UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ROKU, INC.,

Petitioner,

v.

VIDEOLABS, INC.,

Patent Owner.

PTAB Case No. IPR2025-00072

Patent No. 7,233,790

DECLARATION OF JAMES OLIVIER, PH.D. IN SUPPORT OF PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 7,233,790

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I. INTRODUCTION AND SUMMARY OF TESTIMONY

1. My name is James Olivier. I am currently an Adjunct Professor in the Telecommunications and Network Engineering Program at Southern Methodist University's Graduate School of Electrical Engineering, where I teach Multiprotocol Labelled Switching ("MPLS") networked enabled applications. I am also the owner of Olivier Consulting, where I provide consulting services for advanced network/product design along with intellectual property consulting.

2. I have been engaged by Roku, Inc. ("Roku") as a consultant in connection with Roku's Petition for *Inter Partes* Review ("IPR") of U.S. Patent No. 7,233790 (the "'790 patent").

3. I understand that the '790 patent is assigned to VideoLabs, Inc. ("Patent Owner" or "VideoLabs").

4. This Declaration is based on the information currently available to me. To the extent that additional information becomes available, I reserve the right to continue my investigation and analysis, which may include a review of documents and information that have not yet been produced, as well as testimony from depositions that have not yet been taken.

5. All of the opinions set forth in this Declaration are based on my own personal knowledge, professional experience, education and judgment, in consideration of the documents, materials and information that I reference.

6. In connection with my work as an expert in this matter, I am being compensated at $685.00 per hour for consulting services, including time spent testifying at any hearing that may be held. I am also being reimbursed for reasonable and customary expenses associated with my work in this case. I receive no other forms of compensation related to this case. No portion of my compensation is dependent or otherwise contingent upon the results of this proceeding or the specifics of my testimony.

7. I reside in Dallas, Texas, and I am a citizen of the United States of America.

A. Qualifications

8. I possess the knowledge, skills, experience, training, and education to form an expert opinion and testimony in this case. I am an expert in the field of wireless and networking technologies. I have been an expert in this field since before June of 2002. In formulating my opinions, I have relied upon my training, knowledge, and experience in the relevant art. A copy of my curriculum vitae is attached to this Declaration as EX1004 and provides a description of my relevant experience, including my academic and employment history, publications, U.S. patents and patent applications, committee participation, and cases I have participated in over the past four years.

9. I have a Ph.D. from The Ohio State University in Electrical Engineering

with minors in Discrete Mathematics, Computer Science, and Microelectronics. My Ph.D. dissertation was based on coding theory and was titled "Concurrent Error Detection in Arithmetic Processors using gAN Codes", in which I developed new codes for use in Arithmetic Processors such as microprocessors. In order to pursue this research, I took a number of advanced classes in both coding theory and in the advanced mathematics used in coding theory which is known as Discrete Mathematics. I have published papers on coding theory and continued my work in coding theory for arithmetic processors while at General Motor Research Laboratory.

10. I have extensive experience in wireless systems design and development and have specialized in cellular communications product development. I have developed and designed equipment for wireless networks since my time at AT&T Bell Laboratories in 1990's, where I worked on AT&T 5ESS, Network Control Point, and Autoplex Series base stations as a Member of the Technical Staff. It was there where I first began my work with telecommunication standards bodies as a contributing member of the Asynchronous Transfer Mode ("ATM") Forum. Later at DSC, I was the Senior Manager of the ATM systems engineering group developing ATM packet switches for a new generation base station for Motorola's use in their Centralized Base Station Controller. While at DSC, I was also their corporate representative to the ATM Forum, participating in bi-monthly standards

body development. I was one of the first contributors to the wireless standards at the ATM Forum. At DSC I was also a responsible for architecture and development of DSC's Intelligent Network product line. These products demonstrated at SuperComm 1996, a U.S. telecommunications trade show which showed the integration of streaming media servers together with the interactivity of the Internet.

11. At Samsung, I was a Principal Engineer for wireless broadband services over Universal Mobile Telecommunications System ("UMTS"). UMTS is a third-generation ("3G") broadband standard developed by the 3rd Generation Partnership Project ("3GPP"). At Samsung Telecommunications America, I worked on designing their next-generation cellular switch, a UMTS mobile switching center ("MSC"). While at Samsung, I was also their corporate representative to the International Telecommunication Union ("ITU"), the United Nations agency responsible for standardizing information and communication technologies. The ITU, under its International Mobile Telecommunications-2000 effort, was part of the 3GPP standards body. It was there that I participated in the development of standards for advanced wireless networks. While at Samsung, I was responsible for the "services portion" of the UMTS switch. This subsystem provided Internet service, email, and the like to the subscribers. It was here where I was first introduced to Wireless Application Protocol ("WAP").

12. At Marconi, I worked on several systems for the access market, such as

Digital Subscriber Line ("DSL") modems and Digital Subscriber Line Access Multiplexers ("DSLAMs"), along with the design of point-to-point wireless systems. At Navini Networks, I was responsible for layer 2 and layer 3 network protocols for their Wideband Code Division Multiplexed Access ("WCDMA") wireless base stations and broadband modems. These layers were responsible for packet transmissions for various services over the WCDMA air interface. Here I was also responsible for the development of a Single Sign On ("SSO") system which allowed users to gain information relating to their wireless subscription and delete or add services.

13. From 2003 to the present, I have worked as a consultant for various companies to develop networking systems and provide technical consulting on intellectual property.

14. I was previously Program Lead for Transformational Technology at the Hunt Institute for Engineering and Humanity, which is part of the Lyle School of Engineering at Southern Methodist University ("SMU") in Dallas, Texas. SMU's Hunt Institute's mission is to "partner with leaders in business, academia, NGOs and government, in order to develop and scale sustainable and affordable technologies and solutions to the challenges facing people locally and globally." See https://www.smu.edu/Lyle/Institutes/HuntInstitute (last visited March 5, 2021). Among the transformational technologies I investigated at the Hunt Institute were

the Internet of Things ("IoT"), which makes extensive use of Fourth-Generation and Fifth-Generation networks.

15. I am a co-inventor of U.S. Patent No. 8,334,775 issued on December 18, 2012 and entitled "RFID-Based Asset Security and Tracking System, Apparatus and Method." This invention relates to a Radio-Frequency Identification ("RFID")-based Global Positioning System ("GPS") tracking system to provide control and security of assets. This system integrates an RFID-based detection system with a conventional GPS tracking system. The GPS tracking system includes GPS receivers connected over a network to a centrally-based GPS monitoring system.

16. I have opined on the meaning of claim terms to one of ordinary skill in the art on numerous occasions. *See* EX1004. For example, I provided opinions on the meanings of claim terms in *QPSX Developments 5 Pty Ltd. v. Nortel Networks, Inc.* and *In the Matter of Certain Wireless Devices, Including Mobile Phone and Tablets II*, USITC Inv. No. 337-TA-905.

17. Because of my background, training, and experience, I am qualified as an expert to explain the background of the technology encompassed by the '790 patent, as well as the meaning that the claim terms of the '790 patent discussed herein would have had to a person of ordinary skill in the art ("POSITA") in 2002 reading the claims in light of the specification and file history.

B. Materials Reviewed

18. I have reviewed all of the materials cited herein and identified in the Exhibit List above, including the '790 patent and its file history, and the prior art references discussed in detail below.

C. Legal Principles

19. I am not a patent lawyer, but I have consulted on patent-related issues. I understand that the claims of a patent define the invention or inventions covered by the patent. I further understand that the language of the claims should be interpreted as it would be understood by a POSITA at the time of the invention (which I understand is presumed to be the date the patent application was filed absent other evidence), in light of the specification and prosecution history. I have applied this ordinary meaning in my analysis below, unless otherwise indicated.

20. I understand that a patent claim is anticipated under 35 U.S.C. § 102 if every element or limitation of the claim is disclosed either expressly or inherently in a single prior art reference.

21. I understand that a patent claim is obvious under 35 U.S.C. §103 if the claimed subject matter as a whole would have been rendered obvious to a POSITA at the time of the invention. More specifically, I understand that a patent claim is obvious if any differences between it and what is disclosed in the prior art would have been obvious to a POSITA at the time of the invention. I also understand that the obviousness analysis considers the level of ordinary skill in the art at the time of

the invention. I understand also that certain criteria, such as copying, commercial success, and long but unresolved need are also factors that should be considered. I am not aware of any evidence of secondary considerations of non-obviousness of the challenged claims. As discussed below, I have determined that the challenged claims are clearly obvious. If Patent Owner argues that any so-called secondary considerations of non-obviousness apply to the challenged claims, I reserve the right to offer opinions in response to such arguments.

D. Level of ordinary skill in the art

22. As discussed above, I understand that when interpreting the claims of the '790 patent, I should do so based on the perspective of a POSITA as of the relevant priority date. I understand that Patent Owner has not yet taken a position with regard to the priority date of the challenged claims in related litigation. However, on its face, the '790 patent claims priority to Provisional Application No. 60/392,999, filed on June 28th, 2002. I do not take a position in this declaration whether the challenged claims are in fact entitled to this priority date because all of the asserted prior art is prior art to the '790 patent even in view of this priority date. However, if Patent Owner offers arguments or evidence asserting that the asserted prior art is not prior art to the '790 patent, I reserve the right to offer additional opinions in rebuttal.

23. For purposes of this proceeding, a POSITA as of June 2002 would have

had a bachelor's degree in computer science, computer engineering, or electrical engineering, or a similar field and two years of experience digital multi-media content distribution and management and associated system infrastructures. I believe that additional graduate education could substitute for work experience, just as significant work experience could substitute for formal education. My opinion about the level of ordinary skill would not change if the claims were only entitled to the June 19th, 2003 actual filing date of the '790 patent.

E. Summary of opinions

24. I understand that Roku is asking the Board to institute IPR of Claims 1-14 (the "challenged claims") of the '790 patent. I understand that Roku alleges that the challenged claims are obvious over U.S. Patent No. 7,363,384 ("Chatani") (EX1005) and obvious over Chatani in view of U.S. Patent Application No. 2003/0084177A1 (Mulligan) (EX1006).

25. It is my opinion that the teachings of Chatani, alone and in view of the teachings of Mulligan, renders the challenged claims obvious, as I explain below.

II. OVERVIEW OF THE TECHNOLOGY

A. Relevant State of the Art

26. In the early 2000's there was a need to allow access to the growing quantity of digital content on the Internet by wireless devices such as cell phones. This was a direct result of the introduction of new standards such as UMTS which

supported a maximum transfer rate of up to 42 Mbit/s.

27. This newly available content could take a number of different forms such as and could be accessed web browsers or be supplied over the air, 'OTA'. Web browsers access web pages and make use of user agent strings to identify the application, operating system the vendor of the software making the request. The OTA network allows service providers to directly update software or applications on a subscriber's phone.

28. Many different cell phone manufactures existed at the time, each running different capabilities and operating systems. For example, Nokia released the 8910 in 2003 which had Short Message Service, 'SMS', Multimedia Message service, 'MMS, and Wireless Application Protocol, 'WAP' capabilities. Siemens introduced the SXi which had built in games and support to download even more games OTA. Samsung introduced the SGH-E700 which had MMS and support for Java applications.

29. Java was a common component of consumer wireless devices at the time as it was based on the Java Virtual Machine, 'JVM' which allowed it to run on a variety of hardware platforms. Java applets could run on these JVMs. A particular type of java applet is a MIDlet which makes use of the Mobile Information Device Profile to define its capabilities.

30. Wireless Application Protocol was collection of standards in the earlier

2000s which defined a way in which wireless subscribers could browse content such as sports, weather and news of cellular networks. The WAP standards incorporated a WAP push, which allowed service providers to directly push content to a mobile handset.

B. Overview of the '790 patent

31. The '790 patent (EX1001) is based on Application No. 10/600,746 filed on June 19th, 2003 with six listed inventors. The Abstract explains that the patent is directed to a download manager that manages the publication, purchase and delivery of digital products from multiple suppliers to wireless services subscribers in multiple domains.

32. As background to the presumed invention, the '790 Patent describes that "With new mobile device providing a wider range of capabilities, there [was] increasing demand among the users of these devices (i.e., wireless services subscribers) for new and interesting types of digital content," "such as games and other applications, images, ring tones, screensavers, wallpapers, etc." '790 patent, 1:40-45. The '790 Patent further describes potential inconveniences of acquiring those digital content, including the need for users to visit different web sites of different suppliers for different types of content, and including the need for content suppliers to make content available for different devices that may have different technical requirements. '790 patent, 1:45-2:16. The '790 Patent proposes a server

system including a download manager that makes products available to wireless services subscribers and a product manager that provides a centralized product catalog. '790 patent, 2:50-3:3, 3:63-4:32, 6:46-50.

33. Figure 9 of the '790 Patent "shows a process by which the catalog is displayed to a subscriber." '790 patent, 11:64-12:18.

