IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CRESTRON ELECTRONICS, INC.

Petitioner

v.

INTUITIVE BUILDING CONTROLS, INC.

Patent Owner[1]

PETITION FOR *INTER PARTES* REVIEW
OF UNITED STATES PATENT NO. 5,945,993
TO MARC WERNER FLEISCHMANN FOR
"PICTOGRAPH-BASED METHOD AND APPARATUS FOR CONTROLLING A PLURALITY OF LIGHTING LOADS"

Attn: Mail Stop "Patent Board, PTAB"
Patent Trial and Appeal Board
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

[1] Petitioner's identification of Intuitive Building Controls, Inc. (hereinafter "IBC") as "Patent Owner" in the present Petition is based solely on USPTO assignment records and should not be construed as an admission by Petitioner that IBC has sufficient legal rights to the '993 patent such that IBC has standing to sue for alleged infringement of the '993 patent. Petitioner has not been provided with an opportunity to review the agreements under which IBC and its predecessors-in-interest purported to obtain ownership of the '993 patent, and Petitioner expressly reserves the right to challenge IBC's standing to bring suit for alleged infringement of the '993 patent at least on the grounds that IBC lacks sufficient rights in the '993 patent because one or more of the aforementioned agreements was void and/or unenforceable under the laws of a relevant jurisdiction.

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[2] 37 C.F.R. §42.24(a)(1) provides that "[t]he page limit does not include a table of contents, a table of authorities, a certificate of service, or appendix of exhibits," which have accordingly been designated with Roman page numerals beginning with "i". Pages which count toward the page limit have been designated with Arabic numerals beginning with "1" to help demonstrate Petitioner's compliance with the 60-page limit set forth in 37 C.F.R. §42.24(a)(1)(i).

I. EXHIBIT LIST UNDER 37 C.F.R. §42.63(E)

The following is a list of exhibits in support of this petition:

Exhibit	Description
1001	U.S. Patent No. 5,945,993, filed January 30, 1998 and issued August 31, 1999 to Marc Werner Fleischman, entitled "Pictograph-Based Method and Apparatus for Controlling a Plurality of Lighting Loads" (hereinafter "*the '993 patent*").
1002	Declaration of Dr. Peter M. Corcoran (hereinafter "*Declaration*").
1003	Notice of Allowance issued on April 5, 1999 in the '993 patent (hereinafter "*NOA*").
1004	Excerpts from *Barron's Dictionary of Computer and Internet Terms*, 6th ed., 1998 (hereinafter "*Barron's*"). Although *Barron's* may not have been published before '993 patent's filing date of January 30, 1998, and therefore may not qualify as prior art relative to the '993 patent, it was published before the '993 patent's issue date of August 31, 1999, and is thus still sufficiently contemporaneous to be used in construing terms recited in the claims of the '993 patent. See, e.g., *Brookhill-Wilk 1, LLC. v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1299 (Fed. Cir. 2004) ("In considering the ordinary and customary meaning of the disputed terms,

Exhibit	Description
	the district court consulted a contemporaneous dictionary . . . *Webster's Third New International Dictionary* [] (Merriam-Webster 1993) . . . . [to] the '003 patent, which was filed in March 1991 and issued in June 1993."); *Inverness Medical v. Princeton Biomeditech Corp.*, 309 F.3d 1365, 1370 & n.1 (Fed. Cir. 2002) ("Our decisions have not always been consistent as to whether the pertinent date is the filing date of the application or the issue date of the patent. No party here has suggested that the pertinent sources changed between the application and issuance dates. We may look, therefore, to the dictionary definition of the claim term 'mobility' as of the date the patents issued."); and *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202-03 (Fed. Cir. 2002) ("Dictionaries, encyclopedias and treatises, publicly available at the time the patent is issued, are objective resources that serve as reliable sources of information on the established meanings that would have been attributed to the terms of the claims by those of skill in the art.")
1005	Excerpts from *The New Lexicon Webster's Dictionary of the English Language*, 1995, vol. 2 (hereinafter "*Lexicon*").

