

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

U.S. Patent Application Publication No. 2007/0124211 (“Smith”) was filed on May 25, 2006, published on May 31, 2007, and therefore qualifies as prior art under at least 35 U.S.C. §§ 102(a), (b), and (e) as to the asserted claims of U.S. Pat. No. 10,674,432 (“the ’432 Patent”). Smith, including any material incorporated by reference into Smith, anticipates claims 1-17 (“the Asserted Claims”) of the ’432 Patent under 35 U.S.C. § 102. Smith also renders obvious the Asserted Claims under 35 U.S.C. § 103, alone based on the state of the art and/or in combination with one or more references identified in Samsung’s accompanying disclosure for the ’432 Patent.<sup>1</sup>

To the extent Plaintiff alleges that the Smith does not disclose any particular limitation of the Asserted Claims of the ’432 Patent, either expressly or inherently, it would have been obvious to a person of ordinary skill in the art as of the priority date of the ’432 Patent to modify the Smith reference and/or to combine the teachings of the Smith reference with other prior art references, including but not limited to the present prior art references found in Exhibit 432-B and the corresponding section(s) of charts for other prior art references for the ’432 Patent in a manner that would have rendered the Asserted Claims invalid as obvious.

With respect to the obviousness of the Asserted Claims under 35 U.S.C. § 103, one or more of the principles enumerated by the United States Supreme Court in *KSR v. Teleflex*, 550 U.S. 398 (2007) apply, including: (a) combining various claimed elements known in the prior art according to known methods to yield a predictable result; and/or (b) making a simple substitution of one or more known elements for another to obtain a predictable result; and/or (c) using a known technique to improve a similar device or method in the same way; and/or (d) applying a known technique to a known device or method ready for improvement to yield a predictable result; and/or (e) choosing from a finite number of identified, predictable solutions with a reasonable expectation of success or, in other words, the solution was one which was “obvious to try”; and/or (f) a known work in one field of endeavor prompting variations of it for use either in the same field or a different field based on given design incentives or other market forces in which the variations were predictable to one of ordinary skill in the art; and/or (g) a teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill in the art to modify the prior art reference or to combine the teachings of various prior art references to arrive at the claimed invention. It therefore would have been obvious to one of ordinary skill in the art to combine the disclosures of these references in accordance with the principles and rationales set forth above.

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<sup>1</sup> Samsung notes that Plaintiff appears in many instances to be pursuing overly broad constructions of various limitations of the asserted claims of the ’432 Patent in an effort to piece together an infringement claim where none exists and to accuse a product that does not practice the claims. This claim chart may take into account Plaintiff’s overly broad constructions of the claim limitations. Any assertion that a particular limitation is disclosed by a prior art reference may be based on Plaintiff’s apparent constructions and is not intended to be, and is not, an admission that such constructions are supportable or proper.

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

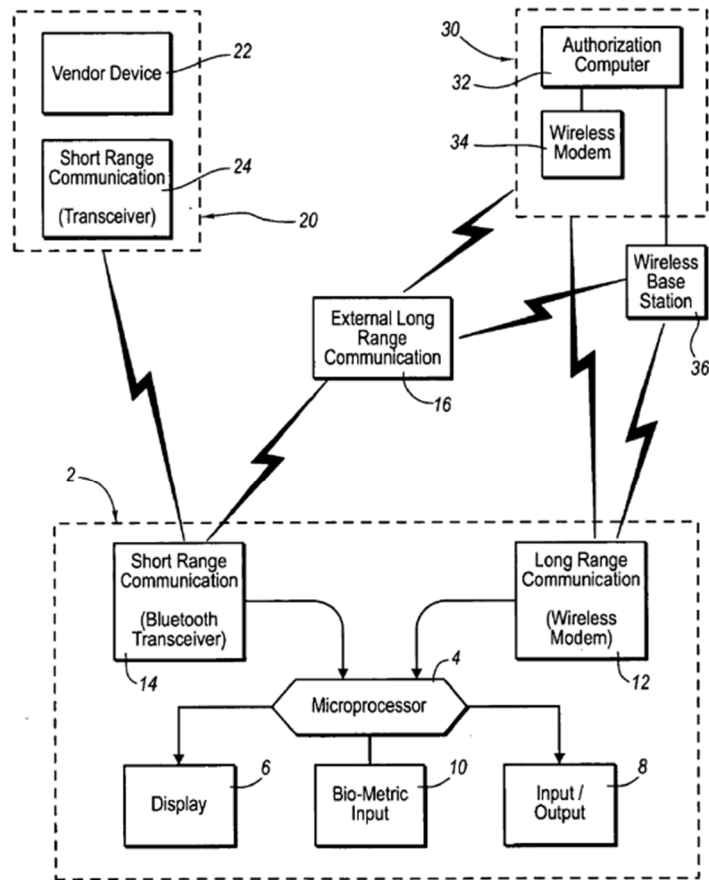
The citations to portions of any reference in this chart are exemplary only. For example, a citation that refers to or discusses a figure or figure item should be understood to also incorporate by reference that figure and any additional descriptions of that figure as if set forth fully therein. Samsung reserves the right to rely on the entirety of the references cited in this chart to show that the Asserted Claims are invalid. Citations presented for one claim limitation are expressly incorporated by reference into all other limitations for that claim as well as all limitations of all claims on which that claim depends. Samsung also reserves the right to rely on additional citations or sources of evidence that also may be applicable, or that may become applicable in light of claim construction, changes in Plaintiff's infringement contentions, and/or information obtained during discovery as the case progresses.

Claim	U.S. Patent No. 10,674,432	Exemplary Disclosure in Smith
[1.1]	A method of operating a smartphone in performing a plurality of financial transactions, the method comprising:	<p>To the extent the preamble is limiting, Smith discloses “A method of operating a smartphone in performing a plurality of financial transactions, the method comprising:” See e.g.:</p> <p>[1.2]-[1.11], <i>infra</i>.</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection.</p> <p>Smith at Abstract</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at Para 0001</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**



**Figure 1**

Smith at Figure 1

Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>communication device 12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In this manner, the transaction may be completed without any direct communication between a vendor and an authorization processor or financial institution. This method allows a vendor to operate a WVD at a point-of-sale without the expense and inconvenience of a long range communication connection. This method also allows the consumer to retain confidential account information without disclosure to vendor personnel or exposure to the risks present in the vendor's system.</p> <p>Smith at Para 0037</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[1.2]	<p>responsive to at least one physiological parameter having been sensed by at least one sensor of the smartphone, enabling a mode to communicate by the smartphone information requesting an authorization;</p>	<p>Smith discloses “responsive to at least one physiological parameter having been sensed by at least one sensor of the smartphone, enabling a mode to communicate by the smartphone information requesting an authorization;” See e.g.:</p> <p>The apparatus of claim 25, further comprising a bio-metric input device electrically coupled to the microprocessor.</p> <p>Smith at Claim 27</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device<sup>10</sup> to verify user identity. Biometric input device<sup>10</sup> may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Smith at Para 0032</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumer's menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
<p>[1.3]</p>	<p>while the mode is enabled, transmitting by the smartphone first data to a first device, the first data relating to a plurality of financial transactions to be conducted;</p>	<p>Smith discloses “while the mode is enabled, transmitting by the smartphone first data to a first device, the first data relating to a plurality of financial transactions to be conducted;” See e.g.:</p> <p>The apparatus of claim 25, further comprising a bio-metric input device electrically coupled to the microprocessor.</p> <p>Smith at Claim 27</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device<sup>10</sup> to verify user identity. Biometric input device<sup>10</sup> may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at Para 0032</p> <p>Authorization by authorization processor 30 also causes a request to be transmitted from processor 30 to the customer's financial institution 40 to transfer funds from the customer's account to the vendor's account 42.</p> <p>Smith at Para 0036</p> <p>In this manner, the transaction may be completed without any direct communication between a vendor and an authorization processor or financial institution. This method allows a vendor to operate a WVD at a point-of-sale without the expense and inconvenience of a long range communication connection. This method also allows the consumer to retain confidential account information without disclosure to vendor personnel or exposure to the risks</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>present in the vendor's system.</p> <p>Smith at Para 0037</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumer's menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
<p>[1.4]</p>	<p>receiving by the smartphone second data from the first device responsive to said transmitting by the smartphone the first data, the second data relating to the plurality of financial transactions to be conducted and differing from the first data;</p>	<p>Smith discloses “receiving by the smartphone second data from the first device responsive to said transmitting by the smartphone the first data, the second data relating to the plurality of financial transactions to be conducted and differing from the first data;” See e.g.:</p> <p>An apparatus carried by a purchaser in performing wireless point-of-sale purchase transactions comprising:  a microprocessor;  a short range communications device electrically coupled to the microprocessor for automatically receiving sales information from and forwarding authorization information to a point-of-sale wireless vendor device for communicating with a point-of-sale wireless vendor device;  a long range communications device electrically coupled to the microprocessor for communicating without vendor participation a request to an authorization processor and receiving a response from the authorization processor for authorization of a purchase; and  an input device electrically coupled to the microprocessor.</p> <p>Smith at Claim 25</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at Para 0001</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at Para 0019</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Some embodiments of the WPD of the present invention will also comprise a long range communications device<sup>12</sup> for communication with an authorization provider<sup>30</sup>. Long range communications device 12 may take the form of a cell modem, radio modem or other wireless communications device capable of transmitting and receiving data over a large area.</p> <p>Smith at Para 0030</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range communication device<sup>12</sup> or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0035</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[1.5]	performing a first transaction of the plurality of financial transactions by:	<p>Smith discloses “performing a first transaction of the plurality of financial transactions by:” See e.g.:</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In this manner, the transaction may be completed without any direct communication between a vendor and an authorization processor or financial institution. This method allows a vendor to operate a WVD at a point-of-sale without the expense and inconvenience of a long range communication connection. This method also allows the consumer to retain confidential account information without disclosure to vendor personnel or exposure to the risks present in the vendor's system.</p> <p>Smith at Para 0037</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth®</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[1.6]	detecting by the smartphone that a proximity condition is satisfied between the smartphone and a first	Smith discloses “detecting by the smartphone that a proximity condition is satisfied between the smartphone and a first entity, wherein the first entity is distinct from the first device;” See e.g.:

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

<p>entity, wherein the first entity is distinct from the first device;</p>	<p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at Para 0016</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at Para 0017</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at Para 0018</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at Para 0019</p> <p>Preferred embodiments of the present invention comprise a portable electronic communications device which is capable of communicating with a vendor's point-of-sale device and capable of communicating with an independent financial institution such as a bank or credit lender. In many embodiments, these two communication functions will be achieved using two communications protocols or methods. One method will employ a short range communication or networking device to communicate with a vendor's point-of-sale device. The other method will use a long range wireless communication system to contact financial institutions for payment authorization and execution.</p> <p>Smith at Para 0028</p> <p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD2 may communicate with other electronic devices using a short-range communications device14. Short range communications device14 may be used to communicate with a vendor's point-of-sale device, such as wireless vending device (WVD) 20, with other</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>WPDs, with external communication device or with other electronic devices. However, the key function of short range communications device14 is to communicate with WVDs, and in some embodiments with external long range communication device16. Short range communications device14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p> <p>Smith at Para 0029</p> <p>When a consumer already has possession of a cell phone or other long range communications device16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device14 to interact with the external long range communications device16 for contact with authorization provider30.</p> <p>Smith at Para 0031</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[1.7]	<p>establishing, using a first air interface, a wireless short-range communications link between the smartphone and the first entity, in response to the proximity condition having been satisfied between the smartphone and the first entity;</p>	<p>Smith discloses “establishing, using a first air interface, a wireless short-range communications link between the smartphone and the first entity, in response to the proximity condition having been satisfied between the smartphone and the first entity;” See e.g.:</p> <p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at Para 0016</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at Para 0017</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at Para 0018</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at Para 0019</p> <p>Preferred embodiments of the present invention comprise a portable electronic communications device which is capable of communicating with a vendor's point-of-sale device and capable of communicating with an independent financial institution such as a bank or credit lender. In many embodiments, these two communication functions will be achieved using two communications protocols or methods. One method will employ a short range communication or networking device to communicate with a vendor's point-of-sale device. The other method will use a long range wireless communication system to contact financial institutions for payment authorization and execution.</p> <p>Smith at Para 0028</p> <p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD2 may communicate with other electronic devices using a short-range communications device14. Short range communications device14 may be used to communicate with a vendor's point-of-sale device, such as wireless vending device (WVD) 20, with other WPDs, with external communication device or with other electronic devices. However, the key function of short range communications device14 is to communicate with WVDs, and in some embodiments with external long range</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>communication device16. Short range communications device14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p> <p>Smith at Para 0029</p> <p>When a consumer already has possession of a cell phone or other long range communications device16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device14 to interact with the external long range communications device16 for contact with authorization provider30.</p> <p>Smith at Para 0031</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[1.8]	receiving, using the first air interface, a short-range signal from the first entity; and	<p>Smith discloses “receiving, using the first air interface, a short-range signal from the first entity; and” See e.g.:</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at Para 0017</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at Para 0018</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval.</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[1.9]	<p>responsive to receiving the short-range signal from the first entity, sending by the smartphone to the first entity over the first air interface, information associated with the second data received from the first device; and</p>	<p>Smith discloses “responsive to receiving the short-range signal from the first entity, sending by the smartphone to the first entity over the first air interface, information associated with the second data received from the first device; and” See e.g.:</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at Para 0018</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at Para 0019</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range communication device<sup>12</sup> or <sup>16</sup>. WPD communication device <sup>12</sup> or <sup>16</sup> may communicate with authorization long range communications device <sup>34</sup> using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device <sup>12</sup> or <sup>16</sup> and <sup>34</sup> or may involve a wireless communications base <sup>36</sup> which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device <sup>34</sup> provides access to authorization computer <sup>32</sup> which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD <sup>2</sup> and a WVD <sup>20</sup>. WPD may receive product or service information from WVD which may be presented on the display <sup>6</sup> of WPD <sup>2</sup>. In some embodiments, a consumer may then make a selection between menu items presented on display <sup>6</sup> or otherwise indicate a desire to make a purchase. In some situations, a WVD may</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval<sup>50</sup> will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[1.10]	independent of performing said first transaction, receiving by the smartphone a communications service from a wireless network, using a second air interface that differs from the first air interface,	<p>Smith discloses “independent of performing said first transaction, receiving by the smartphone a communications service from a wireless network, using a second air interface that differs from the first air interface,” See e.g.:</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection.</p> <p>Smith at Abstract</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Embodiments of the present invention also comprise a wireless vendor device</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>(WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range communication device<sup>12</sup> or <sup>16</sup>. WPD communication device <sup>12</sup> or <sup>16</sup> may communicate with authorization long range communications device <sup>34</sup> using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device <sup>12</sup> or <sup>16</sup> and <sup>34</sup> or may involve a wireless communications base <sup>36</sup> which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device <sup>34</sup> provides access to authorization computer <sup>32</sup> which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2.</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

<p>[1.11]</p>	<p>wherein said transmitting by the smartphone first data and said receiving by the smartphone second data are performed over an air interface that differs from the first air interface.</p>	<p>Smith discloses “wherein said transmitting by the smartphone first data and said receiving by the smartphone second data are performed over an air interface that differs from the first air interface.” See e.g.:</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection.</p> <p>Smith at Abstract</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range communication device 12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[2.1]	<p>The method of claim 1, wherein establishing the wireless short-range communications link between the smartphone and the first entity is performed responsive to at least one physiological parameter having been sensed by at least one sensor of the smartphone.</p>	<p>To the extent the preamble is limiting, Smith discloses “the method of claim 1, wherein establishing the wireless short-range communications link between the smartphone and the first entity is performed responsive to at least one physiological parameter having been sensed by at least one sensor of the smartphone.” See e.g.:</p> <p>Claim 1, supra.</p> <p>When a consumer already has possession of a cell phone or other long range communications device<sup>16</sup> which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device<sup>14</sup> to interact with the external long range communications device<sup>16</sup> for contact with authorization provider<sup>30</sup>.</p> <p>Smith at Para 0031</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device<sup>10</sup> to verify user identity. Biometric input device<sup>10</sup> may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at Para 0032</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) <sup>20</sup> which is typically positioned at a point-of-sale for communication</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[3.1]	<p>The method of claim 1, wherein sending by the smartphone to the first entity, information associated with the second data, is performed responsive to at least one physiological parameter having been sensed by at least one sensor of the smartphone.</p>	<p>Smith discloses “The method of claim 1, wherein sending by the smartphone to the first entity, information associated with the second data, is performed responsive to at least one physiological parameter having been sensed by at least one sensor of the smartphone.” See e.g.:</p> <p>Claim 1, supra.</p> <p>When a consumer already has possession of a cell phone or other long range communications device<sup>16</sup> which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device<sup>14</sup> to interact with the external long range communications device<sup>16</sup> for contact with authorization provider<sup>30</sup>.</p> <p>Smith at Para 0031</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device<sup>10</sup> to verify user identity. Biometric input device<sup>10</sup> may use thumb print analysis, retinal scan analysis or another identification method to</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at Para 0032</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[4.1]	<p>The method of claim 1, wherein sending by the smartphone to the first entity, information associated with the second data, is performed responsive to a value of at least one parameter associated with the smartphone.</p>	<p>Smith discloses “The method of claim 1, wherein sending by the smartphone to the first entity, information associated with the second data, is performed responsive to a value of at least one parameter associated with the smartphone.” See e.g.:</p> <p>Claim 1, supra.</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Smith at Para 0032</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[5.1]	The method of claim 1, wherein the method further comprises:	To the extent the preamble is limiting, Smith discloses “the method of claim 1, wherein the method further comprises.” See e.g.:

**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Claim 1, supra.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[5.2]	<p>performing a second transaction of the plurality of financial transactions by:</p>	<p>Smith discloses “performing a second transaction of the plurality of financial transactions by:” See e.g.:</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[5.3]	<p>detecting by the smartphone that a proximity condition is satisfied between the smartphone and a second entity, wherein the second entity is distinct from the first entity and is further distinct from the first device;</p>	<p>Smith discloses “detecting by the smartphone that a proximity condition is satisfied between the smartphone and a second entity, wherein the second entity is distinct from the first entity and is further distinct from the first device;” See e.g.:</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[5.4]	<p>establishing, using the first air interface, a wireless short-range communications link between the smartphone and the second entity, in response to the proximity condition having been satisfied between the smartphone and the second entity;</p>	<p>Smith discloses “establishing, using the first air interface, a wireless short-range communications link between the smartphone and the second entity, in response to the proximity condition having been satisfied between the smartphone and the second entity;” See e.g.:</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval<sup>50</sup> will be transmitted to the WPD<sup>2</sup> which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device<sup>10</sup>. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[5.5]	<p>receiving, using the first air interface, a short-range signal from the second entity; and</p>	<p>Smith discloses “receiving, using the first air interface, a short-range signal from the second entity; and” See e.g.:</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at Para 0017</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at Para 0018</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
<p>[5.6]</p>	<p>responsive to receiving the short-range signal from the second entity, sending by the smartphone to the second entity over the first air interface, information associated with the second data received from the first device.</p>	<p>Smith discloses “responsive to receiving the short-range signal from the second entity, sending by the smartphone to the second entity over the first air interface, information associated with the second data received from the first device.” See e.g.:</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at Para 0018</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at Para 0019</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>communication device 12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[6.1]	The method of claim 1,	<p>To the extent the preamble is limiting, Smith discloses “the method of claim 1,” See e.g.:</p> <p>Claim 1, supra.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[6.2]	wherein said transmitting by the smartphone first data to a first device includes transmitting by the smartphone data relating to a request to pay for a transaction; and	<p>Smith discloses “wherein said transmitting by the smartphone first data to a first device includes transmitting by the smartphone data relating to a request to pay for a transaction; and” See e.g.:</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection.</p> <p>Smith at Abstract</p> <p>Preferred embodiments of the present invention comprise a portable electronic communications device which is capable of communicating with a vendor's point-of-sale device and capable of communicating with an independent financial institution such as a bank or credit lender. In many embodiments, these two communication functions will be achieved using two communications protocols or methods. One method will employ a short range communication or networking device to communicate with a vendor's point-of-sale device. The other method will use a long range wireless communication system to contact financial institutions for payment authorization and execution.</p> <p>Smith at Para 0028</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range communication device<sup>12</sup> or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval<sup>50</sup> will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Smith at Para 0035</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
<p>[6.3]</p>	<p>wherein said receiving by the smartphone second data from the first device includes receiving by the smartphone data relating to an acknowledgement and/or authorization of enabling a mode/function to pay for a transaction.</p>	<p>Smith discloses “wherein said receiving by the smartphone second data from the first device includes receiving by the smartphone data relating to an acknowledgement and/or authorization of enabling a mode/function to pay for a transaction.” See e.g.:</p> <p>An apparatus carried by a purchaser in performing wireless point-of-sale purchase transactions comprising:  a microprocessor;  a short range communications device electrically coupled to the microprocessor for automatically receiving sales information from and forwarding authorization information to a point-of-sale wireless vendor device for communicating with a point-of-sale wireless vendor device;  a long range communications device electrically coupled to the microprocessor for communicating without vendor participation a request to an authorization processor and receiving a response from the authorization processor for authorization of a purchase; and  an input device electrically coupled to the microprocessor.</p> <p>Smith at Claim 25</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection.</p> <p>Smith at Abstract</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at Para 0001</p> <p>Preferred embodiments of the present invention provide systems, methods and</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at Para 0019</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Accordingly it is an object of some embodiments of the present invention to provide systems, method and apparatus for obtaining a point-of-sale purchase authorization.</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Smith at Para 0021</p> <p>It is another object of some embodiments of the present invention to provide systems methods and apparatus for obtaining a point-of-sale purchase authorization for a purchase from a vendor who does not have a communications link with an authorization processor.</p> <p>Smith at Para 0022</p> <p>Preferred embodiments of the present invention comprise a portable electronic communications device which is capable of communicating with a vendor's point-of-sale device and capable of communicating with an independent financial institution such as a bank or credit lender. In many embodiments, these two communication functions will be achieved using two communications protocols or methods. One method will employ a short range communication or networking device to communicate with a vendor's point-of-sale device. The other method will use a long range wireless communication system to contact financial institutions for payment authorization and execution.</p> <p>Smith at Para 0028</p> <p>Some embodiments of the WPD of the present invention will also comprise a long range communications device<sup>12</sup> for communication with an authorization provider<sup>30</sup>. Long range communications device 12 may take the form of a cell modem, radio modem or other wireless communications device capable of transmitting and receiving data over a large area.</p> <p>Smith at Para 0030</p> <p>When a consumer already has possession of a cell phone or other long range communications device<sup>16</sup> which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>expensive embodiment of the WPD which uses short range communications device14 to interact with the external long range communications device16 for contact with authorization provider30.</p> <p>Smith at Para 0031</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device10 to verify user identity. Biometric input device10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at Para 0032</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers30 using long range communication device12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[7.1]	The method of claim 1, comprising:	<p>To the extent the preamble is limiting, Smith discloses “the method of claim 1, comprising:” See e.g.:</p> <p>Claim 1, supra.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.
[7.2]	transmitting by the smartphone third data to a second device; the second device being distinct from the first device and further being distinct from the first entity; and	<p>Smith discloses “transmitting by the smartphone third data to a second device; the second device being distinct from the first device and further being distinct from the first entity; and” See e.g.:</p> <p>Claim 1, supra.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[7.3]	receiving by the smartphone fourth data from the second device relating to an acknowledgement and/or authorization of enabling a mode/function to pay for a financial transaction,	<p>Smith discloses “receiving by the smartphone fourth data from the second device relating to an acknowledgement and/or authorization of enabling a mode/function to pay for a financial transaction,” See e.g.:</p> <p>Claim 1, supra.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[7.4]	wherein said transmitting by the smartphone third data to a second device and said receiving by the smartphone fourth data from the second device are performed over	<p>Smith discloses “wherein said transmitting by the smartphone third data to a second device and said receiving by the smartphone fourth data from the second device are performed over the air interface that differs from the first air interface.” See e.g.:</p> <p>Claim 1, supra.</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

	the air interface that differs from the first air interface.	Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.
[8.1]	The method of claim 1, wherein said operations further comprise:	To the extent the preamble is limiting, Smith discloses “the method of claim 1, wherein said operations further comprise:” See e.g.:  Claim 1, supra.  Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.
[8.2]	responsive to performing a financial transaction, causing data to be transmitted selectively to a plurality of predetermined devices and further causing data to be received selectively from said plurality of predetermined devices.	Smith discloses “responsive to performing a financial transaction, causing data to be transmitted selectively to a plurality of predetermined devices and further causing data to be received selectively from said plurality of predetermined devices.” See e.g.:

Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith

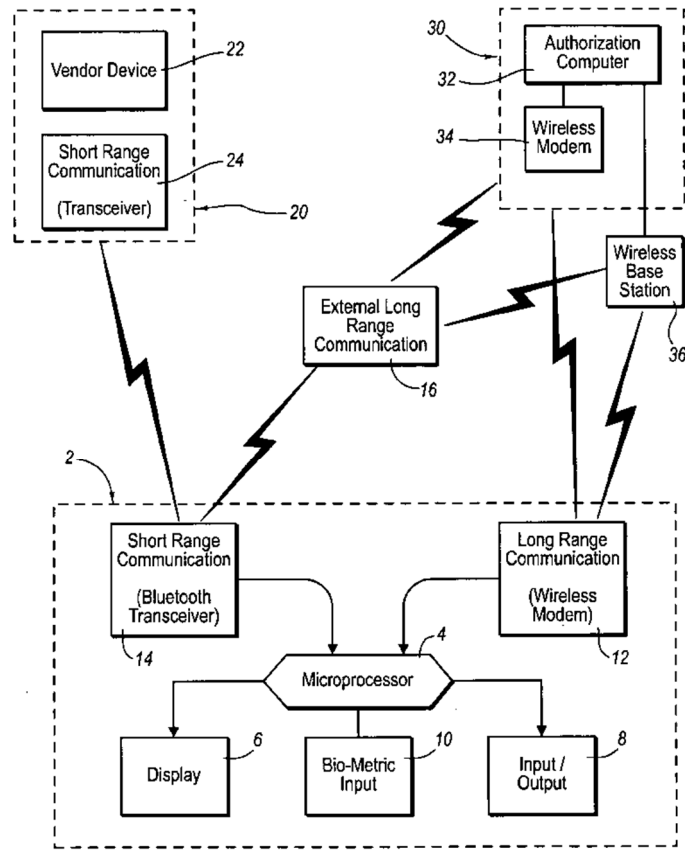
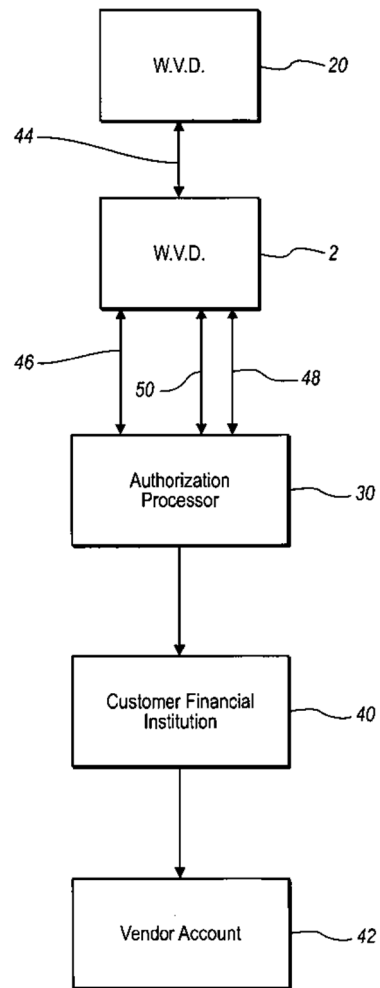


Figure 1

Smith at Figure 1

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**



**Figure 2**

Smith at Figure 2

Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith

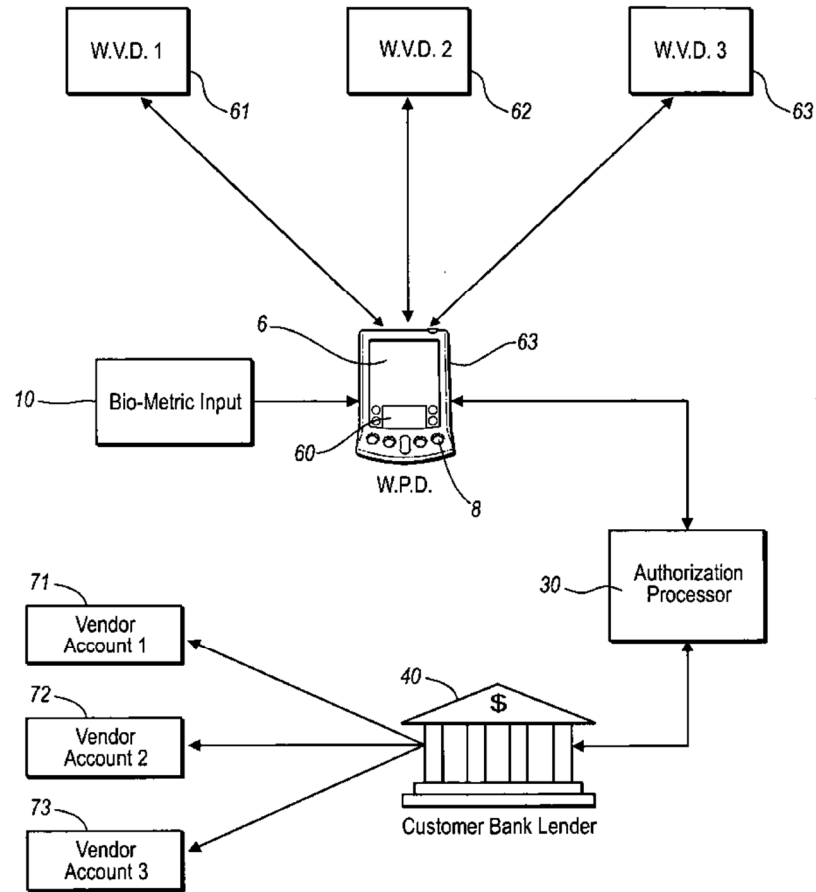


Figure 3

Smith at Figure 3

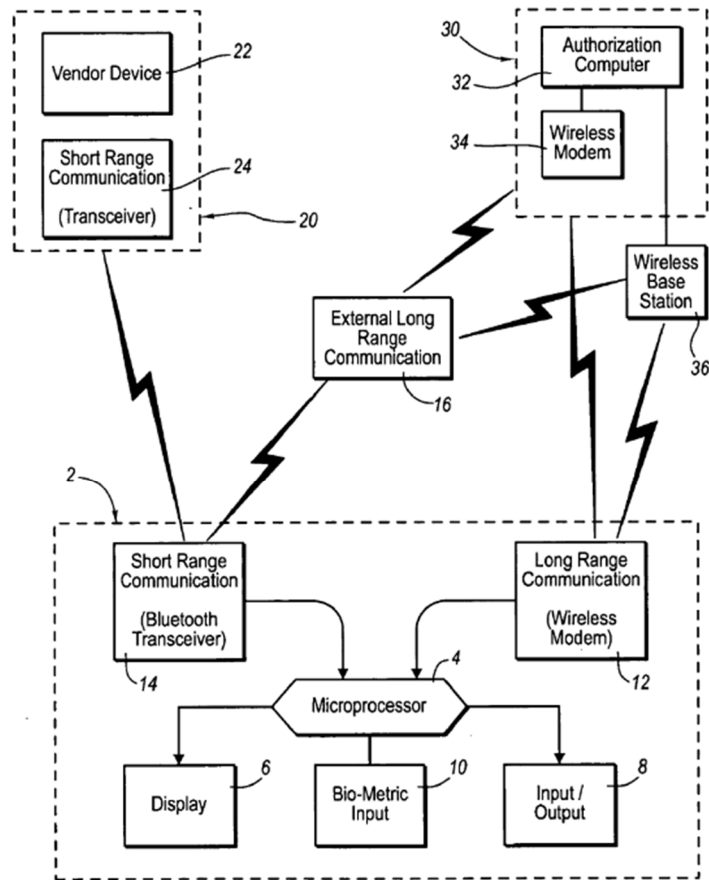
**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[9.1]	<p>The method of claim 1, wherein the second air interface comprises an Orthogonal Frequency Division Multiplexed and/or an Orthogonal Frequency Division Multiple Access (OFDM/OFDMA) technology.</p>	<p>Smith discloses “the method of claim 1, wherein the second air interface comprises an Orthogonal Frequency Division Multiplexed and/or an Orthogonal Frequency Division Multiple Access (OFDM/OFDMA) technology.” See e.g.:</p> <p>The invalidity chart for the ’793 patent in view of Smith at 8.5.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[10.1]	<p>A smartphone that is configured to perform operations associated with a plurality of financial transactions; the operations comprising:</p>	<p>To the extent the preamble is limiting, Smith discloses “a smartphone that is configured to perform operations associated with a plurality of financial transactions; the operations comprising:” See e.g.:</p> <p>[1.1], supra.  [10.2-10.11], infra.</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection.</p> <p>Smith at Abstract</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at Para 0001</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**