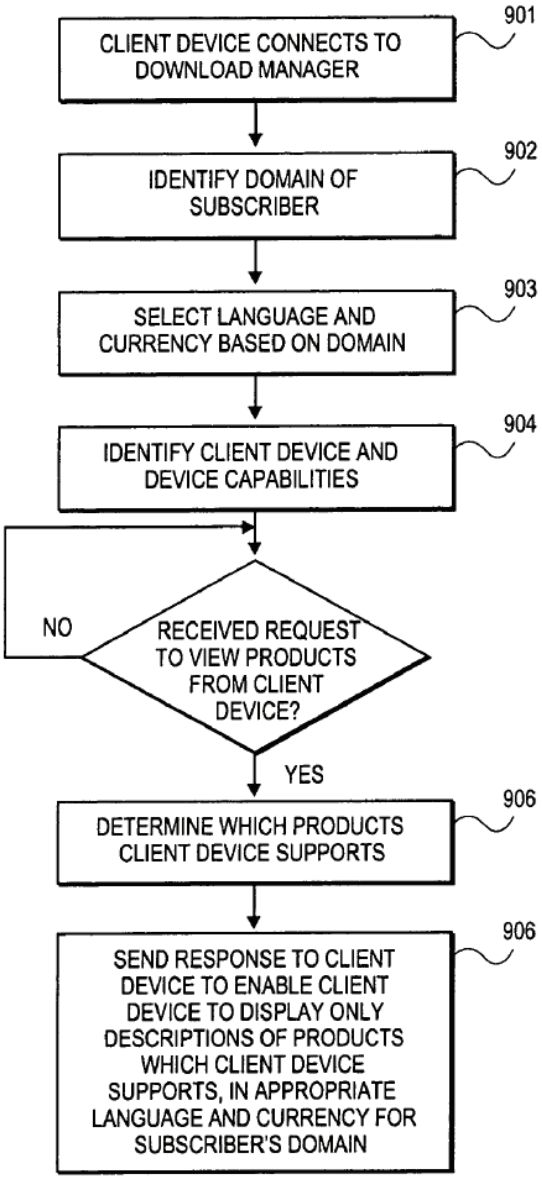


FIG. 9

34. Steps 904, 906, and 907 in particular describe that the download manager identifies a client device and its capabilities, determines which products the client device supports, and then displays the supported products. A product catalog, which contains descriptions of all products, is referenced to determine the products

supported by the client device. '790 patent, 9:37-56. A product "may have multiple implementations published on the download manager, each of which may be designed for a different specific client device or set of client devices." '790 patent, 9:44-48.

35. The '790 further states that different devices were known to support different provisioning models (for example "Nokia-COD phones" and "Sprint-GCD OTA phones") and thus functions to "provision a particular product in a particular client device … based on the device capabilities of the client device as well as the content type of the best-fit implementation." '790 patent, 12:65-13:3.

C. The Challenged Claims

36. The '790 patent has four independent claims and nine dependent claims. Representative Independent claim 2 is shown below.

37. Claim 2 recites limitations a-e listed below:

> [2pre] A method of providing access to digital content for use on wireless communication devices, the method comprising:
>
> [2a] receiving and storing in a server system a plurality of items of digital content to be made available for use in wireless communication devices used by a plurality of wireless services subscribers, including receiving and storing a plurality of different implementations of at least one of the items of digital content, where each implementation of any given item of digital content corresponds to a different set of device capabilities:

[2b] operating the server system to maintain a product catalog containing a description of the items of digital content, wherein the product catalog includes, in association with each item of digital content, a reference to each implementation of said item of digital content;

[2c] receiving a request from a wireless device used by one of the subscribers;

[2d] in response to the request, selecting a portion of the product catalog to be presented to the subscriber, based on device capabilities of the wireless device used by the subscriber; and

[2e] presenting the selected portion of the product catalog to the subscriber via a wireless network, as presented to the subscriber, provides only a single description of each item of digital content in said portion, regardless of the number of implementations of each said item,

38. I understand that Roku is challenging claims 1-14 (the "challenged claims") of the '790 patent.

D. Alleged Priority Date

39. The '790 patent claims priority to Provisional Application No. 60/392,383, filed on June 28th, 2002. I do not necessarily agree that the '790 patent is entitled to this priority date. However, all of the prior art references discussed herein in the grounds of invalidity have earlier effective prior art dates. If VideoLabs asserts that any of the prior art references discussed herein are not prior art to the '790 patent, I reserve the right to respond to such assertions and offer additional opinions about whether the subject matter of the challenged claims of the '790 patent

is supported by the provisional application, as well as respond to any assertions that VideoLabs may make about any prior invention of the subject matter of the '790 patent.

E. Prosecution of the '790 patent

40. I have reviewed the prosecution history of the '790 patent. EX1002 ("'790FH"). The applicant filed Application No. 10/600,746 on June 19th, 2003.

41. During prosecution, the Examiner rejected claims based on prior art, such as Namba (U.S. 6,912,385) and Gidron (U.S. 2003/0060188), but also found some claims immediately allowable. '790FH, 88-92.

42. In an Amendment, the Patent Owner appeared to accept allowable claims or claim limitations by canceling rejected claims (for example pending claims 1-4), amending claims to depend from allowed other allowed claims (for example pending claim 9), and adding new claims that contain similar limitations as the allowed claims (for example, pending system claims 12 and 13 contain similar limitations to pending method claims 5 and 6). '790FH, 108-114.

43. The Examiner allowed the claims of the '790 Patent, stating that the limitation of "receiving and storing a plurality of different implementations of the items of content" was not taught in the prior art. '790FH, 123.

44. At no time did the Examiner substantively discuss any reference substantially similar to the combination of references discussed in this Petition. As

discussed further below, the various elements that Applicants claimed were missing in the prior art raised by the Examiner during prosecution are all taught by the combination of references discussed in this Petition.

F. Reexamination of the '790 patent

45. Years later, on June 23rd, 2023, another party, Unified Patents, LLC, requested reexamination of the '790 Patent under serial number 90/015,063. Unified Patents presented one primary prior art reference, Senoh (U.S. 2002/0078178), and several secondary prior art references, Agaharam (U.S. 6,035,339), Kenner (U.S. 6,421,726), and Li (U.S. 6,345,279). EX1014 ("'790EPR"), 649-863.

46. The Examiner immediately confirmed the patentability of independent claims 2 and 9 over Senoh but rejected independent claims 1 and 8 as being unpatentable over Senoh in view of Agaraham. '790EPR, 897-907. The Patent Owner amended claims 1 and 8 to "very closely track the limitations of claim 2" to overcome the rejections based on Senoh. '790EPR, 917-934. Thus, as a result of the reexamination, each of the independent claims of the '790 Patent included limitations substantially similar to those found in claim 2.

47. At no time did the Examiner substantively discuss any reference substantially similar to the combination of references discussed in this Petition. The Patent Owner did identify a prior art reference from the same family as Chatani, and also identified the Mulligan prior art reference in an Information Disclosure

Statement, but did not provide any particular details about their relevance to the ’790 Patent. ’790EPR, 954-956. The Examiner did not appear to consider these prior art references with any particularity. ’790EPR, 1129.

G. Prior Inter Partes Review of the ‘790 patent

48. The ’790 Patent was also involved in another *inter partes* review filed by Netflix, Inc., on February 22nd, 2023, based on prior art “Mehta” (U.S. 2002/0131404) and “Schlapfer” (a paper titled *Mobile Applications with J2ME*). EX1008, EX1009.

49. On October 2nd, 2024, all claims 1-14 were determined to be unpatentable. EX1015.

H. Claim Construction

50. I understand that Roku is not proposing constructions for any claim terms in the challenged claims beyond the plain and ordinary meaning, which I am applying to the claim terms. I understand that the parties have not yet proposed constructions for any claim terms in the challenged claims in the related district court litigation.

51. I have been informed that the ’790 Patent is involved in three different district court litigation cases between the Patent Owner and (1) Roku, Inc., (2) Netflix Inc., and (3) Starz Entertainment, LLC. I have also been informed that in the Starz Entertainment case, the court issued a claim construction order (EX1007) with

the following terms:

Term	Court's Construction
"wireless communication devices" / "wireless device" [Claims 1-2, 4-9]	No construction necessary (not restricted to "personal mobile devices")
"content" / "digital content" / "product" / "digital product" [Claims 1-2, 4-6, 8-9]	"software and/or data embodying a file for delivery or purchase"
"implementation" [Claims 1-2, 4, 8-9]	"one or more binary files (or "binaries"), software files, software applications, and/or executable files representing a product"

52. As I stated above, I do not believe constructions of the '790 Patent's terms are necessary, but to the extent that the Starz Entertainment Court's constructions are to be applied here, the prior art discloses the same features as I discuss below.

III. UNPATENTABILITY OF THE '790 PATENT CLAIMS

A. Ground 1: Claims 1-4 and 8-11 are obvious over Chatani

53. For the reasons discussed below, in my opinion Chatani renders claims 1-4 and 8-11 of the '790 Patent obvious.

1. The Prior Art

a. Chatani (U.S. Patent No. 7,363,384)

54. U.S. Patent No. 7,363,384 ("Chatani") (EX1005) is titled "Selection of Content in Response to Communication Environment".

55. Chatani is directed to the transfer of content from a service manager node to a user node, in a computer network, where the content is "particularly suited for the hardware, software, and communication capabilities of the user node." Chatani, Abstract.

56. Like the '790 Patent, Chatani describes that the type of content and services available over the Internet had grown to include a variety of content (such as text, graphics, animation, video, sound, games, and other applications), delivery methods (such as push or pull technologies and other transport technologies). Chatani, 1:29-61. Additionally, different types of hardware and communication technologies made it difficult for content providers to tailor content appropriately. Chatani, 2:20-38.

57. Chatani therefore proposes to manage the transfer of content over a network to a user node by determining the characteristics and capabilities of a user node and then arrange a content transfer that is "particularly suited for the hardware, software, and communication capabilities of the user node," which may be performed automatically. Chatani, 2:62-3:20.

58. With respect to the capabilities of user devices, Chatani describes that the user device's communication environment and hardware configuration are relevant and include, for example: the bandwidth of the user device network interface, the bandwidth of the user device link to the network, the type of link,

latency data, the device's processor type, speed, availability of storage, video and sound processing capabilities, etc. Chatani, 6:27-61, 9:25-44. A service manager device determines the capabilities of a connected user device and administers a web page of content available to that user device. Chatani, 9:9-12, 11:1-14, 12:42-61.

59. For each particular item of content, the service manager device also maintains different service levels that may be available to a user device based on its capabilities. Chatani, 9:57-10:59. In example Table 1, below, Chatani illustrates a particular item of content with four service levels, the sets of user device capabilities required to be in each service level, and the available types and quality of the item of content for each service level. Chatani, 10:28-52.

TABLE 1

Required User Device Capabilities	Characteristics of Service Level
Analog modem (bit rate of 56 kbps or less), no hard disk, latency greater than 1 ms.	Only text files available.
Analog modem (bit rate of 56 kbps or less), hard disk present, latency less than 1 ms.	Text files available. Video game software applications available.
Cable modem or DSL line (bit rate of at least 2 Mbps), no hard disk, latency of less than 1 ms.	Text files available. Video game software applications available. Video streaming available. CD quality sound files available.
Cable modem (bit rate of at least 2 Mbps), hard disk present, latency of less than 1 ms.	Text files available. Video game software applications available. Video streaming available. CD quality sound files available. Higher resolution video streaming made available.

60. The service manager device preferably selects the service level of content automatically, rather than permit the user to peruse the available service

levels and manually make a selection. Chatani, 10:60-11:6. The selected content is then transferred to the user device from the service manager device (if the content is stored locally) or from a content provider device. Chatani, 7:25-35, 11:15-28, 13:18-23.

61. Additionally, Chatani describes features that are "examples" or "embodiments" of aspects of its invention as a whole. See, for example, Chatani, 5:26-29, 9:11-12, 12:21-24. For instance, Chatani explains that "it should be understood that the present invention has wide applicability with respect to search query systems generally" and many configurations are to be considered. Chatani, 16:9-21. And, where Chatani provides more details of the same components in one "embodiment" compared to another, a person of ordinary skill in the art would have recognized that such disclosures are not mutually exclusive, and they should instead be understood together as part of Chatani's whole disclosure. For example, Chantani discloses several embodiments where the user device capabilities are determined before the user can select content and some where the user device capabilities are determined after the user selects content, such disclosures are not mutually exclusive. See Chatani, 11:7-14, 12:21-24. Thus to the extent it may be argued that different examples or embodiments are relied on from Chatani, a person of ordinary skill in the art would have determined that Chatani nevertheless renders obvious the '790 Patent's claims based on the same disclosures of the same network system 100,

user device 110, service manager device 115, and content provider device 120. In implementing a system according to the disclosures in Chatani, it would have been obvious for a person of ordinary skill in the art to experiment with the various examples provided therein, which all relate to the interactions between the same components, to achieve obvious configurations.