Exhibit	Description
1006	Excerpts from *Webster's New World Dictionary of Computer Terms*, 6th ed. 1997 (hereinafter "*Webster's*").
1007	Excerpts from *Oxford Paperback Reference Dictionary of Computing*, 4th ed. 1997 (hereinafter "*Oxford*").
1008	Excerpts from *Microsoft Press Computer Dictionary*, 3d ed. 1997 (hereinafter "*Microsoft*").
1009	Affidavit of Christopher Butler, Office Manager of Internet Archive, dated June 4, 2015, attesting that attached thereto as Exhibit A are printouts of webpages which were publicly available at the following addresses on November 14, 1996: http://www.savoysoft.com/index.htm (page 3 of Exhibit 1009) http://www.savoysoft.com/Overview.htm (pages 4-5 of Exhibit 1009) http://www.savoysoft.com/Company.htm (page 6 of Exhibit 1009) http://www.savoysoft.com/housemgr.htm (page 7 of Exhibit 1009) http://www.savoysoft.com/lighting.htm (page 8 of Exhibit 1009) http://www.savoysoft.com/page2.html (page 9 of Exhibit 1009) http://www.savoysoft.com/page3.html (page 10 of Exhibit 1009)

Exhibit	Description
	http://www.savoysoft.com/page6.html (page 11 of Exhibit 1009) http://www.savoysoft.com/page7.html (page 12 of Exhibit 1009) http://www.savoysoft.com/page8.html (page 13 of Exhibit 1009) http://www.savoysoft.com/page9.html (page 14 of Exhibit 1009) http://www.savoysoft.com/page13.html (page 15 of Exhibit 1009) Because the webpages attached as pages 3-15 of Exhibit 1009 were all publicly available at the same website (http://www.savoysoft.com) and describe a single software product (CyberHouse Release 2) available from the website's publisher, these webpages will be collectively referred to herein as a single reference (hereinafter "*SavoySoft*"). To the extent that each individual webpage is considered a distinct reference, one skilled in the art would have been motivated to combine their respective teachings because the webpages are each directed to common subject matter: namely, descriptions of a single software product commercially available from the webpages' publisher. The Affidavit on page 1 of Exhibit 1009 constitutes legally sufficient

Exhibit	Description
	evidence that the webpages attached as pages 3-15 of Exhibit 1009 were published at least as early as November 14, 2006, which is more than one year prior to the January 30, 1998 filing date of the '993 patent, and that pages 3-15 of Exhibit 1009 constitutes prior art relative to the '993 patent at least under 35 U.S.C. §102(b). See, e.g., *EMC Corp. v. Personalweb Techs., LLC*, Case IPR2013-00084, Paper 64 at 45 (USPTO PTAB May 15, 2014), citing *United States v. Bansal*, 663 F.3d 634, 667-68 (3d. Cir. 2011) ("concluding that the screenshot images from the Internet Archive were authenticated sufficiently under Federal Rule of Evidence 901(b)(1) by a witness with personal knowledge of its contents, verifying that the screenshot the party seeks to admit are true and accurate copies of Internet Archive's records").
1010	Printout of a file included as /htdocs/Architecture/index.htm on a copy of the CyberHouse Release 2 CD-ROM provided to Petitioners by Dr. David L. Nelson, founder of Savoy Software Development, discussed in Exhibit 1009 at page 6. This CD-ROM is a commercial embodiment of the software product described in Exhibit 1009 (*SavoySoft*). This file, as included on the CD-ROM, included metadata indicating that it was last