**Figure 1**

Smith at Figure 1

Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range communication device<sup>12</sup> or 16. WPD communication device 12 or 16 may</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In this manner, the transaction may be completed without any direct communication between a vendor and an authorization processor or financial institution. This method allows a vendor to operate a WVD at a point-of-sale without the expense and inconvenience of a long range communication connection. This method also allows the consumer to retain confidential account information without disclosure to vendor personnel or exposure to the risks present in the vendor's system.</p> <p>Smith at Para 0037</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[10.2]	<p>responsive to at least one physiological parameter having been sensed by at least one sensor of the smartphone, enabling a mode to communicate by the smartphone information requesting an authorization;</p>	<p>Smith discloses “responsive to at least one physiological parameter having been sensed by at least one sensor of the smartphone, enabling a mode to communicate by the smartphone information requesting an authorization;” See e.g.:</p> <p>[1.2], supra.</p> <p>The apparatus of claim 25, further comprising a bio-metric input device electrically coupled to the microprocessor.</p> <p>Smith at Claim 27</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device<sup>10</sup> to verify user identity. Biometric input device<sup>10</sup> may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Smith at Para 0032</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumer's menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
<p>[10.3]</p>	<p>while the mode is enabled, transmitting first data to a first device as a precursor to performing the plurality of financial transactions; and</p>	<p>Smith discloses “while the mode is enabled, transmitting first data to a first device as a precursor to performing the plurality of financial transactions; and” See e.g.:</p> <p>[1.3], supra. The apparatus of claim 25, further comprising a bio-metric input device electrically coupled to the microprocessor.</p> <p>Smith at Claim 27</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device<sup>10</sup> to verify user identity. Biometric input device<sup>10</sup> may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at Para 0032</p> <p>Authorization by authorization processor 30 also causes a request to be transmitted from processor 30 to the customer's financial institution 40 to transfer funds from the customer's account to the vendor's account 42.</p> <p>Smith at Para 0036</p> <p>In this manner, the transaction may be completed without any direct communication between a vendor and an authorization processor or financial institution. This method allows a vendor to operate a WVD at a point-of-sale without the expense and inconvenience of a long range communication connection. This method also allows the consumer to retain confidential account information without disclosure to vendor personnel or exposure to the risks</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>present in the vendor's system.</p> <p>Smith at Para 0037</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumer's menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
<p>[10.4]</p>	<p>receiving second data from the first device responsive to said transmitting the first data;</p>	<p>Smith discloses “receiving second data from the first device responsive to said transmitting the first data;” See e.g.:</p> <p>[1.4], supra  An apparatus carried by a purchaser in performing wireless point-of-sale purchase transactions comprising:  a microprocessor;  a short range communications device electrically coupled to the microprocessor for automatically receiving sales information from and forwarding authorization information to a point-of-sale wireless vendor device for communicating with a point-of-sale wireless vendor device;  a long range communications device electrically coupled to the microprocessor for communicating without vendor participation a request to an authorization processor and receiving a response from the authorization processor for authorization of a purchase; and  an input device electrically coupled to the microprocessor.</p> <p>Smith at Claim 25</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at Para 0001</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at Para 0019</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Some embodiments of the WPD of the present invention will also comprise a long range communications device<sup>12</sup> for communication with an authorization provider<sup>30</sup>. Long range communications device 12 may take the form of a cell modem, radio modem or other wireless communications device capable of transmitting and receiving data over a large area.</p> <p>Smith at Para 0030</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range communication device<sup>12</sup> or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0035</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[10.5]	performing a first financial transaction of the plurality of financial transactions by:	<p>Smith discloses “performing a first financial transaction of the plurality of financial transactions by:” See e.g.:</p> <p>[1.5], supra.</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval<sup>50</sup> will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In this manner, the transaction may be completed without any direct communication between a vendor and an authorization processor or financial institution. This method allows a vendor to operate a WVD at a point-of-sale without the expense and inconvenience of a long range communication connection. This method also allows the consumer to retain confidential account information without disclosure to vendor personnel or exposure to the risks present in the vendor's system.</p> <p>Smith at Para 0037</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[10.6]	detecting by the smartphone that a proximity condition is satisfied between the smartphone and a first	Smith discloses “detecting by the smartphone that a proximity condition is satisfied between the smartphone and a first entity, wherein the first entity is distinct from the first device;” See e.g.:

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

	<p>entity, wherein the first entity is distinct from the first device;</p>	<p>[1.6], supra.</p> <p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at Para 0016</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at Para 0017</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at Para 0018</p> <p>Preferred embodiments of the present invention provide systems, methods and</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at Para 0019</p> <p>Preferred embodiments of the present invention comprise a portable electronic communications device which is capable of communicating with a vendor's point-of-sale device and capable of communicating with an independent financial institution such as a bank or credit lender. In many embodiments, these two communication functions will be achieved using two communications protocols or methods. One method will employ a short range communication or networking device to communicate with a vendor's point-of-sale device. The other method will use a long range wireless communication system to contact financial institutions for payment authorization and execution.</p> <p>Smith at Para 0028</p> <p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD2 may communicate with other electronic devices using a short-range communications device14. Short range communications device14 may be used to communicate with a vendor's</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>point-of-sale device, such as wireless vending device (WVD) 20, with other WPDs, with external communication device or with other electronic devices. However, the key function of short range communications device14 is to communicate with WVDs, and in some embodiments with external long range communication device16. Short range communications device14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p> <p>Smith at Para 0029</p> <p>When a consumer already has possession of a cell phone or other long range communications device16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device14 to interact with the external long range communications device16 for contact with authorization provider30.</p> <p>Smith at Para 0031</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[10.7]	<p>establishing, using a first air interface, a wireless short-range communications link between the smartphone and the first entity, in response to the proximity condition</p>	<p>Smith discloses “establishing, using a first air interface, a wireless short-range communications link between the smartphone and the first entity, in response to the proximity condition having been satisfied between the smartphone and the first entity;” See e.g.:  [1.7], supra.</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

<p>having been satisfied between the smartphone and the first entity;</p>	<p>Another innovation in the wireless communications arena is the advent of short-range wireless networking between portable communications devices. One standard for this technology is known as Bluetooth®, and is being established by a collaborative group of communications and computing companies. Devices incorporating Bluetooth® technology will utilize a micro-chip transceiver for communications between devices. Bluetooth® devices will transmit in the previously unused 2.4 GHz range and will have a range of about meters which may be extended to about 100 meters by increasing transmitter power. Bluetooth® technology promises to be a viable and economical networking solution for interconnection of cell phones, computers, printers, modems, computer peripherals, fax machines and other communications and computing devices. The size of the Bluetooth® transceiver makes it usable in devices as small as palm computers and cell phones.</p> <p>Smith at Para 0016</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at Para 0017</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at Para 0018</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at Para 0019</p> <p>Preferred embodiments of the present invention comprise a portable electronic communications device which is capable of communicating with a vendor's point-of-sale device and capable of communicating with an independent financial institution such as a bank or credit lender. In many embodiments, these two communication functions will be achieved using two communications protocols or methods. One method will employ a short range communication or networking device to communicate with a vendor's point-of-sale device. The other method will use a long range wireless communication system to contact financial institutions for payment authorization and execution.</p> <p>Smith at Para 0028</p> <p>In reference to FIG. 1, a preferred embodiment of a consumer's wireless purchasing device (WPD) 2 is shown comprising a microprocessor 4 for processing consumer input, communications functions and display functions as well as other functions. WPD 2 may also comprise a display 6 in preferred embodiments, however display 6 is not required for rudimentary embodiments. An input device 8 may also be part of WPD 2 to allow for consumer input and selection. WPD2 may communicate with other electronic devices using a short-range communications device14. Short range communications device14 may be used to communicate with a vendor's point-of-sale device, such as wireless vending device (WVD) 20, with other</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>WPDs, with external communication device or with other electronic devices. However, the key function of short range communications device14 is to communicate with WVDs, and in some embodiments with external long range communication device16. Short range communications device14 may be a Bluetooth® transceiver or similar short range networking device or may be an Infrared transceiver such as an IrDA standard port as well as other devices.</p> <p>Smith at Para 0029</p> <p>When a consumer already has possession of a cell phone or other long range communications device16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device14 to interact with the external long range communications device16 for contact with authorization provider30.</p> <p>Smith at Para 0031</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[10.8]	receiving, using the first air interface, a short-range signal from the first entity; and	<p>Smith discloses “receiving, using the first air interface, a short-range signal from the first entity; and” See e.g.:</p> <p>[1.8], supra.</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at Para 0017</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at Para 0018</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2.</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumer's menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[10.9]	<p>responsive to receiving the short-range signal from the first entity, sending to the first entity over the first air interface, information based on the second data received from the first device; and</p>	<p>Smith discloses “responsive to receiving the short-range signal from the first entity, sending to the first entity over the first air interface, information based on the second data received from the first device; and” See e.g.:</p> <p>[1.9], supra.</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Smith at Para 0018</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at Para 0019</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range communication device<sup>12</sup> or <sup>16</sup>. WPD communication device <sup>12</sup> or <sup>16</sup> may communicate with authorization long range communications device <sup>34</sup> using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device <sup>12</sup> or <sup>16</sup> and <sup>34</sup> or may involve a wireless communications base <sup>36</sup> which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device <sup>34</sup> provides access to authorization computer <sup>32</sup> which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p style="text-align: center;">Smith at Para 0035</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