2. Claim 1

a. 1[pre] A method of providing access to digital content for use on wireless communication devices, the method comprising:

62. In my opinion, Chatani discloses a method of providing access to digital content for use on wireless communication devices. See Claim 2[pre].

b. 1[a.i] receiving and storing in a server system a plurality of digital items of content to be made available for use in wireless communication devices used by a plurality of wireless services subscribers,

63. In my opinion Chatani discloses receiving and storing in a server system a plurality of digital items of content to be made available for use in wireless communication devices used by a plurality of wireless services subscribers. See Claim 2[a.i](a)-(b).

c. 1[a.ii] including receiving and storing a plurality of different implementations of at least one of the items of digital content, where each implementation of any given item of digital content corresponds to a different set of device capabilities;

64. In my opinion Chatani discloses receiving a plurality of different implementations of at least one of the items of content, where each implementation

of any given item of content corresponds to a different set of device capabilities. See Claim 2[a.ii](a)–(b).

d. 1[b] operating the server system to maintain a product catalog containing a description of the items of digital content, whereinthe product catalog includes, in association with each item of digital content, a reference to each implementation of said item of digital content;

65. In my opinion Chatani discloses this limitation. See Claim 2[b](a)-(b).

e. 1[c] receiving a request from one of the wireless communication devices;

66. In my opinion Chatani discloses this limitation. See Claim 2[c]. Although claims 1[c] and 2[c] are not identical, they are substantially similar. Specifically, Chatani's described user device discloses "one of the wireless communication device[]" in the same way it discloses "a wireless device used by one of the subscribers."

f. 1[d] in response to the request, selecting a portion of the product catalog to be presented on the one wireless communication device, based in part on device capabilities of the one wireless communication device; and

67. In my opinion Chatani discloses this limitation. See Claim 2[d]. Although claims 1[d] and 2[d] are not identical, they are substantially similar, and Chatani describes both a "wireless communication device[]" and "wireless device" as I discussed for claim 1[c] above.

g. 1[e] presenting the selected portion of the product

catalog to the one wireless communication device, such that the selected portion, as presented, provides a single description of each item of digital content in said portion, regardless of a number of implementations that are available for each said item.

68. In my opinion Chatani discloses this limitation. See Claim 2[e](a)-(b). Although claims 1[e] and 2[e] are not identical, they are substantially similar, and Chatani describes both a "wireless communication device[]" and "wireless device" as I discussed for claim 1[c] above. Additionally, Chatani's description for a "single description … regardless of" a "number of implementations" in claim 2[e] below also describes the same for the subset "implementations that are available" that is claimed in claim 1[e].

3. Claim 2

a. 2[pre]: A method of providing access to digital content for use on wireless communication devices, the method comprising:

69. In my opinion, Chatani discloses a method of providing access to digital content for use on wireless communication devices. Chatani discloses that a service manager device 115 administers a Website and serves one or more Web pages, accessible to user devices 110, that list available digital content, e.g. software or data, for download.

70. See, for example, the following portions of Chatani:

- 5:1-11 ("With reference still to FIG. 1, the service manager device 115 comprises a computer system that is configured to communicate over the network 135, such as using the standard protocols of the

World Wide Web. As mentioned, the **service manager device 115** functions as an intermediary between the **user device 110** and the content provider device 120 regarding the transfer of content therebetween over the network 135. In other words, the **service manager device 115 functions as a centralized content** clearing house through which a **user can review, select, and download content** that is available over the **network 135**.")

- 5:12-29 ("In accordance with these functions, the service manager device 115 preferably administers a Web site through which a user can access and download content from the network 135. The service manager device 115 includes a server 150 that maintains and serves one or more Web pages that can be accessed via the user device 110. The server 150 may comprise a server application that executes in memory of the service manager device 115, or may comprise a separate computer component of the service manager device. FIG. 2 shows an exemplary content download Web page 210 within a browser window 220 that is displayed on a display screen of the user device 110. The Web page 210 preferably includes a user interface that presents a listing of content that the user may access, such as by clicking on an appropriate hyperlink or selecting from a menu. For example, the Web page 210 may include a listing of **computer game applications** that the user can download or a listing **of music files or video files that the user can download**.")

- See also 4:21-25.

71. Chatani discloses that the user device can be a mobile phone, or a personal digital assistant, which are both wireless communication devices.

72. See, for example, the following portions of Chatani:

- 4:46-48 ("For example, the user device 110 may comprise a desktop computer, a laptop computer, a mobile phone, or a personal digital assistant.")

73. In addition, Chatani discloses that the network 135 can be a wireless network.

74. See, for example, the following portions of Chatani:

- 4:48-55 ("The user device 110 includes a network interface 146 that enables communication over a communication link 147 between the network 135 and the user device 110. The link 147 could be wired or wireless.")
- See also 1:65-66.

b. 2[a.i](a): receiving and storing in a server system a plurality of items of digital content

75. In my opinion, Chatani discloses receiving and storing in a server system a plurality of items of digital content. First, Chatani discloses that the server manager device 115 contains server 150 and therefore is a server system. See, for example, the following portions of Chatani:

- 5:15-17 ("The service manager device 115 includes a server 150 that maintains and serves one or more Web pages that can be accessed via the user device 110. The server 150 may comprise a server application that executes in memory of the service manager device 115, or may comprise a separate computer component of the service manager device.")

76. Next, Chatani discloses that this server system, service device manager 115, receives and stores a plurality of items of digital content. Chatani discloses that the server manager device 115 receives and stores items of digital content locally.

77. See, for example, the following portions of Chatani:

- 7:26-31 ("the service manager device 115 causes the requested content to be transmitted to the user device 110 over the network 135 according to the previously-selected service level. If the content is stored locally to the service manager device 115, then the server 150 simply serves the content to the user device 110.")

- 11:25-28 ("The content could also reside at the service manager device 115, in which case the service manager device 115 would simply transfer the content to the user device 110.")

78. A POSITA would understand that in order for the service manager 115, which is not described as having the functionality create new digital content, to store, transmit or transfer digital content, it must have previously received the digital content and stored it.

79. In an embodiment, Chatani discloses that the service manager 115 could be combined with the content provider 120 in a single computer system. In such a situation the single computer system would be a server system that receives and stores digital content.

80. See, for example, the following portions of Chatani:

- 5:53-65 ("the content provider device 120 comprises any source of content 162 available to the user device 110 via the network 135. The content provider device 120 has access to content 162 that is stored in a local data store or in a data store that is available to the content provider device 120. The content provider device 120 device includes a network interface 163 that enables communication over a communication link 175 between the network 135 and the content provider device 120. The content provider device 120 further includes a server 165 that serves the content 162. It is appreciated that the content provider device 120 and the service manager device 115 could be combined into a single computer or system of computers.")

81. Additionally, to the extent that the Patent Owner contends that Chatani does not explicitly describe that the content stored locally at service manager device 115 had been first "received," a person of ordinary skill in the art would have been

motivated to modify the system to receive the content for storage at service manager device 115. Chatani describes the "Web [as] a collection of millions of linked documents that reside on computers throughout the world" and seeks to make a variety of content available to user devices, such as "software executable files (such as computer games) and other electronic data files, such as Web pages, text files, audio files, and video files."

82. See, for example, the following portions of Chatani:

- 1:29-33 ("The emergence of the World Wide Web (the "Web") resulted in a dramatic increase in the general public's interest in the Internet. The Web is a collection of millions of linked documents that reside on computers throughout the world and that are accessible via the Internet.")
- 4:21-25 ("As used herein, the term "'content'" refers to any type of electronic data that may be transferred over a computer network, including, for example, software executable files (such as computer games) and other… electronic data files, such as Web pages, text files, audio files, and video files.")

83. It would have been obvious to receive the content at service manager device 115 from other sources because a wide variety of content can be sourced from different content providers that make such content available. Moreover, it would be highly impractical to create all of the content at service manager device 115 itself—potentially costing vast amounts of time, processing power, and human manhours to generate content from scratch—when such content can be pooled from many different sources.

84. Chatani discloses that the content stored in the server manager device are items of digital content, such as executable files, electronic data files text files, audio files or video files.

85. See, for example, the following portions of Chatani:

- 4:21-26 ("As used herein, the term "content" refers to any type of electronic data that may be transferred over a computer network, including, for example**, software executable files** (such as computer games) and other electronic data files, such as **Web pages**, text files, audio files, and video files.")

c. 2[a.i](b): content to be made available for use in wireless communication devices used by a plurality of wireless services subscribers,

86. In my opinion, Chatani discloses the content is made available for use in wireless communication devices used by a plurality of wireless services subscribers. Chatani discloses user device may by a mobile phone, which are wireless devices or personal digital assistants which are typically wireless devices.

87. See, for example, the following portions of Chatani:

- 4:44-48 ("The user device 110 comprises any type of device that is configured to interact with and download content from the network 135. For example, the user device 110 may comprise a desktop computer, a laptop computer, a mobile phone, or a personal digital assistant.")

88. In addition, Chatani discloses the use of mobile phones and digital assistants to access the Internet for content, which access the content as registered wireless subscribers of the system.

89. See, for example, the following portions of Chatani:

- 1:65-66 ("Users can now access the Internet using mobile phones, personal digital assistants, and Web appliances")
- 9:22-24 ("service manager device 115 may associate the user device 110 with the data by using a username and password combination")

90. Chatani also discloses that the user device's network interface can be wireless.

91. See, for example, the following portions of Chatani:

- 4:51-55 ("The user device 110 includes a network interface 146 that enables communication over a communication link 147 between the network 135 and the user device 110. The link 147 could be wired or wireless.")

d. 2[a.ii](a): including receiving and storing a plurality of different implementations of at least one of the items of digital content,

92. In my opinion Chatani discloses receiving and storing a plurality of different implementations of at least one of the items of digital content.

93. By way of example, Chatani discloses that the service manager may maintain four different service levels for **a particular item of digital content**.

94. See, for example, the following portions of Chatani:

- 10:28-31 ("For example, Table 1 shows that the service manager device 115 may maintain **four service levels for a particular item of content** that is available from the content provider device 120, as follows:")

95. These four different service levels for a particular item of digital content represent four different implementations of the digital content. As Chatani discloses

maintaining four service levels for a particular item of digital content, Chatani discloses receiving and storing a plurality of different implementations of at least one of the items of digital content.

96. Additionally, Chatani discloses that there are service levels associated with items of the received digital content and these **service levels vary for each item of digital content**.

97. See, for example, the following portions of Chatani:

- 10:23-27 ("The service manager device 115 maintains a record of service levels that are available for a particular content provider and the associated minimum capabilities that are required. The available **service levels may vary for each item of content**.")
- See also 7:17-22.

e. 2[a.ii](b) where each implementation of any given item of digital content corresponds to a different set of device capabilities;

98. In my opinion Chatani discloses where each implementation of any given item of digital content corresponds to a different set of device capabilities. As described above in 2[a.ii](a), Chatani discloses different service levels associated with a particular item of digital content. Chatani further discloses that these service levels correspond to a different set of device capabilities.

99. See, for example, the following portions of Chatani:

- 9:57-62 ("After the service manager device 115 has determined the capabilities of the user device 110, it selects a service level to govern the transfer of the content to the user device 110. This operation is

represented by the flow diagram box numbered 540. The selection of a service level is preferably based upon the capabilities of the user device 110.")

- 10:15-27 ("The service manager device 115 preferably offers various service levels that may be selected for downloading content from the content provider device 120. The operator of the content provider device 120 preferably determines the characteristics of each level and specifies to the service manager device 115 the characteristics of the service levels, as well as the minimum user device capabilities that are required in order to make a service level available to the user device 110. The service manager device 115 maintains a record of service levels that are available for a particular content provider and the associated minimum capabilities that are required. The available service levels may vary for each item of content.")

- See also 10:53-59, 12:38-39.

100. Relevant device capabilities include, for example, the user device's rate of downloading data, speed and processing capabilities, amount of available memory, hard disk access speed, video and sound processing and output abilities, and ability to adhere to or process information according to certain protocols.

101. See, for example, the following portions of Chatani:

- 9:29-56 ("The capabilities of the user device relate to the rate at which the user device can download data, the speed and processing capabilities of the processor…, the amount of accessible and storable memory…, and the access speed of any hard disks…. The capabilities could also include… factors that affect the user device's ability to download content over the network 135, as well as the user devices ability to process and output content, such as the processing of graphic, video, and sound information.

  Furthermore, the user device capabilities could include other factors, such as whether the user device 110 can securely transmit and receive content according to a security protocol, such as the Secure

Socket Layer (SSL) protocol or secure HTTP (S-HTTP).

In determining the capabilities of the user device 110, the service manager device 115 preferably determines the maximum bit rate at which the user device 110 can download content from the network 135. The service manager device 115 also determines whether the bit rate is sufficient to support an audio or video streaming transmission to the user device 110. For example, a minimum bit rate of 2 megabytes per second may be viewed as necessary to support streaming transmissions. The minimum bit rate may be modified as necessary. Furthermore, the service manager device 115 determines whether the processor of the user device 110 supports streaming transmissions.")

102. By way of example, Chatani discloses that there is a correspondence between an implementation at a particular service level and the required user device capabilities for executing that implementation. Table 1 annotated below shows that relationship.

TABLE 1

Required User Device Capabilities	Characteristics of Service Level
Analog modem (bit rate of 56 kbps or less), no hard disk, latency greater than 1 ms.	Only text files available.
Analog modem (bit rate of 56 kbps or less), hard disk present, latency less than 1 ms.	Text files available. Video game software applications available.
Cable modem or DSL line (bit rate of at least 2 Mbps), no hard disk, latency of less than 1 ms.	Text files available. Video game software applications available. Video streaming available. CD quality sound files available.
Cable modem (bit rate of at least 2 Mbps), hard disk present, latency of less than 1 ms.	Text files available. Video game software applications available. Video streaming available. CD quality sound files available. Higher resolution video streaming made available.