Exhibit	Description
	modified on December 2, 1996. Even if this printout fails to qualify as a prior art printed publication, it is being relied upon in the present Petition and accompanying Declaration (Exhibit 1002) solely for the purposes permitted by MPEP 2141.03(I) and the cases cited therein: References which do not qualify as prior art because they postdate the claimed invention may be relied upon to show the level of ordinary skill in the art at or around the time the invention was made. *Ex parte Erlich*, 22 USPQ 1463 (Bd. Pat. App. & Inter. 1992). Moreover, documents not available as prior art because the documents were not widely disseminated may be used to demonstrate the level of ordinary skill in the art. For example, the document may be relevant to establishing "a motivation to combine which is implicit in the knowledge of one of ordinary skill in the art." *Nat'l Steel Car, Ltd. v. Can. Pac. Ry., Ltd.*, 357 F.3d 1319, 1338, 69 USPQ2d 1641, 1656 (Fed. Cir. 2004)
1011	Peter House, "CEBus for the Masses," Home Automation & Building Control, April 1995, p. 61-68 (hereinafter "*House*") was published in April 1995, which is more than one year prior to the January 30, 1998 filing date of the '993 patent, and thus constitutes prior art relative to the '993 patent at least under 35 U.S.C. §102(b).

Exhibit	Description
1012	Peter M. Corcoran et al., "CEBus Network Access via the World-Wide-Web," 1996 Digest of Technical Papers, International Conference on Consumer Electronics, p. 236-237 (hereinafter "*Corcoran96*") was published in June 1996, which is more than one year prior to the January 30, 1998 filing date of the '993 patent, and thus constitutes prior art relative to the '993 patent at least under 35 U.S.C. §102(b).
1013	Glenn Fleishman, "Image Mapping," *Adobe.Mag*, Issue #3, 10 pages (hereinafter "*Fleishman*") was published on May 1, 1996, which is more than one year prior to the January 30, 1998 filing date of the '993 patent, and thus constitutes prior art relative to the '993 patent at least under 35 U.S.C. §102(b).
1014	Dave Raggett, World Wide Web Consortium (W3C) Recommendation, "HTML 3.2 Reference Specification," http://www.w3.org/TR/REC-html32, 48 pages (hereinafter "*REC-html32*") was published at least as early as January 14, 1997, which is more than one year prior to the January 30, 1998 filing date of the '993 patent, and thus constitutes prior art relative to the '993 patent at least under 35 U.S.C. §102(b).

Exhibit	Description
1015	U.S. Patent No. 5,400,246 to Wilson et al. (hereinafter "*Wilson*") issued on March 21, 1995, which is more than one year prior to the January 30, 1998 filing date of the '993 patent and thus constitutes prior art relative to the '993 patent at least under 35 U.S.C. §102(b).

II. CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §42.6(e) and 37 C.F.R. §42.105, the undersigned certifies that on June 11, 2015, a complete and entire copy of this Petition for *Inter Partes* Review and all supporting exhibits were provided via United Parcel Service (UPS Tracking Number 1Z2FY5730292017876), costs prepaid, to Patent Owner at the official correspondence address shown in PAIR, as follows:

Hewlett-Packard Company
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
Fort Collins, CO 80528

III. TABLE OF AUTHORITIES

CASES

STATUTES

RULES

IV. MANDATORY NOTICES UNDER 37 C.F.R. §42.8(A)(1)

A. Real Party in Interest under 37 C.F.R. §42.8(b)(1)

Petitioner, Crestron Electronics, Inc. is the real party-in-interest.

B. Related Matters under 37 C.F.R. §42.8(b)(2)

The '993 patent has been judicially asserted in the following cases, each of which was filed on April 15, 2015 and remains pending in the U.S. District Court for the Eastern District of Texas:

Docket No.	**Caption**
2:15-cv-00500	*Intuitive Building Controls, Inc. v. AMX LLC*
2:15-cv-00501	*Intuitive Building Controls, Inc. v. Acuity Brands, Inc.*
2:15-cv-00502	*Intuitive Building Controls, Inc. v. Crestron Electronics, Inc.*
2:15-cv-00503	*Intuitive Building Controls, Inc. v. Control4 Corporation*
2:15-cv-00504	*Intuitive Building Controls, Inc. v. United Techs. Corporation*