<p>[10.10]</p>	<p>independent of performing a transaction to pay for one or more items, receiving by the smartphone a communications service from a wireless network, using a second air interface that differs from the first air interface,</p>	<p>Smith discloses “independent of performing a transaction to pay for one or more items, receiving by the smartphone a communications service from a wireless network, using a second air interface that differs from the first air interface,” See e.g.:</p> <p>[1.10], supra.</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection.</p> <p>Smith at Abstract</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range communication device<sup>12</sup> or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval<sup>50</sup> will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[10.11]	<p>wherein said transmitting first data and said receiving second data are performed over an air interface that differs from the first air interface.</p>	<p>Smith discloses “wherein said transmitting first data and said receiving second data are performed over an air interface that differs from the first air interface.” See e.g.: [1.11], supra.</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection.</p> <p>Smith at Abstract</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p style="text-align: center;">Smith at Para 0020</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p style="text-align: center;">Smith at Para 0033</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range communication device<sup>12</sup> or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied,</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval<sup>50</sup> will be transmitted to the WPD<sup>2</sup> which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[11.1]	<p>The smartphone of claim 10, wherein establishing the wireless short-range communications link between the smartphone and the first entity is performed responsive to at least one physiological parameter having been sensed by at least one sensor of the smartphone.</p>	<p>Smith discloses “the smartphone of claim 10, wherein establishing the wireless short-range communications link between the smartphone and the first entity is performed responsive to at least one physiological parameter having been sensed by at least one sensor of the smartphone.” See e.g.:</p> <p>Claim 10, supra. [2.1], supra.</p> <p>When a consumer already has possession of a cell phone or other long range communications device<sup>16</sup> which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device<sup>14</sup> to interact with the external long range communications device<sup>16</sup> for contact with authorization provider<sup>30</sup>.</p> <p>Smith at Para 0031</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Some embodiments of the WPD of the present invention may also comprise a biometric input device<sup>10</sup> to verify user identity. Biometric input device<sup>10</sup> may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at Para 0032</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[12.1]	<p>The smartphone of claim 10, wherein sending by the smartphone to the first entity, information based on the second data, is performed responsive to at least one physiological parameter having been sensed by at least one sensor of the smartphone.</p>	<p>Smith discloses “the smartphone of claim 10, wherein sending by the smartphone to the first entity, information based on the second data, is performed responsive to at least one physiological parameter having been sensed by at least one sensor of the smartphone.” See e.g.:</p> <p>Claim 10, supra.  [3.1], supra.  When a consumer already has possession of a cell phone or other long range</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>communications device16 which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device14 to interact with the external long range communications device16 for contact with authorization provider30.</p> <p>Smith at Para 0031</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device10 to verify user identity. Biometric input device10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at Para 0032</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

<p>[13.1]</p>	<p>The smartphone of claim 10, wherein sending by the smartphone to the first entity, information based on the second data, is performed responsive to a value of at least one parameter associated with the smartphone.</p>	<p>Smith discloses “the smartphone of claim 10, wherein sending by the smartphone to the first entity, information based on the second data, is performed responsive to a value of at least one parameter associated with the smartphone.” See e.g.:</p> <p>Claim 10, supra.  [4.1], supra.</p> <p>Some embodiments of the WPD of the present invention may also comprise a biometric input device 10 to verify user identity. Biometric input device 10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at Para 0032</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied,</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73of vendors who were selected in the consumers menu selection on the WPD 2.</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[14.1]	The smartphone of claim 10, wherein the operations further comprise:	<p>To the extent the preamble is limiting, Smith discloses “the smartphone of claim 10, wherein the operations further comprise:” See e.g.:</p> <p>Claim 10, supra.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[14.2]	performing a second financial transaction of the plurality of financial transactions by:	<p>Smith discloses “performing a second financial transaction of the plurality of financial transactions by:” See e.g.:</p> <p>[5.2], supra.</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase.</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[14.3]	<p>detecting by the smartphone that a proximity condition is satisfied between the smartphone and a second entity; wherein the second entity is distinct from the first entity and is further distinct from the first device;</p>	<p>Smith discloses “detecting by the smartphone that a proximity condition is satisfied between the smartphone and a second entity; wherein the second entity is distinct from the first entity and is further distinct from the first device;” See e.g.:</p> <p>[5.3], supra.</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[14.4]	establishing, using the first air interface, a wireless short-range communications link between the smartphone and the second entity,	Smith discloses “establishing, using the first air interface, a wireless short-range communications link between the smartphone and the second entity, in response to the proximity condition having been satisfied between the smartphone and the second entity;” See e.g.:

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

<p>in response to the proximity condition having been satisfied between the smartphone and the second entity;</p>	<p>[5.4], supra.</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Embodiments of the present invention also comprise a wireless vendor device (WVD) 20 which is typically positioned at a point-of-sale for communication with WPDs. WVD 20 will generally comprise a short range communications device 24 configured to communicate with short range communications device 14 used in WPDs. As with communications device 14, device 24 may be a Bluetooth® transceiver, an IrDA port or another communications device. In situations where multiple vendors are accessible to a single WPD at the same time, a Bluetooth® transceiver or similar networking device is preferred to allow multiple party communications. Short range communications device 24 is connected to a vendor device 22 which is typically an electronic computing device such as an electronic cash register, an electronic vending machine, a bar-code reader or other device which may transmit and receive product and transaction information.</p> <p>Smith at Para 0033</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[14.5]	receiving, using the first air interface, a short-range signal from the second entity; and	<p>Smith discloses “receiving, using the first air interface, a short-range signal from the second entity; and” See e.g.:</p> <p>[5.5], supra.</p> <p>Another established wireless connectivity standard is known as IrDA and employs infrared radiation to communicate between devices. IrDA is a point-to-point narrow angle, ad-hoc data transmission standard designed to operate over a</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>distance of 0 to 1 meter at speeds of 9600 bps to 16 Mbps. It is typically used in a point-and-shoot fashion by pointing one device at another for direct data transmission.</p> <p>Smith at Para 0017</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications connection with mobile phone or other technology.</p> <p>Smith at Para 0018</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2.</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p style="text-align: center;">Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic</p>
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**Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumer's menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[14.6]	responsive to receiving the short-range signal from the second entity, sending by the smartphone to the second entity over the first air interface; information associated with the second data received from the first device.	<p>Smith discloses “responsive to receiving the short-range signal from the second entity, sending by the smartphone to the second entity over the first air interface; information associated with the second data received from the first device.” See e.g.:</p> <p>[5.6], supra.</p> <p>The combination of some of the above technologies allows a user to use a single electronic device to communicate with other electronic devices in a short range network or direct data link while establishing a long-range communications</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>connection with mobile phone or other technology.</p> <p>Smith at Para 0018</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at Para 0019</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range communication device<sup>12</sup> or <sup>16</sup>. WPD communication device <sup>12</sup> or <sup>16</sup> may communicate with authorization long range communications device <sup>34</sup> using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device <sup>12</sup> or <sup>16</sup> and <sup>34</sup> or may involve a wireless communications base <sup>36</sup> which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device <sup>34</sup> provides access to authorization computer <sup>32</sup> which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p style="text-align: center;">Smith at Para 0035</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.
[15.1]	The smartphone of claim 10,	<p>To the extent the preamble is limiting, Smith discloses “the smartphone of claim 10,” See e.g.:</p> <p>Claim 10, supra.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[15.2]	wherein said transmitting by the smartphone first data to a first device includes transmitting by the smartphone data relating to a request to pay for a transaction; and	<p>Smith discloses “wherein said transmitting by the smartphone first data to a first device includes transmitting by the smartphone data relating to a request to pay for a transaction; and” See e.g.:</p> <p>[6.2], supra.</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection.</p> <p>Smith at Abstract</p> <p>Preferred embodiments of the present invention comprise a portable electronic communications device which is capable of communicating with a vendor's point-of-sale device and capable of communicating with an independent financial institution such as a bank or credit lender. In many embodiments, these two communication functions will be achieved using two communications protocols or methods. One method will employ a short range communication or networking device to communicate with a vendor's point-of-sale device. The other method will use a long range wireless communication system to contact financial institutions for payment authorization and execution.</p> <p>Smith at Para 0028</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers<sup>30</sup> using long range communication device<sup>12</sup> or <sup>16</sup>. WPD communication device <sup>12</sup> or <sup>16</sup> may communicate with authorization long range communications device <sup>34</sup> using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device <sup>12</sup> or <sup>16</sup> and <sup>34</sup> or may involve a wireless communications base <sup>36</sup> which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device <sup>34</sup> provides access to authorization computer <sup>32</sup> which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p style="text-align: center;">Smith at Para 0035</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
<p>[15.3]</p>	<p>wherein said receiving by the smartphone second data from the first device includes receiving by the smartphone data relating to an acknowledgement and/or authorization of enabling a mode/function to pay for a transaction.</p>	<p>Smith discloses “wherein said receiving by the smartphone second data from the first device includes receiving by the smartphone data relating to an acknowledgement and/or authorization of enabling a mode/function to pay for a transaction.” See e.g.:</p> <p>[6.3], supra.</p> <p>An apparatus carried by a purchaser in performing wireless point-of-sale purchase transactions comprising:</p> <ul style="list-style-type: none"> <li>a microprocessor;</li> <li>a short range communications device electrically coupled to the microprocessor for automatically receiving sales information from and forwarding authorization information to a point-of-sale wireless vendor device for communicating with a point-of-sale wireless vendor device;</li> <li>a long range communications device electrically coupled to the microprocessor for communicating without vendor participation a request to an authorization processor and receiving a response from the authorization processor for authorization of a purchase; and</li> <li>an input device electrically coupled to the microprocessor.</li> </ul> <p>Smith at Claim 25</p> <p>The present invention relates to systems, methods and apparatus for making purchase transactions at a point-of-sale. A wireless purchase device (WPD) comprising a short range communications device for communication with vendor point-of-sale equipment such as a wireless vendor device (WVD) and a long range communications device for communications with credit or debit authorization processors. In preferred embodiments, a WVD will communicate vendor identification data and a transaction purchase price to a WPD and a WPD user will determine whether to complete the transaction. The transaction may be completed by transmitting the vendor identification and purchase data to an authorization processor for credit or debit approval. Authorization approval or denial is</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>transmitted to the WPD where the user is discretely notified of the outcome. If approved, the user may transmit the approval to the WVD to complete the transaction. Using the systems and methods of the present invention, vendors need not maintain long range communications between points-of-sale and authorization processors or other parties. Purchasers also benefit from the discrete notification of credit or debit approval or rejection.</p> <p>Smith at Abstract</p> <p>The present invention relates to methods and apparatus for point-of-sale transactions using wireless communication devices. Embodiments of the present invention utilize wireless purchasing devices (WPDs) to communicate with point-of-sale wireless vendor devices (WVDs) and arrange the electronic transfer of assets to complete a sale. WPDs of embodiments of the present invention may negotiate a purchase code with a WVD and obtain authorization to complete a purchase identified in the purchase code directly from a creditor or account holder. When authorization is approved, an authorization code is transmitted from the creditor/account holder directly to the WPD and a purchase authorization code is transmitted to the WVD to complete the transaction. Embodiments of the present invention may be used with human-operated vendor devices such as electronic cash registers or with automated vendor devices such as electronic vending machines.</p> <p>Smith at Para 0001</p> <p>Preferred embodiments of the present invention provide systems, methods and apparatus which provide for short range communication with a point-of-sale device combined with long-range communication with a credit or debit authorization processor. As a non-limiting example, an embodiment of the present invention in the form of a PDA may communicate with a point-of-sale device to determine vendor identification and a sale amount. The vendor/sale data is combined with credit or debit account data and forwarded to an authorization processor as a request for authorization of the sale amount. The authorization processor processes</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>the request and transmits an authorization approval or denial to the PDA through a long range communication system. The authorization is then transmitted to the vendor's point-of-sale device to complete the transaction.</p> <p>Smith at Para 0019</p> <p>Embodiments of the present invention allow for transactions with multiple vendors. A consumer with a wireless purchasing device (WPD) may enter an area in which several vendors have point-of-sale devices which can communicate with the WPD. As the consumer enters communication range with the point-of-sale devices, a menu on the WPD is updated to reflect the products available from vendors in communication range along with associated prices and related data. A consumer may select from the available products and initiate the purchase. Vendor information, product identification and pricing data received from the point-of-sale devices is processed into purchase requests for each vendor selected and the purchase requests are transmitted to one or more authorization processors. If the purchases are authorized, the authorization approval is transmitted back to the WPD and the consumer completes the transaction by transmitting a charge or debit authorization to the point-of-sale devices thereby enabling product access or delivery of the purchased products.</p> <p>Smith at Para 0020</p> <p>Accordingly it is an object of some embodiments of the present invention to provide systems, method and apparatus for obtaining a point-of-sale purchase authorization.</p> <p>Smith at Para 0021</p> <p>It is another object of some embodiments of the present invention to provide systems methods and apparatus for obtaining a point-of-sale purchase authorization for a purchase from a vendor who does not have a communications link with an authorization processor.</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Smith at Para 0022</p> <p>Preferred embodiments of the present invention comprise a portable electronic communications device which is capable of communicating with a vendor's point-of-sale device and capable of communicating with an independent financial institution such as a bank or credit lender. In many embodiments, these two communication functions will be achieved using two communications protocols or methods. One method will employ a short range communication or networking device to communicate with a vendor's point-of-sale device. The other method will use a long range wireless communication system to contact financial institutions for payment authorization and execution.</p> <p>Smith at Para 0028</p> <p>Some embodiments of the WPD of the present invention will also comprise a long range communications device<sup>12</sup> for communication with an authorization provider<sup>30</sup>. Long range communications device 12 may take the form of a cell modem, radio modem or other wireless communications device capable of transmitting and receiving data over a large area.</p> <p>Smith at Para 0030</p> <p>When a consumer already has possession of a cell phone or other long range communications device<sup>16</sup> which also has short range communications ability, such as a Bluetooth® enable cell phone, the consumer may prefer to use a less-expensive embodiment of the WPD which uses short range communications device<sup>14</sup> to interact with the external long range communications device<sup>16</sup> for contact with authorization provider<sup>30</sup>.</p> <p>Smith at Para 0031</p> <p>Some embodiments of the WPD of the present invention may also comprise a</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>biometric input device10 to verify user identity. Biometric input device10 may use thumb print analysis, retinal scan analysis or another identification method to identify the WPS user. Once the user is identified, user identity can be matched to account data to ensure that unauthorized users do not gain access to sensitive information or other user's accounts.</p> <p>Smith at Para 0032</p> <p>As embodiments of the present invention are to be used with credit and debit card accounts which generally require authorization before funds may be transferred, WPDs may communicate with authorization providers30 using long range communication device12 or 16. WPD communication device 12 or 16 may communicate with authorization long range communications device 34 using known wireless communications methods such as through the use of wireless modems. This communication may be direct between communication device 12 or 16 and 34 or may involve a wireless communications base 36 which receives and transmits wireless signals and converts them to a wired connections such as with a standard telephone line. Authorization communications device 34 provides access to authorization computer 32 which may authorize credit and debit transactions and execute transfers of funds to the appropriate accounts.</p> <p>Smith at Para 0034</p> <p>A variety of communication protocols and methods are known and commonly used in the industry, therefore, the information transfer used in some embodiments of the present invention is shown in a generic format in FIG. 2. Typically a purchase transaction will commence by establishing communication between a WPD 2 and a WVD 20. WPD may receive product or service information from WVD which may be presented on the display 6 of WPD 2. In some embodiments, a consumer may then make a selection between menu items presented on display 6 or otherwise indicate a desire to make a purchase. In some situations, a WVD may simply transmit a transaction amount and vendor identification to the WPD, such as when a cashier has tallied a total and seeks payment or when an automated</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>vending machine offers a single selection. In most situations, the WVD 20 and WPD 2 will communicate 44 with or without vendor and consumer input until a total purchase amount is reached. When a transaction amount is established, the WPD 2 will use its long range communications ability to contact an authorization provider 30 to request authorization 46 of the credit or debit transaction. Authorization processor 30 will check the consumer's account to verify that sufficient funds or credit are available and make any other necessary verification as required. If authorization is denied, a denial 48 will be transmitted to the WPD 2 and the consumer will be notified on the WPD display 6 that the transaction cannot be completed. If the authorization is approved, an authorization approval 50 will be transmitted to the WPD2 which will use its short range communications link to pass the authorization to the WVD to inform the vendor of the transaction so that the goods or services may be released.</p> <p>Smith at Para 0035</p> <p>In reference to FIG. 3, embodiments of the present invention which accommodate multiple, simultaneous vendors are illustrated. In these embodiments WvDs and WPDs will generally utilize wireless networking technology such as Bluetooth® transceivers or others to communicate. WVD1 61, WVD2 62 and WVD3 63 are present within communication range of a single WPD 2 and communication between WVDs 61, 62 and 63 and WPD 2 is initiated upon communication contact. In a preferred embodiment WVDs 61, 62 and 63 will transmit menu options to WPD 2 to inform the consumer of available products and to identify the vendors associated with the WVDs. WVDs 61, 62 and 63 may be electronic vending machines or other vendor devices. A consumer may view the menu 60 on the WPD display 6 to see the available products and make selections with WPD input device 8. When a final selection is made by the consumer, the WPD 2 will request authorization for the purchase by contacting authorization provider 30. Authorization provider 30 may request user identification before approval. Identification may be provided through the use of a confidential PIN number or for increased security may be provided by biometric identification device 10. When identification is verified, authorization provider 30 will check account status and</p>
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**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>approve or deny the transaction according to internal rules. If approval is granted, an authorization approval is transmitted to WPD 2 and a transfer of funds request is transmitted to the consumer's financial institution 40 who will transfer appropriate amounts of funds to the accounts 71, 72 and 73 of vendors who were selected in the consumers menu selection on the WPD 2.</p> <p>Smith at Para 0038</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[16.1]	<p>The smartphone of claim 10, wherein said operations further comprise:</p>	<p>To the extent the preamble is limiting, Smith discloses “the smartphone of claim 10, wherein said operations further comprise:” See e.g.:</p> <p>Claim 10, supra.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
[16.2]	<p>transmitting third data to a second device; the second device being distinct from the first device and</p>	<p>Smith discloses “transmitting third data to a second device; the second device being distinct from the first device and further being distinct from the first entity; and” See e.g.:</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