103. As shown in the above annotated Table 1, an implementation for the service level in Table 1 that I have highlighted **blue**, i.e. a service level with the characteristic of providing video streaming, would correspond to a device with the capabilities of a "Cable modem or DSL line (bit rate of at least 2 Mbps), no hard disk, latency of less than 1 ms," while an implementation for the service level in Table 1 that I have highlighted **purple**, i.e. a service level with the characteristic of providing higher resolution video streaming, would correspond to a device with the capabilities of a "Cable modem (bit rate of at least 2 Mbps), hard disk present, latency of less than 1 ms."

f. 2[b](a) operating the server system to maintain a product catalog containing a description of the items of digital content,

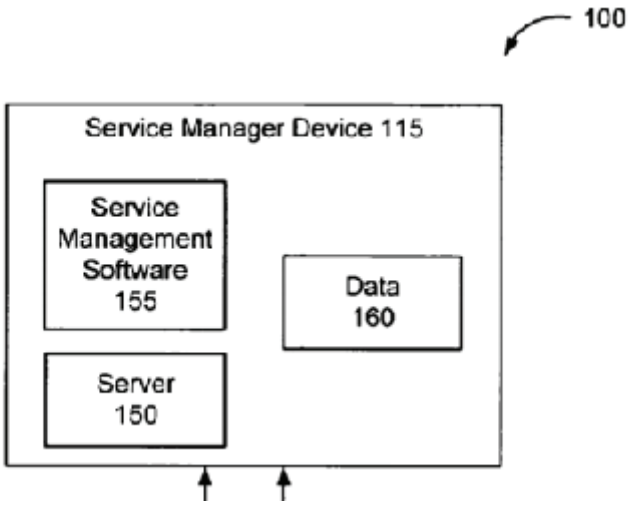
104. In my opinion Chatani discloses operating the server system to maintain a product catalog containing a description of the items. Chatani discloses that the service manager device 115 maintains in data store 160 a list of the items of digital content.

105. See, for example, the following portions of Chatani:

- 5:41-52 ("The service management software 155 preferably maintains in a data store 160 **a list of content that is available over the network** 135 via the service manager device 115. The service management software 155 also maintains the network location of each item of content, such as a uniform resource locator (URL) for content. For example, the service management software 155 could maintain a listing of content that is available from the content provider device 120, as well as the URLs associated with such

content. It is appreciated that the service management software 155 could maintain a listing of content available from a plurality of content provider devices.")

- Fig. 1



106. Chatani further discloses that these listings contain a description of the items of digital content, for example, being a computer game application, music or video files.

107. See, for example, the following portions of Chatani:

- 5:23-29 ("The Web page 210 preferably includes a user interface that presents a listing of content that the user may access, such as by clicking on an appropriate hyperlink or selecting from a menu. For example, the Web page 210 may include a listing of computer game applications that the user can download or a listing of music files or video files that the user can download.")

- 12:59-66 ("The content download list can be presented to the user in the form of a Web page that the service manager device 115 generates and transfers to the user device 110. FIG. 8 shows an exemplary content download Web page 805 within a browser window that is displayed on a display screen of the user device 110. The Web page 805 includes a downloadable list 807 of content for which the user device 110 can attain the requisite service level for

downloading.")

108. Additionally, Chatani discloses that this service management software provides product information describing the type of digital content.

109. See, for example, the following portions of Chatani:

- 6:6-12 ("The service management software 155 preferably provides information regarding the URL of the content, the type of content, such as whether the content comprises a Web page, a video file, or an audio file, the size of the content, and the transfer modes available for the content, such as whether the content can be transmitted in a streaming fashion.")
- 13:4-7 ("The lists 807, 809 of content preferably include a brief description regarding the characteristics of the content so that the user can gain an idea of what type of content is available.")

g. 2[b](b) wherein the product catalog includes, in association with each item of digital content, a reference to each implementation of said item of digital content;

110. In my opinion Chatani discloses that the product catalog includes, in association with each item of digital content, a reference to each implementation of the item of digital content. Chatani discloses there are various service levels associated with items of content.

111. See, for example, the following portions of Chatani:

- 10:23-27 ("The service manager device 115 maintains a record of service levels that are available for a particular content provider and the associated minimum capabilities that are required. The available **service levels may vary for each item of content**.")
- 10:28-52 ("For example, Table 1 shows that the service manager device 115 may maintain **four service levels for a particular item**

of content that is available from the content provider device 120…, as follows: [TABLE 1])

112. Chatani further discloses that the content is transferred to the user according to the selected level.

- 11:15-18 ("After the service level has been selected, the service manager device 115 causes the content to be transferred to the user device 110 according to the selected level, as represented by the flow diagram box numbered 550.")

113. In order to transfer the content at a selected service level, a POSITA would understand that there must be a reference, such as a link or connection or pointer, to each implementation of items of digital content.

114. Chatani discloses that URLs can be used to reference content. A POSITA would understand the URLs reference a particular file.

- 6:6-12 ("The service management software 155 preferably provides information regarding the URL of the content, the type of content, such as whether the content comprises a Web page, a video file, or an audio file, the size of the content, and the transfer modes available for the content, such as whether the content can be transmitted in a streaming fashion.")

- 5:41-52 ("The service management software 155 preferably maintains in a data store 160 a list of content that is available over the network 135 via the service manager device 115. The service management software 155 also maintains the network location of each item of content, such as a uniform resource locator (URL) for content.)

- See also 10:60-11:1, 12:31-58, 12:59-66.

h. 2[c] receiving a request from a wireless device used by

one of the subscribers;

115. In my opinion Chatani discloses receiving a request from a wireless device used by one of the subscribers. Chatani discloses that service manager device 115 receives requests for Web pages from user devices 110 navigating Web pages using, for example, menus and links, administered by service manager device 115.

116. See, for example, the following portions of Chatani:

- 5:12-29 ("In accordance with these functions, the service manager device 115 preferably administers a Web site through which a user can access and download content from the network 135. The service manager device 115 includes a server 150 that maintains and serves one or more Web pages that can be accessed via the user device 110. The server 150 may comprise a server application that executes in memory of the service manager device 115, or may comprise a separate computer component of the service manager device. FIG. 2 shows an exemplary content download Web page 210 within a browser window 220 that is displayed on a display screen of the user device 110. The Web page 210 preferably includes a user interface that presents a listing of content that the user may access, such as by clicking on an appropriate hyperlink or selecting from a menu. For example, the Web page 210 may include a listing of computer game applications that the user can download or a listing of music files or video files that the user can download.")

- 9:4-13 ("FIG. 5 is a flow diagram that shows the operations performed in transferring content from the content provider device 120 to the user device 110 over the network 135. In the first operation, represented by the flow diagram box numbered 510, the user device 110 submits a request for content. The user device preferably submits the request via a Web page administered by the service manager device 115. For example, a user could click on a link on such a Web page that displays a list of available content. The service manager device 115 receives the request from the user device 110.")

- 7:6-11 ("In the next operation, represented by the flow diagram box numbered 320, the user device 110 submits a request for content to the service manager device 115. As mentioned, the user device 110 could submit the request by a user selecting a hyperlink on the Web page 210 (FIG. 2) that is served by the service manager device 115.")

- See also 5:12-29.

117. In addition, Chatani also discloses that a user device connects to the service manager to request content.

- 12:21-24 ("In the first operation, represented by the flow diagram box numbered 710, the service manager device 115 accesses the configuration information, including the communication environment data and hardware configuration data relating to the user device 110. This operation can occur automatically when the **user device 110 establishes a connection with the service manager device 115. The operation can also occur when the user device 110 establishes a connection with the network 135** or in response to the user device 110 initiating a download of content via the network 135.").

118. A POSITA would understand that by connecting to the service manager device, the user is making a request for access to its services.

119. Chatani also discloses that the user device may by a mobile phone, which are wireless device used by wireless subscribers.

120. See, for example, the following portions of Chatani:

- 4:44-48 ("The user device 110 comprises any type of device that is configured to interact with and download content from the network 135. For example, the user device 110 may comprise a desktop computer, a laptop computer, a mobile phone, or a personal digital assistant.")

i. 2[d] in response to the request, selecting a portion of

the product catalog to be presented to the subscriber, based on device capabilities of the wireless device used by the subscriber; and

121. In my opinion Chatani discloses in response to the request, selecting a portion of the product catalog to be presented to the subscriber, based on device capabilities of the wireless device used by the subscriber. For example, Chatani discloses that in response to the request for service, a selection is made of the content to make available based on the user device capabilities.

- 11:7-14 ("It is appreciated that the **service manager device 115 can make content available to the user device 110 after the user device capabilities are determined** so that the user device does not actually select and request content until the service manager device determines the available service levels. In such a case, the operation shown in the flow diagram box 510 would occur after the operation shown in the flow diagram box 540")

122. See Fig. 5 below, modified according to Chatani's express disclosure above.

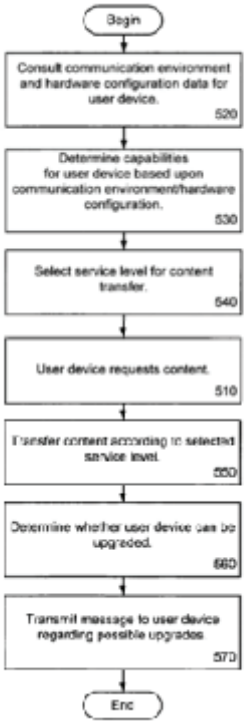


Figure 5

123. The user selects the content only after the service manager device has determined the service levels available to the user device. A POSITA would understand that the content made available would include the content which user device could make use of based on those available service levels.

124. In a similar embodiment following the same service level determination and user selection steps, Chatani teaches that in response to the device connecting to the service manager device, and before the user selects content, the user device capabilities are determined. The service manager device determines the user device capabilities to determine the service levels available for content transfer.

- 12:35-41 ("In the next operation, represented by the flow diagram box numbered 720, the service manager device 115 determines the service level(s) that are available to the user device for downloading

> of content. The available service levels are determined based upon the capabilities of the user device, such as was described in the operations represented by the flow diagram boxes numbered 520 and 530 of FIG. 5.")

125. Chatani teaches that when device capabilities are used to determine available service levels before making content available to the user for selection, making content available includes identifying and selecting a list of content available for download for presentation to the user.

- 12:42-53 ("In the next operation, represented by the flow diagram box numbered 730, **the user is presented with a list of content that is available for a download request**. The service manager device 115 preferably **identifies a list of content that can actually be downloaded given the current capabilities of the user device 110**. In this regard, the service manager device 115 can consult a table that maps downloadable content with the minimum service level necessary to download the content, such as Table 1, above. **Based upon the available service levels, the service manager device 115 determines the corresponding content that is actually available to the user device 110 for download**.")

126. As the selection of content with available service levels is based on the user device capabilities, the service manager device 115 has selected a portion of the product catalog to be presented to the subscriber, based on device capabilities of the wireless device used by the subscriber.

127. By way of example, Chatani discloses that there is a correspondence between an implementation at a particular service level and the required user device capabilities for executing that implementation. Table 1 annotated below shows the association of an item of digital content to each implementation, e.g. service level.

TABLE 1

Required User Device Capabilities	Characteristics of Service Level
Analog modem (bit rate of 56 kbps or less), no hard disk, latency greater than 1 ms.	Only text files available.
Analog modem (bit rate of 56 kbps or less), hard disk present, latency less than 1 ms.	Text files available. Video game software applications available.
Cable modem or DSL line (bit rate of at least 2 Mbps), no hard disk, latency of less than 1 ms.	Text files available. Video game software applications available. Video streaming available. CD quality sound files available.
Cable modem (bit rate of at least 2 Mbps), hard disk present, latency of less than 1 ms.	Text files available. Video game software applications available. Video streaming available. CD quality sound files available. Higher resolution video streaming made available.

j. 2[e](a) presenting the selected portion of the product catalog to the subscriber via a wireless network,

128. In my opinion Chatani discloses presenting the selected portion of the product catalog to the subscriber via a wireless network. As described above, Chatani discloses that a user makes a request via links on a web page that displays a list of available content identified based on user device capabilities. See 2[d] above. By way of example, Fig. 2 of Chatani illustrates a Web page of available content presented to user device 115.