Petitioner is not aware of any related administrative proceedings. However, Petitioner intends to file petitions for *inter partes* review of U.S. Patent No. 6,118,230 (hereinafter "the '230 patent") and U.S. Patent No. 6,160,359 (hereinafter "the '359 patent"). The '230 patent and the '359 patent are related to the '993 patent: all three patents were filed concurrently by the same inventor, have substantially similar specifications, and have sufficiently similar claims to necessitate the filing of terminal disclaimers to overcome obviousness-type double

patenting rejections in the '230 patent and the '359 patent. Moreover, the '230 patent and the '359 patent, in addition to the '993 patent, have been asserted against the Petitioner by the Patent Owner in the aforementioned litigation.

C. Lead And Back-Up Counsel Under 37 C.F.R. §42.8(b)(3) and §42.10(a)

Designation of counsel for Petitioner is as follows:

Lead Counsel	Backup Counsel
David E. Shifren, Reg. No. 59,329 Crestron Electronics, Inc. 15 Volvo Drive Rockleigh, NJ 07647-2507 T: 201-767-3400 Ext. 12486 F: 201-768-7289 patents@crestron.com	**Samir Termanini, Reg. No. 56,591** Crestron Electronics, Inc. 15 Volvo Drive Rockleigh, NJ 07647-2507 T: 201-767-3400 Ext. 12516 F: 201-768-7289 patents@crestron.com

A Power of Attorney under 37 C.F.R. §42.10(b) is submitted herewith.

D. Service Information Under 37 C.F.R. §42.8(b)(4)

Lead counsel for Petitioner may be served by mail, courier or hand at:

David E. Shifren
Crestron Electronics, Inc.
15 Volvo Drive
Rockleigh NJ 07647-2507
Telephone: 201-767-3400 Ext. 12486
Email: patents@crestron.com
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E. Payment of Fees Under 37 C.F.R. §42.103 and 37 C.F.R. §42.15(a)

Please charge all fees due in connection with the present *Inter Partes* Review to Deposit Account No. 505234.

V. GROUNDS FOR STANDING UNDER 37 C.F.R. §42.104(A)

Petitioner certifies that the patent for which review is sought is available for *inter partes* review and that Petitioner is not barred or estopped from requesting an *inter partes* review challenging the claims on the grounds identified in the petition.

VI. CHALLENGE UNDER 37 C.F.R. §42.104(B) AND PRECISE RELIEF REQUESTED

A. Identification of claims challenged under 37 C.F.R. §42.104(b)(1)

Petitioner requests *inter partes* review of claims 1-22 of the '993 patent, including independent claims 1, 12 and 16. Petitioner is not conceding that the grounds presented herein are the only grounds applicable to the challenged claims. Indeed, the only reason why Petitioner has not presented additional challenges to the validity of the '993 patent based on prior art in the present proceeding is because of the 60-page limit imposed by 37 C.F.R. §42.24(a)(1)(i).

B. Statutory grounds and patents or printed publications relied upon for each ground. 37 C.F.R. §42.104(b)(2).

1. Claims 1-22 are anticipated under 35 U.S.C. §102(b) by SavoySoft (Exhibit 1009)
2. Claims 1-22 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009)
3. Claims 1-22 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009) and House (Exhibit 1011)
4. Claims 6-8, 19 and 20 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009) and Corcoran96 (Exhibit 1012)
5. Claims 6-8, 19 and 20 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009), House (Exhibit 1011) and Corcoran96 (Exhibit 1012)