	<p>further being distinct from the first entity; and</p>	<p>[7.2], supra.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
<p>[16.3]</p>	<p>receiving by the smartphone fourth data from the second device relating to an acknowledgement and/or authorization of enabling a mode/function to pay for a financial transaction;</p>	<p>Smith discloses “receiving by the smartphone fourth data from the second device relating to an acknowledgement and/or authorization of enabling a mode/function to pay for a financial transaction;” See e.g.:</p> <p>[7.3], supra.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
<p>[16.4]</p>	<p>wherein said transmitting by the smartphone third data to a second device and said receiving by the smartphone fourth data from the second device are performed over the air interface that differs from the first air interface.</p>	<p>Smith discloses “wherein said transmitting by the smartphone third data to a second device and said receiving by the smartphone fourth data from the second device are performed over the air interface that differs from the first air interface.” See e.g.:</p> <p>[7.4], supra.</p> <p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-</p>

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.
[17.1]	The smartphone of claim 10, wherein said operations further comprise:	To the extent the preamble is limiting, Smith discloses “the smartphone of claim 10, wherein said operations further comprise:” See e.g.:  Claim 10, supra.  Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.
[17.2]	responsive to performing a financial transaction, causing data to be transmitted selectively to a plurality of predetermined devices and further causing data to be received selectively from said plurality of predetermined devices.	Smith discloses “responsive to performing a financial transaction, causing data to be transmitted selectively to a plurality of predetermined devices and further causing data to be received selectively from said plurality of predetermined devices.” See e.g.:

Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith

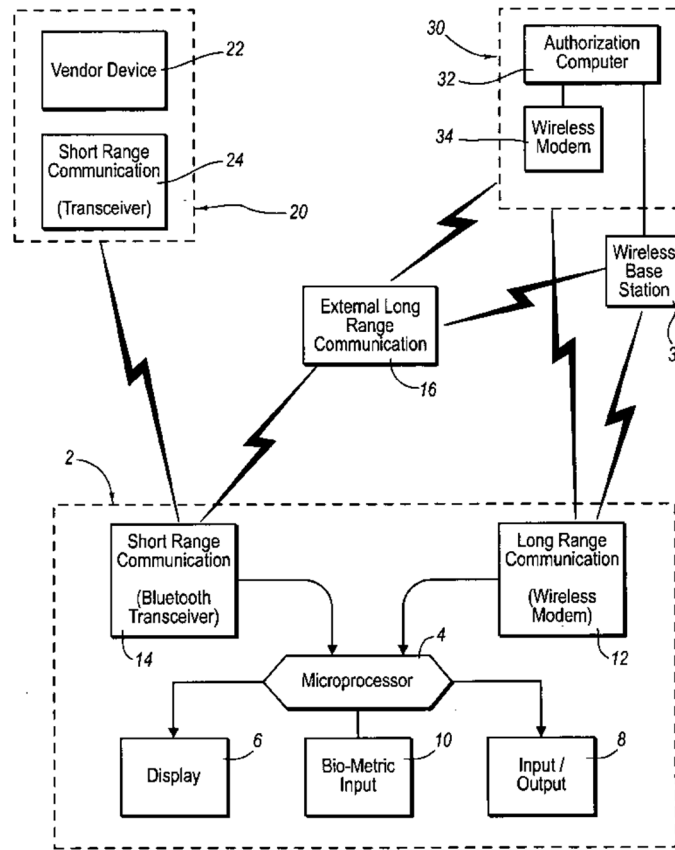
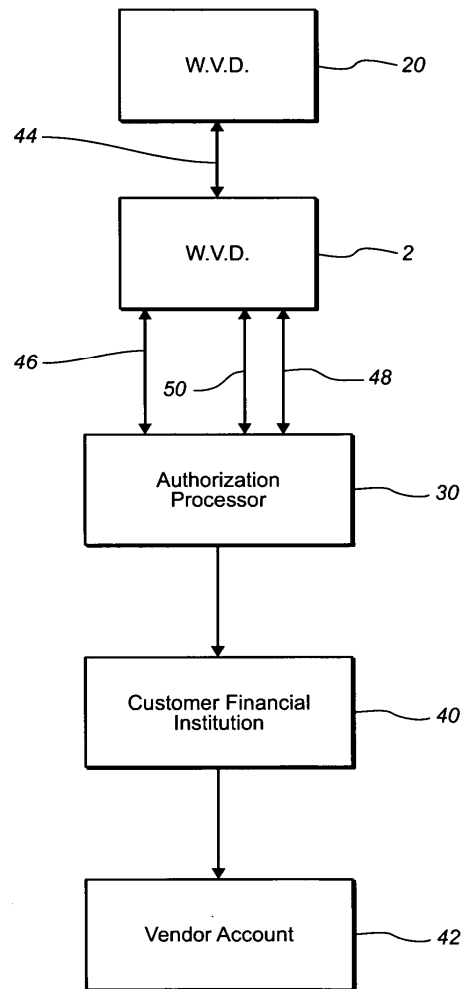


Figure 1

Smith at Figure 1

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**



**Figure 2**

Smith at Figure 2

Exhibit 432-A13  
Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith

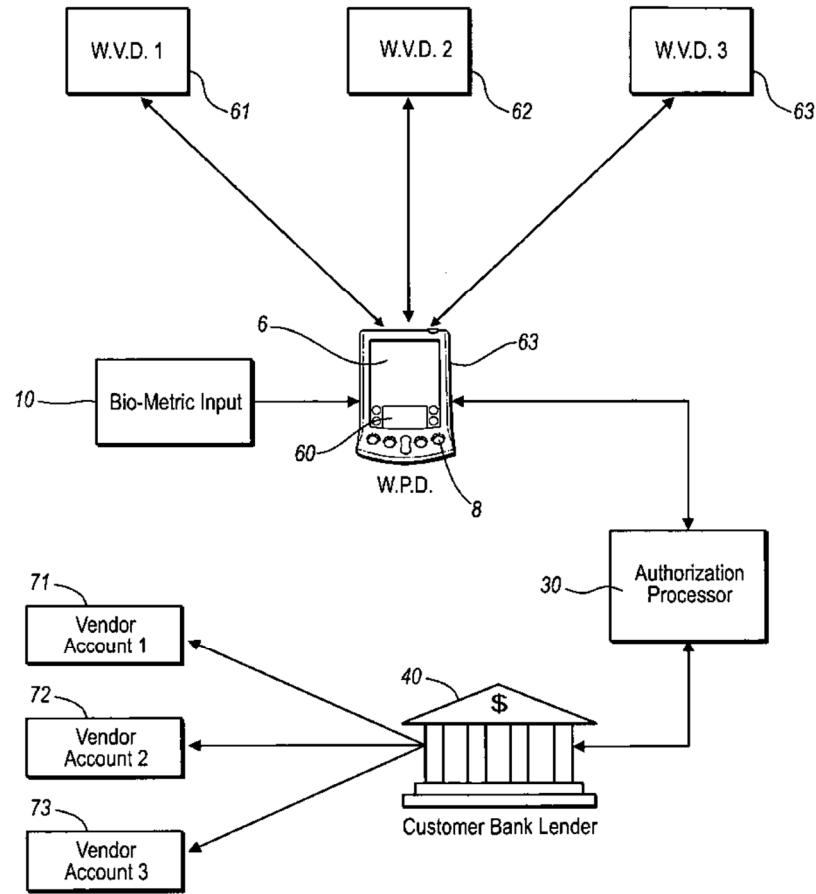


Figure 3

Smith at Figure 3

**Exhibit 432-A13**  
**Invalidity Chart for U.S. Patent No. 10,674,432 In View of Smith**

		<p>Furthermore, this claim element is obvious in light of Smith itself, when combined with any of the other references as charted for this claim element in Exs. 432-A01-A23, Ex. 432-B, and/or when combined with the knowledge of one of ordinary skill in the art. Motivations to combine may come from the knowledge of the person of ordinary skill themselves, or from the known problems and predictable solutions as embodied in these references. Further motivations to combine references and additional details may be found in the Cover Pleading and Ex. 432-B.</p>
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