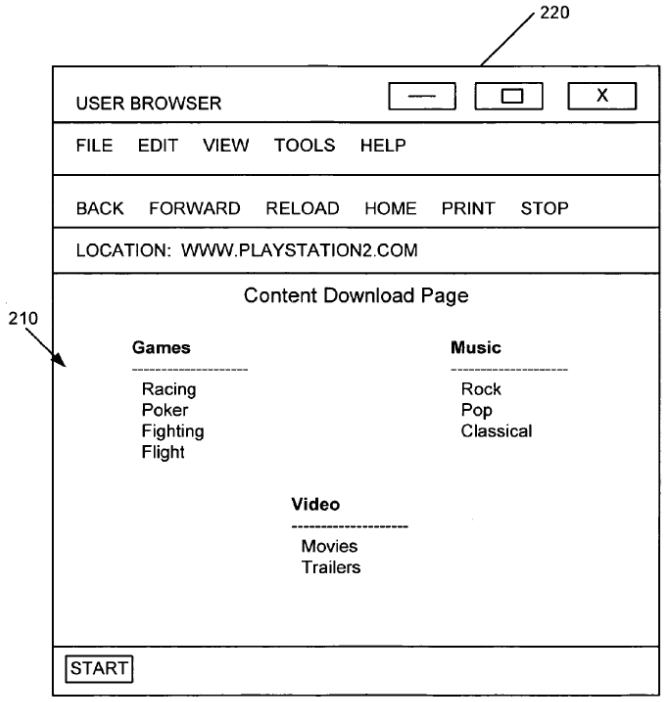


Figure 2

See, for example, the following portions of Chatani:

- 5:12-29 ("In accordance with these functions, the service manager device 115 preferably administers a Web site through which a user can access and download content from the network 135. The service manager device 115 includes a server 150 that maintains and serves one or more Web pages that can be accessed via the user device 110. The server 150 may comprise a server application that executes in memory of the service manager device 115, or may comprise a separate computer component of the service manager device. **FIG. 2 shows an exemplary content download Web page 210 within a browser window 220 that is displayed on a display screen of the user device 110.** The Web page 210 preferably includes a user interface that presents a listing of content that the user may access, such as by clicking on an appropriate hyperlink or selecting from a menu. For example, the Web page 210 may include a listing of computer game applications that the user can download or a listing of music files or video files. that the user can download.")

- 12:59-66 ("The content download list can be presented to the user

in the form of a Web page that the service manager device 115 generates and transfers to the user device 110. FIG. 8 shows an exemplary content download Web page 805 within a browser window that is displayed on a display screen of the user device 110. The **Web page 805 includes a downloadable list 807** of content for which the user device 110 can attain the requisite service level for downloading.")

- See also 13:4-7.

k. 2[e](b) as presented to the subscriber, provides only a single description of each item of digital content in said portion, regardless of the number of implementations of each said item.

129. In my opinion Chatani discloses only a single description of each item of digital content in said portion, regardless of the number of implementations of the item. Chatani discloses that after determining the user device capabilities and available service levels, as described above, a service level for transfer is automatically selected (for example, the highest service level is chosen).

- 10:63-66 ("The service manager device 115 compares the user device capabilities with the requirements for each service level and selects the highest service level that is available. ")

130. It is after this selection that the content is made available for the user to choose from. Chatani discloses that this selection is performed instead of presenting service level information to the user device 110 and requiring the user to view the service levels and make a selection.

131. See, for example, the following portions of Chatani:

- 10:60-11:6 ("Preferably, the service manager device 115 automatically selects the service level for the content transfer based

> upon whether the user device capabilities meet the minimum requirements for a service level. The service manager device 115 compares the user device capabilities with the requirements for each service level and selects the highest service level that is available. This advantageously provides a seamless transfer of content without requiring a user to manually select a service level. The service manager device 115 could also transmit information regarding the available levels to the user device 110 and then prompt the user device 110 to display the information. A user could then peruse the available service levels and select a desired service level using the user device 110.")

132. A POSITA would have recognized that Chatani therefore discloses that each item of content is presented with only a single description from which to choose, and the selection of service level or implementation for transfer is made automatically by the service manager device 115 based, for example, on the highest service level available. Since the user is not required to view and manually select a service level, selection information would not have been displayed, and this allows for the disclosed seamless transfer of content. That the content is transferred without requiring the user to select a service level confirms that there was only a single description of the digital content made available to the user, regardless of the number of implementations, service levels, of the item.

133. Furthermore, to the extent argued that the Patent Owner contends that Chatani does not explicitly state that the information regarding the available service levels would not be separately displayed, a person of ordinary skill in the art would have been motivated to omit that unnecessary information and provide only a single

description of each item of digital content. In doing so, clutter is eliminated from the Web page (which would have been especially beneficial for smaller screened devices such as mobile phones) and the user's experience would have been streamlined (by, for example, providing the user with the best available implementation and eliminating the display of choice information that would have been irrelevant due to the automatic selection of service level).

4. Claim 3

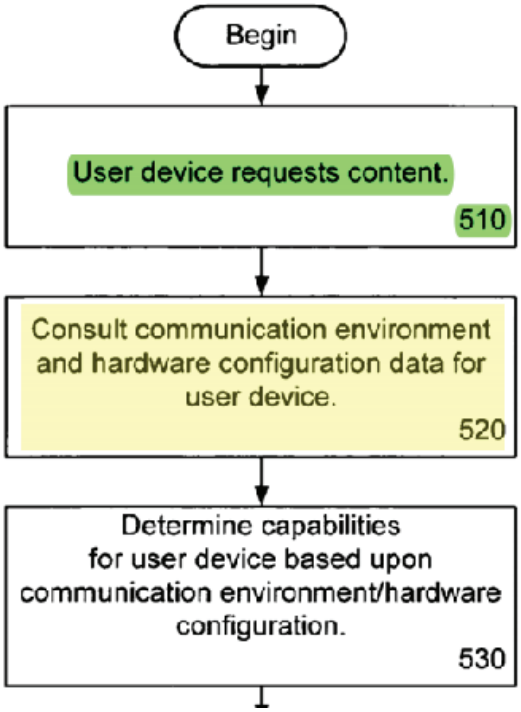
a. 3[pre] A method as recited in claim 2, wherein said selecting a portion of the product catalog comprises:

134. See Claim 2.

b. 3[a.i] in response to the request, determining the identity of the wireless device used by the subscriber,

135. In my opinion Chatani discloses in response to the request, determining the identity of the wireless device used by the subscriber.

136. In the '790 patent, a device can be recognized by specific makes and models or by generic definitions describing sets of device capabilities. '790 patent, 8:30-51, 8:60-67. Similarly, Chatani discloses that in response to the request by the user device, box 510, the identity of the wireless device, e.g. the hardware configuration data for the user device is determined, box 520. See Fig. 2.



- 9:9-18 ("The user device preferably submits the request via a Web page administered by the service manager device 115. For example, a user could click on a link on such a Web page that displays a list of available content. The service manager device 115 receives the request from the user device 110. In the next operation, represented by the flow diagram box numbered 520, the service manager device 115 accesses the configuration information, including the communication environment data and hardware configuration data relating to the user device 110.")

- See also 10:60-11:1, 12:21-34.

137. Additionally, Chatani discloses that the service manager device may associate the user device 110 with the data by using a username and password combination. Service manager device 115 thus determines the capabilities of the user device by determining the identity of the user device, including using a username and password to retrieve configuration information stored in the data store.

138. See, for example, the following portions of Chatani:

- 8:45-52 ("In the next operation, represented by the flow diagram box numbered 430, the download management software 145 causes the user device 110 to transmit the configuration information, including the hardware configuration data and communication environment data, to the service manager device 115. The service manager device 115 preferably stores the data relating to the user device 110 in the data store 160.")

- 9:18-24 ("The service manager device 115 preferably maintains a record of communication environment data and hardware configuration data for each user device with which the service manager device 115 interfaces. The service manager device 115 may associate the user device 110 with the data by using a username and password combination.")

c. 3[a.ii] wherein each implementation of the plurality of items of digital content has been previously associated in the server system with at least one device identity, according to corresponding device capabilities supported by the implementation; and

139. In my opinion Chatani discloses wherein each implementation of the plurality of items of digital content has been previously associated in the server system with at least one device identity, according to corresponding device capabilities supported by the implementation.

140. Chatani discloses that each implementation of the items of content are associated with at least one device identity. For example, Table 1 of Chatani (below, annotated to separate the four service levels and device classifications), shows that high-resolution video streaming had been associated with the device identity representing a class of devices with capabilities "Cable modem (bit rate of at least 2

Mbps), hard disk present, latency of less than 1 ms," while video streaming had been associated with the device identity representing a class of devices with capabilities "Cable modem or DSL line (bit rate of at least 2 Mbps), no hard disk, latency of less than 1 ms,"

TABLE 1

Required User Device Capabilities	Characteristics of Service Level
Analog modem (bit rate of 56 kbps or less), no hard disk, latency greater than 1 ms.	Only text files available.
Analog modem (bit rate of 56 kbps or less), hard disk present, latency less than 1 ms.	Text files available. Video game software applications available.
Cable modem or DSL line (bit rate of at least 2 Mbps), no hard disk, latency of less than 1 ms.	Text files available. Video game software applications available. Video streaming available. CD quality sound files available.
Cable modem (bit rate of at least 2 Mbps), hard disk present, latency of less than 1 ms.	Text files available. Video game software applications available. Video streaming available. CD quality sound files available. Higher resolution video streaming made available.

141. The associations, e.g., as in Table 1, are previously determined and then stored and maintained in service manager device 115.

142. See, for example, the following portions of Chatani:

- 10:15-27 ("The service manager device 115 preferably offers various service levels that may be selected for downloading content from the content provider device 120. The operator of the content provider device 120 preferably determines the characteristics of each level and specifies to the service manager device 115 the characteristics of the service levels, as well as the minimum user device capabilities that are required in order to make a service level available to the user device 110. The service manager device 115 maintains a record of service levels that are available for a particular

content provider and the associated minimum capabilities that are required. The available service levels may vary for each item of content.")

- See also 10:28-59.

d. 3[b] selecting the portion of the product catalog to be presented to the subscriber based on the identity of the wireless device used by the subscriber.

143. In my opinion Chatani discloses selecting the portion of the product catalog to be presented to the subscriber based on the identity of the wireless device used by the subscriber. As discussed for claim 2[d], Chatani discloses "selecting a portion of the product catalog to be presented to the subscriber, based on device capabilities of the wireless device used by the subscriber."

144. In determining the device capabilities maintained in the data store, Chatani discloses that the manager device 115 uses the username and password to associate the hardware configuration data to the user device interfacing to it.

145. See, for example, the following portions of Chatani:

- 9:14-24 ("In the next operation, represented by the flow diagram box numbered 520, the service manager device 115 accesses the configuration information, including the communication environment data and hardware configuration data relating to the user device 110. The service manager device 115 preferably maintains a record of communication environment data and hardware configuration data for each user device with which the service manager device 115 interfaces. The service manager device 115 may associate the user device 110 with the data by using a username and password combination.")

- See also 10:28-52, 12:38-39, 12:43-58.

5. Claim 4

a. 4[pre] A method as recited in claim 2, further comprising

146. See claim 2.

b. 4[a] receiving from the subscriber a request for one of the items of digital content in said portion of the product catalog;

147. In my opinion Chatani discloses receiving from the subscriber a request for one of the items of digital content in the portion of the product catalog.

148. As described in 2[c] above, Chatani discloses receiving from the subscriber a request for one of the items of digital content in the portion of the product catalog. In particular, Chatani discloses the user clicking on the displayed list of available content.

149. See, for example, the following portions of Chatani:

- 9:6-9 ("In the first operation, represented by the flow diagram box numbered 510, the user device 110 submits a request for content. The user device preferably submits the request via a Web page administered by the service manager device 115. For example, a user could click on a link on such a Web page that displays a list of available content. The service manager device 115 receives the request from the user device 110.")
- See also 7:6-11.

c. 4[b] selecting an implementation of the requested item of digital content, based on device capabilities of the wireless device used by the subscriber; and

150. In my opinion Chatani discloses selecting an implementation of the

requested item of digital content, based on device capabilities of the wireless device used by the subscriber. Chatani discloses that service manager device 115 automatically determines which service level implementation of the content item to transfer to the user device 110, based on the user device capabilities.

151. See, for example, the following portions of Chatani:

- 10:60-11:1 ("Preferably, the service manager device 115 automatically **selects** the service level for the content transfer based upon whether the user device capabilities meet the minimum requirements for a service level. The service manager device 115 compares the user device capabilities with the requirements for each service level and **selects** the highest service level that is available. This advantageously provides a seamless transfer of content without requiring a user to manually select a service level.")

d. 4[c] downloading the selected implementation of the item of digital content to the wireless device used by the subscriber.

152. In my opinion Chatani discloses downloading the selected implementation of the item of digital content to the wireless device used by the subscriber, when it discloses transferring the content to the user device.

153. See, for example, the following portions of Chatani:

- 11:15-18 ("After the service level has been selected, the service manager device 115 causes the content to be transferred to the user device 110 according to the selected level, as represented by the flow diagram box numbered 550.")

- 11:25-28 ("The content could also reside at the service manager device 115, in which case the service manager device 115 would simply transfer the content to the user device 110.")

6. Claim 8

a. 8[pre] A system that provides access to digital content for use on wireless communication devices, said system comprising:

154. In my opinion Chatani discloses a system that provides access to digital content for use on wireless communication devices.

155. As I explained for claim 2[pre], for example, Chatani discloses providing access to digital content for use on wireless communication devices.