6. Claims 3-5, 14, 17 and 18 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009), Corcoran96 (Exhibit 1012), and Fleishman (Exhibit 1013)
7. Claims 3-5, 14, 17 and 18 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009), House (Exhibit 1011), Corcoran96 (Exhibit 1012), and Fleishman (Exhibit 1013)
8. Claims 3-8, 14 and 17-20 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009) and REC-html32 (Exhibit 1014)
9. Claims 3-8, 14 and 17-20 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009), House (Exhibit 1011), and REC-html32 (Exhibit 1014)
10. Claims 1, 2, 9-12, 15, 16, 21 and 22 are anticipated under 35 U.S.C. §102(b) by Wilson (Exhibit 1015)
11. Claims 1, 2, 9-12, 15, 16, 21 and 22 are obvious under 35 U.S.C. §103(a) over Wilson (Exhibit 1015)
12. Claims 6-8, 19 and 20 are obvious under 35 U.S.C. §103(a) over Wilson (Exhibit 1015) and Corcoran96 (Exhibit 1012)
13. Claims 3-5, 14, 17 and 18 are obvious under 35 U.S.C. §103(a) over Wilson (Exhibit 1015), Corcoran96 (Exhibit 1012), and Fleishman (Exhibit 1013)
14. Claims 3-8, 14 and 17-20 are obvious under 35 U.S.C. §103(a) over Wilson (Exhibit 1015) and REC-html32 (Exhibit 1014)

C. How claims are to be construed under 37 C.F.R. §42.104(b)(3)[3]

With the sole exception of the recitation of "means for connecting to a computer network" in dependent claim 2, none of the challenged claims contain a means-plus-function or step-plus-function limitation, as permitted under 35 U.S.C. §112(f). Therefore, each claim term should be given its broadest reasonable

[3] See, e.g., IFR FR, 77 Fed. Reg. at 48700 ("Petitioners are not required to define every claim term, but merely to provide a statement that the claim terms are presumed to take on their ordinary and customary meaning, and to point out any claim term that has a special meaning and the definitions in the specification.")

construction in light of the specification[4], and more particularly each claim term should be presumed to encompass its ordinary meaning to one skilled in the art as of the filing date of the '993 patent, as further discussed in Declaration (Exhibit 1002) at paragraphs 27-36. The USPTO is not bound in the present proceeding by any prior or future court claim constructions issued during litigation[5]. However, the Patentee may be estopped from asserting any claim construction positions before the USPTO contrary to those asserted during litigation[6].

1. Construction of "means for connecting to a computer network"

This recitation within dependent claim 2 is a means-plus-function limitation. "Under section 112 ¶ 6, now recodified as 35 U.S.C. section 112(f), a means-plus-function claim limitation includes both the corresponding structures disclosed by the specification as means of performing the function, and the equivalents of those structures. . . . For purposes of section 112(f), an equivalent of the disclosed

[4] See, e.g., 37 C.F.R. §42.100(b) ("A claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.")

[5] See, e.g., IFR FR, 77 Fed. Reg. at 48697, citing *In re NTP, Inc.*, 654 F.3d 1268, 1274 (Fed. Cir. 2011) ("Even in the situation where the patent claims had been previously construed by the district court using a different standard in an action that involved invalidity and infringement issues, the Office was required to apply the 'broadest reasonable interpretation' standard in its own proceedings.")

[6] See, e.g., *In re Trans Texas Holdings Corp.,* 498 F.3d 1290, 1297 (Fed. Cir. 2007), citing *In re Freeman*, 30 F.3d 1459, 1469 (Fed. Cir. 1994) ("[A] patentee in a PTO proceeding [i]s barred by issue preclusion from asserting a claim construction already rejected in a district court infringement action brought by the patentee against a third party.")

structure performs the same function as the disclosed structure, in substantially the same way, with substantially the same result." *Regents of the Univ. of Minn. v. AGA Medical Corp.*, 717 F.3d 929, 941 (Fed. Cir. 2013).

The '993 patent discloses several corresponding structures as means for performing the function of "connecting to a computer network" recited in claim 2. See, e.g., column 4, lines 24-27, with reference to FIG. 1 ("The web browser 22 can be a first personal computer 48 including . . . a network card 52 for communicating over the computer network 24.") (emphasis added); column 5, lines 40-44, with reference to FIG. 1 ("The Virtual Light Switch 20 can be a second personal computer 76 including. . . a network card 84 for communicating over the computer network 24.") (emphasis added); and column 9, lines 25-30 ("he could dial into the computer network 24 using a modem or ISDN line on his home computer") (emphasis added). Thus, the recited "means for connecting to a computer network" encompasses a network card, a modem, or ISDN line, and any equivalents of those disclosed structures (i.e., any structure which performs the same function in substantially the same way with substantially the same result).

Solely in order to expedite review of claim 2 under §102 and §103, Petitioner will presume that "a computer network" recited in dependent claim 2 refers to the same "computer network" as that recited in independent claim 1. Because challenges under §112 cannot be raised in an *inter partes* review, Petitioner expressly reserves

the right to challenge the validity of claim 2 under §112 in one or more subsequent administrative and/or judicial proceedings.

2. Claim limitations which are not entitled to patentable weight

a. "whereby the lighting control request is used for controlling the lighting load corresponding to the selected representation"

These limitations, found in each independent claim, are directed solely to the intended use of the lighting control request and hence are not entitled to patentable weight. See, e.g., *Minton v. Nat'l Ass'n of Securities Dealers, Inc.*, 336 F.3d 1373, 1381 (Fed. Cir. 2003) (A "clause in a method claim is not given weight when it simply expresses the intended result of a process step positively recited."); *Boehringer Ingelheim Vetmedica v. Schering-Plough Corp*., 320 F.3d 1339, 1345 (Fed. Cir. 2003) ("An intended use or purpose usually will not limit the scope of the claim because such statements usually do no more than define a context in which the invention operates."); *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997) ("It is well settled that the recitation of a new intended use for an old product does not make a claim to that old product patentable.") See also MPEP 2114(I), citing *Schreiber*, 128 F.3d at 1477-78 ("While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function.")

b. "an interface module adapted to be coupled to a power/communications bus; and wherein the instructions further

instruct the computer to translate the lighting control requests into digital commands for the interface module"

Although these limitations are recited in dependent claim 11, the '993 patent admits at column 3, lines 26-50, that such features were "commonly used in lighting control systems" prior to its filing: "The digital commands CMD are sent to an interface module 28. The interface module 28 allows the server 26 to link into the power/communications bus 16. Typically, the interface module 28 does not adhere to an open standard; instead, it expects the digital commands CMD to be in a proprietary format. Therefore, the server 26 generates the digital commands CMD in the proprietary format. . . . . Such relays 14, power/communication buses 16 and interface modules 28 are commonly used in lighting control systems. For example, the interface module 28 can be a TLC Dataline Communications Interface Module, which is available from GE Lighting Controls."

These admissions may be properly relied upon in rejecting claim 11. See, e.g., *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1362 (Fed. Cir. 2007) ("Admissions in the specification regarding the prior art are binding on the patentee for purposes of a later inquiry into obviousness."); *Constant v. Advanced Micro-Devices, Inc.,* 848 F.2d 1560, 1570 (Fed. Cir. 1988) ("A statement in the patent that something is in the prior art is binding on the applicant and patentee for determinations of anticipation and obviousness."); and 37 C.F.R. §1.104(c)(3) ("In rejecting claims the examiner may rely upon admissions by the

applicant, or the patent owner in a reexamination proceeding, as to any matter affecting patentability").

3. High level of skill in pertinent art at filing date suggests obviousness

"A determination of obviousness requires a factual finding of the level of ordinary skill in the art" because "fewer inventions are obvious to a person with a lower level of skill than to one with a higher level of skill. A less sophisticated level of skill generally favors a determination of nonobviousness, and thus the patentee, while a higher level of skill favors the reverse." *Innovention Toys, LLC v. MGA Entm't, Inc.*, 637 F.3d 1314, 1323 (Fed. Cir. 2011). *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d 1342, 1366 (Fed. Cir. 2012) held "it is generally easier to establish obviousness under a higher level of ordinary skill in the art," such as the level described in Declaration (Exhibit 1002) at paragraphs 20-23.