156. The system includes service manager device 115 that manages the transfer of content.

157. See, for example, the following portions of Chatani:

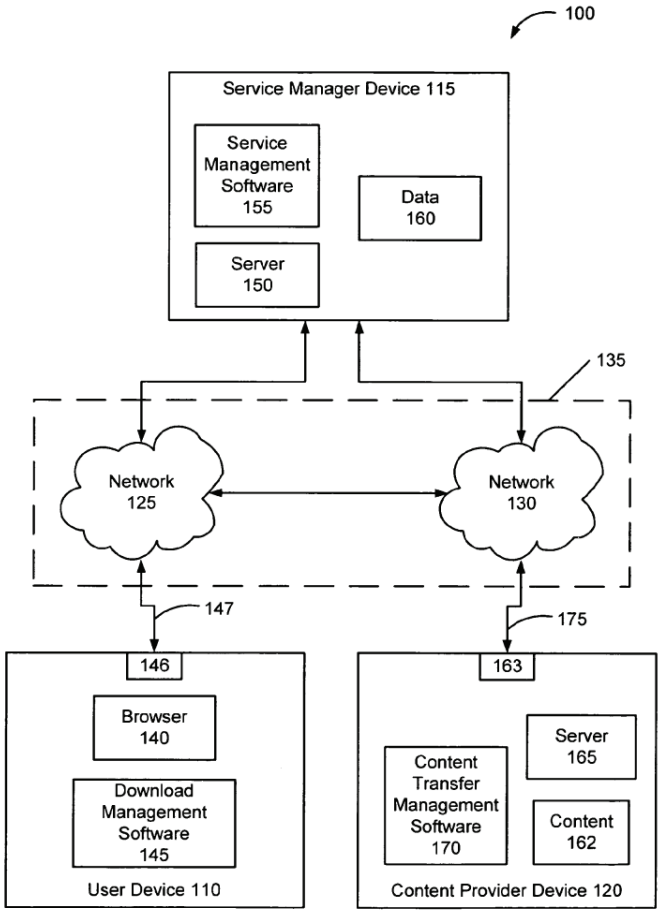


Figure 1

- 4:3-16 ("FIG. 1 illustrates a block diagram of a network system 100 that includes several computer nodes, including at least one user device 110, a service manager device 115 and at least one content provider device 120, which are all interlinked via one or more computer networks. The network system 100 enables the user device 110 to obtain electronic content from the content provider device 120, with the service manager device 115 acting as an intermediary that optimizes the transfer of content between the two, as described in more detail below. The service manager device 115 preferably interfaces with both the user device 110 and the content provider device 120 and manages a content transfer between them that is particularly suited for the capabilities of each device.")

b. 8[a] a network interface through which to communicate over a communication network; and

158. In my opinion Chatani discloses a system with a network interface through which to communicate over a communication network. Chatani discloses that network interface 1018, such as a Network Interface Card, enables communication over network 135.

159. See, for example, the following portions of Chatani:

- 4:26-35 ("As shown in FIG. 1, a computer network 125 communicatively links the user device 110 to the service manager device 115. A computer network 130 communicatively links the content provider device 120 to the service manager device 115. Both of the networks 125 and 130 may comprise a single computer network 135, such as the Internet, as exhibited by a dashed box in FIG. 1 that encompasses the networks 125 and 130. For convenience, the network system 100 is described herein in the context of the single network 135.")

- 14:11-39 ("FIG. 10 shows an exemplary computer 1000 such as might comprise any of the devices 110, 115, or 120…. Each computer 1000 can communicate with the others over a computer network 1020 (such as the Internet or an intranet) through a network

interface 1018 that enables communication over a connection 1022 between the network 1020 and the computer. The network interface 1018 typically comprises, for example, a Network Interface Card (NIC) or a modem that permits communications over a variety of networks.")

- See also 4:48-55, 15:4-12.

c. 8[b.i] a download manager to

160. In my opinion Chatani discloses a download manager.

161. Service manager device 115 "manages a content transfer" of content to user device 110.

162. See, for example, the following portions of Chatani:

- 4:3-16 ("FIG. 1 illustrates a block diagram of a network system 100 that includes several computer nodes, including at least one user device 110, a service manager device 115 and at least one content provider device 120, which are all interlinked via one or more computer networks. The network system 100 enables the user device 110 to obtain electronic content from the content provider device 120, with the service manager device 115 acting as an intermediary that optimizes the transfer of content between the two, as described in more detail below. The service manager device 115 preferably interfaces with both the user device 110 and the content provider device 120 and manages a content transfer between them that is particularly suited for the capabilities of each device.")

- 5:12-29 ("In accordance with these functions, the service manager device 115 preferably administers a Web site through which a user can access and download content from the network 135. The service manager device 115 includes a server 150 that maintains and serves one or more Web pages that can be accessed via the user device 110. The server 150 may comprise a server application that executes in memory of the service manager device 115, or may comprise a separate computer component of the service manager device. FIG. 2 shows an exemplary content download Web page 210 within a browser window 220 that is displayed on a display screen of the user

device 110. The Web page 210 preferably includes a user interface that presents a listing of content that the user may access, such as by clicking on an appropriate hyperlink or selecting from a menu. For example, the Web page 210 may include a listing of computer game applications that the user can download or a listing of music files or video files. that the user can download.")

d. 8[b.ii] receive and store a plurality of items of digital content to be made available for use in wireless communication devices used by a plurality of wireless telecommunications subscribers, including receiving and storing a plurality of different implementations of at least one of the items of digital content, where each implementation of any given item of digital content corresponds to a different set of device capabilities;

163. See Claim 9[b.i] below.

e. 8[b.iii] maintain a product catalog containing a description of the items of digital content, wherein the product catalog includes, in association with each item of digital content, a reference to each implementation of said item of digital content

164. See Claim 2[b](a)-(b).

f. 8[c] receive a request from one of the wireless communication devices

165. See Claims 1[c] and 2[c].

g. 8[d] in response to the request, select a portion of the product catalog to be presented on the one wireless communication device, based in part on device capabilities of the one wireless communication device; and

166. See Claims 1[d] and 2[d].

h. 8[e] presenting the selected portion of the product catalog to the one wireless communication device,

such that the selected portion, as presented, provides a single description of each item of digital content in said portion, regardless of a number of implementations that are available for each said item.

167. See Claims 1[e] and 2[e].

7. Claim 9

a. 9[pre] A system comprising:

168. See Claim 8[pre].

b. 9[a] a processor; and

169. In my opinion Chatani discloses a processor, such as a CPU or microprocessor.

170. See, for example, the following portions of Chatani:

- 14:11-17 ("FIG. 10 shows an exemplary computer 1000 such as might comprise any of the devices 110, 115, or 120. Each computer 1000 operates under control of a central processor unit (CPU) 1002, such as a "Pentium" microprocessor and associated integrated circuit chips, available from Intel Corporation of Santa Clara, Calif., U.S.A.")

c. 9[b] a storage facility accessible to the processor and containing code which, when executed by the processor, causes the processing system to

171. In my opinion Chatani discloses a storage facility accessible to the processor and containing code which, when executed by the processor, causes the processing system to perform operations. Hard disks, RAM, and program product readers store and provide code for execution by the processor to implement the described functions.

172. See, for example, the following portions of Chatani:

- 14:21-32 ("The computer 1000 also includes a direct access storage device (DASD) 1008, such as a hard disk drive. The memory 1010 typically comprises volatile semiconductor [RAM]random access memory (RAM). Each computer preferably includes a program product reader 1012 that accepts a program product storage device 1014, from which the program product reader can read data…. (and to which it can optionally write data). The program product reader can comprise, for example, a disk drive, and the program product storage device can comprise… removable storage media such as a magnetic floppy disk, a CD-R disc, a CD-RW disc, or DVD disc.")

- 14:40-60 ("The CPU 1002 operates under control of programming steps that are temporarily stored in the memory 1010 of the computer 1000. When the programming steps are executed, the computer performs its functions. Thus, the programming steps implement the functionality of any of the management software 145, 155, and 170 illustrated in FIG. 1. The programming steps can be received from the DASD 1008, through the program product storage device 1014, or through the network connection 1022. The program product storage drive 1012 can receive a program product 1014, read programming steps recorded thereon, and transfer the programming steps into the memory 1010 for execution by the CPU 1002. As noted above, the program product storage device can comprise any one of multiple removable media having recorded computer-readable instructions, including magnetic floppy disks and CD-ROM storage discs. Other suitable program product storage devices can include magnetic tape and semiconductor memory chips. In this way, the processing steps necessary for operation in accordance with the invention can be embodied on a program product.")

d. 9[b.i] receive and store a plurality of items of digital content to be made available for use in wireless communication devices used by a plurality of wireless telecommunications subscribers, including receiving and storing a plurality of different implementations of at least one of the items of digital content, where each implementation of any given item of digital content

corresponds to a different set of device capabilities;

173. See Claim 2[a.i] – 2[a.ii].

e. 9[b.ii] maintain a product catalog containing a description of the items of digital content, wherein the product catalog includes, in association with each item of digital content, a reference to each implementation of said item of digital content;

174. See Claim 2[b](a)–(b).

f. 9[b.iii] receive a request from a wireless device used by one of the subscribers;

175. See claim 2[c].

g. 9[b.iv] in response to the request, select a portion of the product catalog to be presented to the subscriber, based on device capabilities of the wireless device used by the subscriber; and

176. See claim 2[d].

h. 9[b.v] cause the selected portion of the product catalog to be presented to the subscriber via a wireless telecommunications network, such that the selected portion, as presented to the subscriber, provides only a single description of each item of digital content in said portion, regardless of the number of implementations of each said item.

177. See claim 2[e].

8. Claim 10

a. 10[pre] A system as recited in claim 9, wherein selection of said portion of the product catalog comprises:

178. See Claim 9.

b. 10[a.i] in response to the request, determining the

identity of the wireless device used by the subscriber,

179. See claim 3[a.i].

c. 10[a.ii] wherein each implementation of the plurality of items of digital content has been previously associated in the server system with at least one device identity, according to corresponding device capabilities supported by the implementation; and

180. See Claim 3[a.ii].

d. 10[b] selecting the portion of the product catalog to be presented to the subscriber based on the identity of the wireless device used by the subscriber.

181. See Claim 3[b].

9. Claim 11

a. 11[pre] A system as recited in claim 10, wherein said storage facility further contains code which, when executed by the processor, causes the processing system to:

182. See Claim 10.

b. 11[a] receive from the subscriber a request for one of the items of digital content in said portion of the product catalog;

183. See claim 4[a].

c. 11[b] select an implementation of the requested item of digital content, based on device capabilities of the wireless device used by the subscriber; and

184. See claim 4[b].

d. 11[c] download the selected implementation of the item of digital content to the wireless device used by

the subscriber.

185. See claim 4[c].

B. Ground 2: Claims 5-7 and 12-14 are Obvious Over Chatani in view of Mulligan

186. For the reasons discussed below, in my opinion Chatani in view of Mulligan render claims 5-7 and 12-14 of the '790 Patent obvious.

1. The Prior Art

a. Mulligan (U.S. Patent No. 7,363,384)

187. U.S. Patent Application Publication No. 2003/0084177 ("Mulligan") (EX1006) is titled "Mobile Client Provisioning Web Service."

188. Mulligan is directed to a mobile client provisioning web service that simplifies provisioning procedures for network service providing applications. Mulligan, [0001], [0009].

189. Like the '790 Patent, Mulligan describes that improvements to communications networks, mobile terminals, mobile services, and related technologies often required mobile terminals to have new or updated configuration settings to successfully access network servers, for example through a "provisioning" process. Mulligan, [0002]-[0006].

190. Mulligan proposes to provision mobile terminals through a provisioning Web service that provides a single point of interface for one or more network services. Mulligan, [0011]-[0012]. As shown in Figure 2 below, a mobile

client provisioning web service is coupled between mobile terminals to be provisioned and network service providers providing applications. Mulligan, [0012], [0035]-[0038]. Applications include any application that a mobile terminal may use, including Web services. Mulligan, [0037].

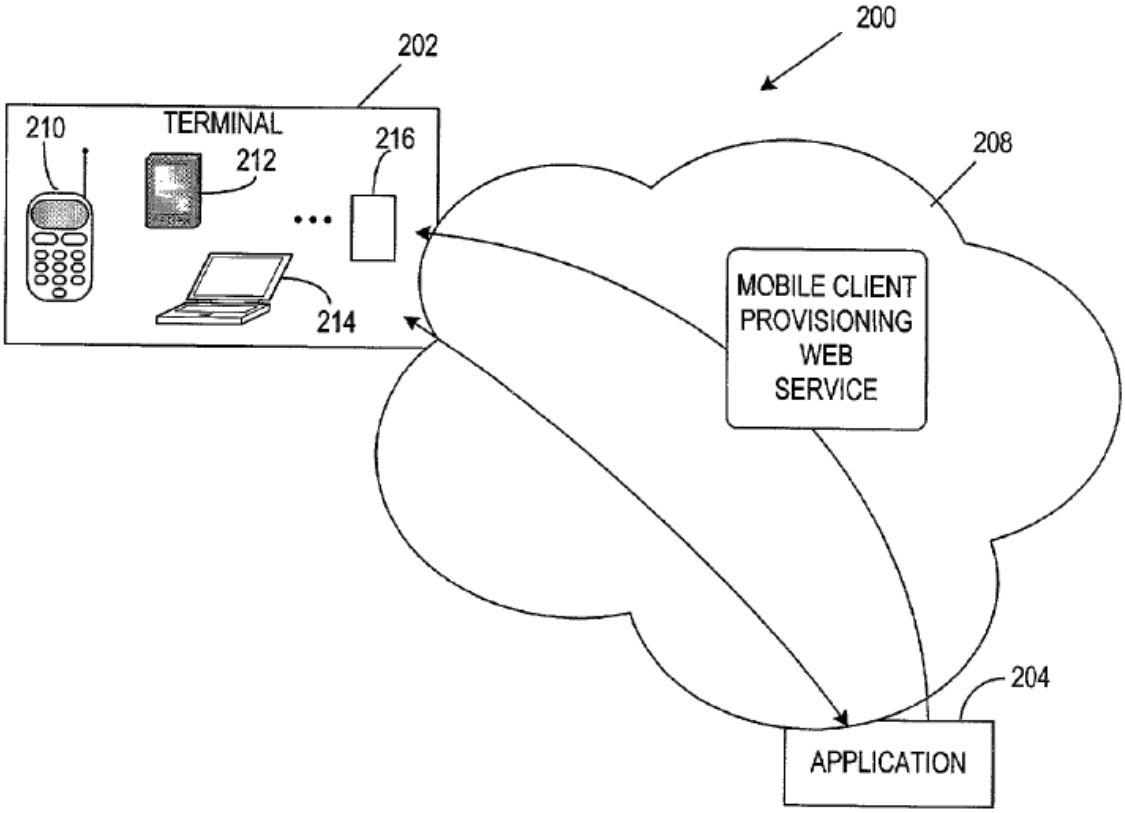


FIG. 2

191. Mulligan provides an example of mobile client provisioning web service 300 in Figure 3, below. Exemplary functions of the provisioning web service may include, as shown, service logic 302 that provides general functionality to the web service 300, delivery service 304 that works in conjunction with notification service 308 to ensure delivery of the correct objects to the terminal using proper

delivery methods (based, e.g., on the terminal type), terminal management service 306 that configures parameters in the terminal for proper access, and presence service 310 that determines information about the terminal, such as its type, and makes that information available to the other services as needed. Mulligan, [0039]-[0044].

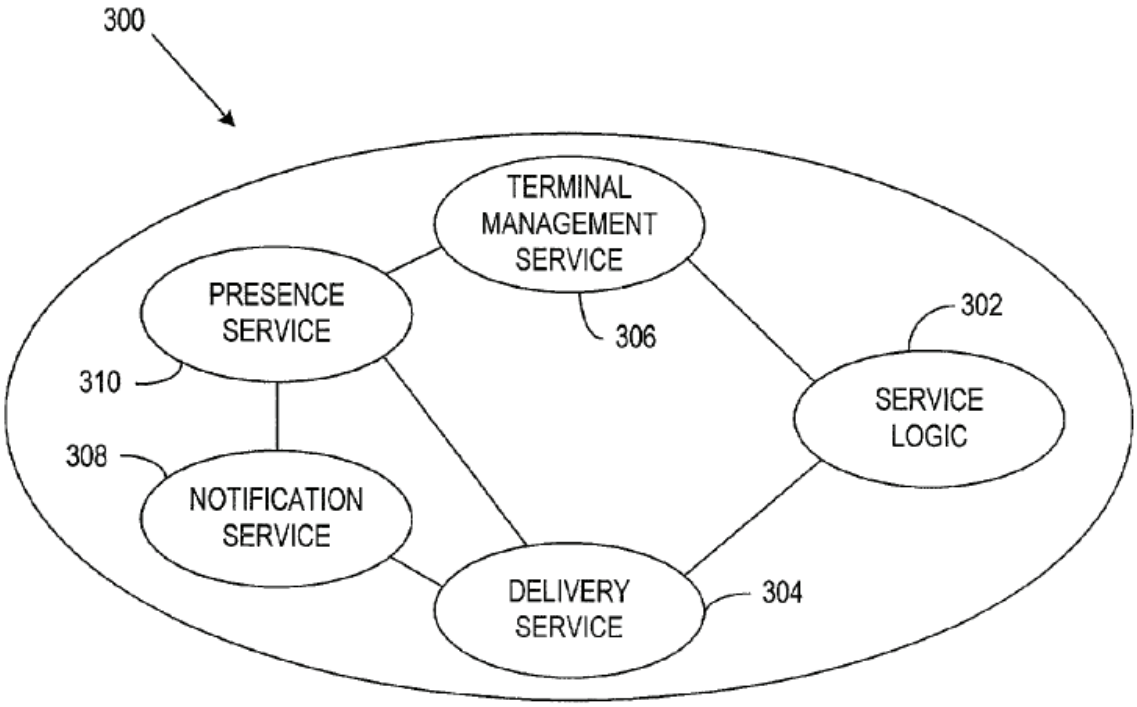


FIG. 3

192. Mulligan describes that a request to provision a terminal for access to a service or application will include several items, including an identification of the terminal (for example by its International Mobile Subscriber Identity (IMEI)), addresses of data objects to be delivered to provision the terminal, addresses of applications, settings and parameters required for connectivity, and any other items

that may depend on protocols, data formats, networking environments, and other conditions. Mulligan, [0046]-[0049]. Mulligan further explains that "there may be different addresses provided to account for variants in the data objects to accommodate different terminal types." Mulligan, [0047], [0052]. The presence service (discussed earlier), which identifies and shares information about the terminal, relays information such as the terminal type, storage capacity, and other characteristic information. Mulligan, [0052], [0057], [0060]-[0061]. Upon determining the correct data objects variants to deliver, data objects and other information for provisioning are packaged and delivered to the terminal based on terminal capabilities. Mulligan, [0053], [0062]-[0063].

b. Motivation to combine teachings

193. A person of ordinary skill in the art would have been aware of Chatani and Mulligan and would have considered Chatani and Mulligan to be in the same field as the '790 Patent. For example, the '790 Patent and Chatani and Mulligan are all directed towards digital multi-media content distribution and management and associated system infrastructures, and Chatani and Mulligan are reasonably pertinent to problems of distributing different types of content to different mobile devices, as discussed in the '790 Patent. '790 Patent, 1:13-18, 2:12-16; Chatani, 1:7-10, 2:20-58; Mulligan, [0001], [0014].

194. As I discussed above, Chatani discloses a service manager device 115

that manages the transfer of digital content to a user device 110 by first determining the capabilities of the user device and then selecting an implementation of the content to transfer that is appropriate for the user device's capabilities. The content may be of any type of digital content, including software, games, Web pages, text, audio, and video, a simple data file or an **executable application** such as a **game.** Chatani 4:21-25, Chatani 9:66-10:1.

195. The user device may be of any type of digital computing device, including a desktop computer, a laptop, and a mobile phone. Chatani 4:44-55.

196. Mulligan discloses downloading applications or services, digital content. Mulligan, [0005] ("The new terminals will increasingly require new or updated configuration settings before they can successfully connect to the **network servers that offer applications over the network**."). These applications or services can also be for example a computer game. Mulligan [0047] ("Other items included in the provisioning requests include addresses 416 of data objects that are to be delivered in order to provision the terminal. For example a **mobile games service could be accessed** via a MIDIet on the terminal").

197. Chatani's disclosure is focused on the determination and selection of the appropriate implementation of a particular digital item of content to transmit to the user device, and Chatani leaves to the POSITA technical implementation details for ensuring that the user device will be able to access and use the desired content.

While Chatani does not, therefore, explicitly describe provisioning procedures, which are described in claims 5-7 and 12-14 of the ’790 Patent, provisioning was a well-known technique known in the art. ’790 Patent, 1:60-2:4 (describing known provisioning models and protocols). Mulligan, for example, teaches that different types of devices require different variants of provisioning data objects and packaging and delivery methods, and, like Chatani and the ’790 Patent, teaches to select these aspects of the provisioning based on the capabilities of the requesting user device.

198. As I discussed in my summary of Mulligan in Section III.B above and discuss in further detail with respect to the ’790 Patent claims below, Mulligan teaches a system and method for providing a single point of interface for one or more network services and for provisioning mobile terminals for using applications offered by those network services. Mulligan, [0011]-[0012]. In particular, Mulligan teaches to identify the type of the mobile terminal requesting content and to provide the mobile terminal with particular variants of data objects for provisioning. Mulligan, [0041], [0047], [0051]-[0053]. Mulligan explains that this customization is desired or necessary because different terminal types may need to be accommodated in different ways. Mulligan, [0047]. But, mobile terminals have limited storage and processing capabilities. Because of this, mobile devices may not include all of the components or configurations needed to make use of new content and network technologies. Mulligan, [0005]-[0006]. Therefore, Mulligan teaches to

identify the type of the mobile terminal requesting content and select provisioning data objects to transfer according to the terminal type (as I mentioned above), packaging provisioning information for provisioning the mobile terminal and transmitting provisioning information to the mobile terminal according to its type (for example, different terminal types may have different capabilities such as being WAP, SyncML or Java capable). Mulligan, [0038]-[0049], [0051]-[0053], [0057], [0059].

199. Thus, based on Mulligan's teachings, a POSITA would have been motivated to modify Chatani to include provisioning functions because different terminals may be required to update their configurations and components, depending on their types and capabilities, in order to successfully make use of new applications with those new or updated requirements.

200. Moreover, since Chatani discloses that its system and method already identify the user device 110 and the user device 110's capabilities (based, for example, on its hardware configuration, networking environment, and other technical abilities), and then select an appropriate implementation for transfer based on the capabilities, the addition of provisioning functions also appropriate for the user device (or mobile terminal) capabilities, as taught by Mulligan, would have been an obvious addition yielding the predictable result of providing the correct data to the user device to ensure that the desired content will be usable and/or accessible

at the user device. In this way, Chatani's goal of "optimizing Internet content and service levels … without requiring user expertise or intervention" and of "provid[ing] a seamless transfer" of content can be achieved. Chatani, 2:39-58, 10:66-11:1.

201. A person of ordinary skill in the art would have also had a reasonable expectation of success in implementing the provisioning functions, taught by Mulligan. As I discussed above, Chatani and Mulligan similarly disclose making decisions based on the identification of user devices and their capabilities. The addition of Mulligan's provisioning functions, which are themselves based in part on provisioning procedures known in the art, Mulligan, [0006]-[0009], to Chatani's decisions would have been well within the skill of a person of ordinary skill in the art.

2. Claim 5

a. 5[pre] A method as recited in claim 4, further comprising

202. See Claim 4.

b. 5[a.i] associating each of the items of digital content in the server system with a plurality of different provisioning models, each of the provisioning models corresponding to a different set of device capabilities

203. In my opinion, Chatani in view of Mulligan renders obvious associating each of the items of digital content in the server system with a plurality of different provisioning models, each of the provisioning models corresponding to a different

set of device capabilities.

204. As I discussed above, it would have been obvious to a person of ordinary skill in the art to modify Chatani to provide the provisioning functions taught by Mulligan.

205. Mulligan teaches a desired application, that is an item of digital content, is to be provisioned on a user terminal by making appropriate selections among various data **objects associated with the application**, configuration settings, and packaging and delivery methods. See, for example:

- Claim 1 ("A method for **provisioning mobile terminals for use of applications**.")
- Claim 9 ("The method as in **claim 1**, wherein delivering the application to the mobile terminal comprises comparing **data object variants offered by the application** with a terminal type of the mobile terminal to determine a suitable data object to deliver for the terminal type of the mobile terminal.")

206. Therefore, each item of digital content, i.e. the application, is associated with different provisioning models—i.e., the data to be used for provisioning a terminal and the manner by which that data is to be delivered to the terminal—including variants of data objects and packaging and delivery methods. See:

- [0052] ("A first function of the delivery service 500 is to determine the **correct variant of the data object to deliver**, based on the type of the mobile terminal. This function is represented in FIG. 5 by the data object variant determination module 502.")
- [0047] ("Other items included in the provisioning requests include addresses 416 of **data objects that are to be delivered in order to**

> **provision the terminal**. For example **a mobile games service** could be accessed via a MIDIet on the terminal. This **data object address field would contain the address where the MIDIet is located on the network**. In one embodiment, this address may be provided via a URL. In addition, **there may be different addresses provided to account for variants in the data objects** to accommodate different terminal types**.**")

207. In one example, Mulligan illustrates selecting a particular MIDIet because of its association with WAP and/or Java. See [0060].

208. Each of these data objects and packaging and delivery methods correspond to a different set of device capabilities, a terminal type. See, for example:

- Claim 9 ("The method as in claim 1, wherein delivering the application to the mobile terminal **comprises comparing data object variants offered by the application with a terminal type of the mobile terminal to determine a suitable data object to deliver for the terminal type of the mobile terminal**.")

- [0052] ("A first function of the delivery service 500 is to determine the correct variant of the data object to deliver, based on the type of the mobile terminal. This function is represented in FIG. 5 by the data object variant determination module 502. For example, **different data objects may need to be delivered to different types of mobile terminals**, and the data object variant determination module 502 performs this analysis. In one embodiment, a comparing module 508 associated with the data object variant determination module 502 **determines the correct object to deliver by comparing the data object variant offered by the application 510 with the terminal that is being provisioned**. The delivery service 502 determines the appropriate terminal type from a presence service 512, which corresponds to the presence service 310 described in connection with FIG. 3.")

- [0047] ("Other items included in the provisioning requests include addresses 416 of data objects that are to be delivered in order to provision the terminal. For example a mobile games service could

be accessed via a MIDlet on the terminal. This **data object address field** would contain the address where the MIDlet is located on the network. In one embodiment, this address may be provided via a URL. In addition, there may be **different addresses provided to account for variants in the data objects to accommodate <u>different terminal types</u>**.")

- See also [0060]

209. Mulligan teaches that the terminal type corresponds to different sets of device capabilities.

- [0057] ("…The presence service 604 provides information to the other services in the system, and therefore the terminal 602 contacts the presence service 604 to supply **information about the terminal 602** for subsequent distribution to other elements of the provisioning Web service 608. By contacting the presence service 604, the terminal 602 notifies the presence service 604 that the terminal 602 is connected to the network, and also **relays information about the terminal. Such information may include, for example, the terminal type, storage capacity, and other information characteristic of the terminal 602**.")

210. Mulligan therefore discloses that applications, e.g. digital content in the server system, are associated with a plurality of provisioning models, including variants of data objects and packaging and delivery methods, which correspond to different sets of device capabilities.

c. 5[a.ii] each provisioning model including a provisioning protocol and a corresponding set of provisioning attributes and descriptors for provisioning digital content in wireless devices.

211. In my opinion, Chatani in view of Mulligan renders obvious each provisioning model including a provisioning protocol and a corresponding set of

provisioning attributes and descriptors for provisioning digital content in wireless devices. As I discussed with respect to claim 5[a.i] above, Mulligan discloses that applications are associated with various provisioning models, including variants of data objects and packaging and delivery methods that are used to provision terminals. Mulligan teaches that data models can include protocols, attributes and descriptors for provisioning the digital content.

212. Mulligan teaches that the provisioning models include provisioning protocols, such as the terminal being capable of provisioning with a Wireless Application Protocol, 'WAP' push to deliver the provisioning information. See, for example:

- [0060] ("The delivery service 612 queries the presence service 604… for the terminal type…. In this example, it is assumed for purposes of discussion that **the terminal 602 has only WAP and Java capabilities. This information is provided to the delivery service 612**, which in response retrieves the appropriate MIDIet from the bank application as shown by connection F.")

- [0062] ("The notification service 614 queries the presence service 604 as shown by connection H, and determines that the terminal 602 is capable of a **WAP push**. Push technology is the active transmission or "pushing" of data to registered receivers within a network.")

- [0063] ("Based on the knowledge that the terminal 602 is capable of a **WAP push**, the notification service 614 constructs a WAP SI with the delivery service 612 address, in accordance with one embodiment of the invention.")

- See also [0007] (describing WAP and SyncML protocols)

213. Mulligan teaches that provisioning models can include attributes and

descriptors for provisioning the digital content, such as a push message containing URLs and other different data types.

- [0062] ("A push message may contain **different data types, such as Service Initiator (SI) and Service Loading (SL), both of which are XML-applications like WML**. SI sends an alert that data in the form of a WML-document is available for downloading, and is generally in the form of a short message and a **Uniform Resource Identifier (URI) indicating a service**.")

- See also [0047]-[0049]

214. In one example Mulligan teaches that WAP settings of the terminal are modified according to instructions of the provisioning model. See, for example:

- [0064] ("As indicated by connection K, the delivery service 612 informs the service logic module 610 that the MIDIet has been successfully delivered to the terminal 602. As illustrated by connection L, the service logic module 610 then instructs the terminal management Service 616 to **modify the terminals 602 WAP settings** to allow it to use the settings required by the bank application. For example, the terminal's WAP settings may be modified to use the **bank's WAP gateway**. As previously described, the terminal management Service 616 can remotely configure parameters in the terminal in order to allow it to access the application.")

215. A POSITA would understand that WAP settings, gateway addresses and URLs are a set of provisioning attributes and descriptors and that WAP "Wireless Application Protocol" is a type of provisioning protocol.

216. Therefore, a POSITA would understand that the provisioning models in Mulligan include a provisioning protocol and a corresponding set of provisioning attributes and descriptors for provisioning digital content in wireless devices.

3. Claim 6

a. 6[pre] A method as recited in claim 5, further comprising

217. See Claim 5.

b. 6[a] receiving from the subscriber a request for one of the items of digital content in said portion of the product catalog

218. In my opinion, Chatani discloses receiving from the subscriber a request for one of the items of digital content in said portion of the product catalog. See claim 4[a].

c. 6[b] identifying device capabilities of the wireless device used by the subscriber

219. In my opinion, Chatani discloses identifying device capabilities of the wireless device used by the subscriber. See claim 4[b]. See also Mulligan [0057] ("By contacting the presence service 604, the terminal 602 notifies the presence service 604 that the terminal 602 is connected to the network, and also **relays information about the terminal. Such information may include, for example, the terminal type, storage capacity, and other information characteristic of the terminal 602**.")

d. 6[c] selecting one of a plurality of provisioning models associated with the requested item in the server system, based on the device capabilities of the wireless device used by the subscriber

220. In my opinion, Chatani in view of Mulligan renders obvious selecting

one of a plurality of provisioning models associated with the requested item in the server system, based on the device capabilities of the wireless device used by the subscriber.

221. As I discussed above, it would have been obvious to a person of ordinary skill in the art to modify Chatani to include provisioning functions taught by Mulligan.

222. Mulligan teaches, for example, based on the type of the terminal, selecting a correct variant of provisioning data objects and a packaging and delivery method related to a requested application.

223. As I discussed with respect to at least claim 5[a.i] above, Mulligan discloses that, to provision a terminal for a desired application, the type of the terminal is determined first so that an appropriate provisioning model is used to accommodate the particular terminal's type.

224. *See*, for example, Claim 9, [0047], and [0052] reproduced above.

225. And, as I discussed, information about the terminal type, used to determine the correct data objects to transfer, may also describe the terminal's communication capabilities, processing, and storage capabilities.

e. 6[d] packaging the requested item according to the selected provisioning model

226. In my opinion, Chatani in view of Mulligan renders obvious packaging the requested item according to the selected provisioning model. Mulligan discloses

that based on the selected provisioning model makes use of a WAP Push, the service constructs the appropriate WAP push message. See [0063] ("Based on the **knowledge that the terminal 602 is capable of a WAP push, the notification service 614 constructs a WAP SI with the delivery service 612 address**, in accordance with one embodiment of the invention.")

f. 6[e] provisioning the requested item in the wireless device used by the subscriber according to the selected provisioning model.

227. In my opinion, Chatani in view of Mulligan renders obvious each provisioning the requested item in the wireless device used by the subscriber according to the selected provisioning model.

228. Mulligan teaches, for example, notifying the terminal to download the appropriate MIDlet with the information discussed in 6[d] above, and, furthermore, after downloading, the provisioning service's terminal management service modifies the terminal's WAP settings to allow it access the application. See:

- [0063] ("Based on the knowledge that the terminal 602 is capable of a WAP push, **the notification service 614 constructs a WAP SI with the delivery service 612 address**, in accordance with one embodiment of the invention. This SI includes instructions to the terminal 602 to download the MIDIet from the delivery service 612 using the delivery service address. **The notification service 614 sends this notification to the terminal 602 as illustrated by connection I**.")
- [0064] ("After receiving the notification from the notification service 614, the **terminal 602 downloads the MIDIet** from the delivery service 612 as shown by connection J. As indicated by

connection K, the delivery service 612 informs the service logic module 610 that the MIDIet has been successfully delivered to the terminal 602. As illustrated by connection L, the service logic module 610 then instructs the **terminal management service 616 to modify the terminals 602 WAP settings to allow it to use the settings required by the bank application.** For example, the **terminal's WAP settings may be modified to use the bank's WAP gateway**. As previously described, the terminal management service 616 can **remotely configure parameters in the terminal in order to allow it to access the application**.")

- Claim 17 (The method as in claim 16, wherein **remotely configuring parameters in the mobile terminal comprises remotely configuring data object parameters associated with data objects of the application** in the mobile terminal.")

4. Claim 7

a. 7[pre] A method as recited in claim 6, wherein

229. See Claim 6.

b. 7[a] said packaging the requested item comprises creating a provisioning descriptor for the requested item according to the selected provisioning model, and associating the provisioning descriptor with the requested item; and

230. Claim 7[a] explains that, in one embodiment, "packaging the requested item" as in claim 6[d] "comprises creating a provisioning descriptor for the requested item according to the selected provisioning model, and associating the provisioning descriptor with the requested item."

231. In my opinion, Chatani in view of Mulligan renders obvious said packaging the requested item comprises creating a provisioning descriptor for the requested item according to the selected provisioning model, and associating the

provisioning descriptor with the requested item.

232. Mulligan teaches, for example, creating a provisioning descriptor, such as a notification or alert including a delivery service address or URI, and associating the descriptor with the requested item, for example the mobile game. See [0047] ("Other items included in the provisioning requests include addresses 416 of data objects that are to be delivered in order to provision the terminal. For example a **mobile games service could be accessed via a MIDIet on the terminal.** This **data object address field would contain the address where the MIDIet is located on the network**. In one embodiment, this address may be **provided via a URL**. In addition, there may be different **addresses provided to account for variants in the data objects** to accommodate different terminal types.")

c. 7[b] said provisioning the requested item in the wireless device comprises sending the packaged requested item to the wireless device used by the subscriber according to a provisioning protocol associated with the selected provisioning model.

233. In my opinion, Chatani in view of Mulligan renders obvious said provisioning the requested item in the wireless device comprises sending the packaged requested item to the wireless device used by the subscriber according to a provisioning protocol associated with the selected provisioning model.

234. As I discussed above, in 6[d], Mulligan discloses, in one example, that based on the selected provisioning model making use of a WAP Push, the service

constructs the appropriate WAP push message. Mulligan teaches that this packaged request it is sent over the associated provisioning protocol, Wireless Application Protocol, WAP. See:

- [0063] ("Based on the knowledge that the terminal 602 is capable of a WAP push, **the notification service 614 constructs a WAP SI with the delivery service 612 address**, in accordance with one embodiment of the invention. This SI includes instructions to the terminal 602 to download the MIDIet from the delivery service 612 using the delivery service address. **The notification service 614 sends this notification to the terminal 602 as illustrated by connection I**.")

235. Mulligan further teaches after receiving this notification, the WAP settings are modified according to the protocol and the terminal can now access the requested application. See:

- [0064] ("**After receiving the notification** from the notification service 614, the terminal 602 **downloads the MIDIet** from the delivery service 612 as shown by connection J. As indicated by connection K, the delivery service 612 informs the service logic module 610 that the MIDIet has been successfully delivered to the terminal 602. As illustrated by connection L, the service logic module 610 then instructs the terminal management service 616 to **modify the terminals 602 WAP settings to allow it to use the settings required by the bank application**. For example, the terminal's WAP settings may be modified to use the bank's WAP gateway. As previously described, the terminal management service 616 can **remotely configure parameters in the terminal in order to allow it to access the application**.")

236. The terminal is thus provisioned according to the selected provisioning model and its protocols.

5. Claim 12

a. 12[pre] A system as recited in claim 11, wherein said storage facility further contains code which, when executed by the processor, causes the processing system to

237. See Claim 11 and 9[b].

b. 12[a.i] associate each of the items of digital content in the server system with a plurality of different provisioning models

238. See Claim 5[a.i].

c. 12[a.ii] each of the provisioning models corresponding to a different set of device capabilities, each of the provisioning models including a provisioning protocol and a corresponding set of provisioning attributes and descriptors for provisioning digital content in wireless devices.

239. See Claim 5[a.ii].

6. Claim 13

a. 13[pre] A system as recited in claim 12, wherein said storage facility further contains code which, when executed by the processor, causes the processing system to

240. See Claim 12 and 9[b].

b. 13[a] receive from the subscriber a request for one of the items of digital content in said portion of the product catalog

241. See Claim 6[a].

c. 13[b] identify device capabilities of the wireless device used by the subscriber

242. See Claim 6[b].

d. 13[c] select one of a plurality of provisioning models associated with the requested item in the server

system, based on the device capabilities of the wireless device used by the subscriber

243. See Claim 6[c].

e. 13[d] package the requested item according to the selected provisioning model; and

244. See Claim 6[d].

f. 13[e] provision the requested item in the wireless device used by the subscriber according to the selected provisioning model.

245. See Claim 6[e].

7. Claim 14

a. 14[pre] A system as recited in claim 13

246. See Claim 13.

b. 14[a] wherein packaging the requested item comprises creating a provisioning descriptor for the requested item according to the selected provisioning model, and associating the provisioning descriptor with the requested item; and

247. See Claim 7[a].

c. 14[b] wherein provisioning the requested item in the wireless device comprises sending the packaged requested item to the wireless device used by the subscriber according to a provisioning protocol associated with the selected provisioning model.

248. See Claim 7[b].

IV. CONCLUSION

249. For the reasons I put forth above, in my opinion Chatani renders claims 1-4 and 8-11 of the '790 patent obvious, and Chatani in view of Mulligan renders claims 5-7 and 12-14 of the '790 patent obvious.

250. I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Executed at Dallas, Texas on November 8th, 2024.

By: /James Olivier, Ph.D./

James Olivier, Ph.D.