D. Specific identification of where each element of the claims are found in prior art patents or printed publications under 37 C.F.R. §42.104(b)(4)

1. Claims 1-22 are anticipated under 35 U.S.C. §102(b) by SavoySoft (Exhibit 1009)

As further discussed in Declaration (Exhibit 1002) at paragraphs 38-61, SavoySoft (Exhibit 1009) discloses the limitations of claims 1-22 as follows:

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
Independent Claim 1: A computer for controlling a plurality of lighting loads, the computer comprising: a	See page 4 ("CyberHouse is a home automation and facility management application for Windows that . . . controls electrical equipment, appliances, lighting through a two-way X10 interface, providing

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
display; and memory encoded with executable instructions,	security, automation, monitoring, management and analysis of one or more facilities. . . . In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") See also Declaration (Exhibit 1002) at paragraph 38.
the instructions, when executed, causing the computer to show a pictograph and a control panel on the display,	Pages 4 and 8 each show a pictograph (light icon) and a control panel (slider). See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") and page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraph 39.
the pictograph including selectable representations of the lighting loads,	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") See also Declaration (Exhibit 1002) at paragraph 39.
the control panel allowing a lighting load state to be entered into the computer,	See page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraph 39.
the instructions further causing the computer to generate a lighting control request when a representation on the pictograph is selected,	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") and page 7 ("CyberHouse's server application . . . . . works in conjunction with the Viewer, accepting instructions from you via the Viewer's graphical user interface.") See also Declaration (Exhibit 1002) at paragraph 40.
the lighting control request identifying a lighting load corresponding to the selected representation,	See the figure on page 4 ("PaulsLight") and the figure on page 8 ("Light1," "Light2," and "Light3"). See also page 8 ("This example can be expanded for more lights and/or more scenes.") See also

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
	Declaration (Exhibit 1002) at paragraph 43.
the lighting control request further identifying the lighting control state entered into the computer,	See page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraph 43.
and send the lighting control request to a computer network,	See page 4 ("CyberHouse can interconnect multiple facilities over networks and provide you with remote access when you're away. . . . True Client/Server architecture with the CyberHouse Manager running as a server (like the Print Manager) and the CyberHouse Viewer running as a client on any networked computer (including laptop over dialup phone line).") See also Declaration (Exhibit 1002) at paragraph 41.
whereby the lighting control request is used for controlling the lighting load corresponding to the selected representation.	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") and page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraph 42.
Claim 2: The computer of claim 1,	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 1.*
further comprising means for connecting to a computer network, the instructions further instructing the computer to send the lighting control request to the computer network.	See page 4 ("CyberHouse can interconnect multiple facilities over networks and provide you with remote access when you're away. . . . True Client/Server architecture with the CyberHouse Manager running as a server (like the Print Manager) and the CyberHouse Viewer running as a client on any networked computer"). See also Declaration (Exhibit 1002) at paragraph 44.
Claim 3: The computer of claim 1, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 1.*
the instructions are included in a web browser program	See page 4 ("CyberHouse is a home automation and facility management application for Windows that

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
and an HTML file,	integrates the world of information processing with your environment. By this we mean the use of mainstream Windows applications with access to Internet sites designed to automate and manage your home or office.") and page 10 ("CyberHouse's client-server architecture enables remote and mobile users to dial into their home PCs . . . via the Internet. Once connected, you can check the status of and control all subsystems and devices on your HouseHold Web.") See also Declaration (Exhibit 1002) at paragraphs 45-47.
the web browser program and the HTML file causing the computer to download and display a pictograph-based image map including the selectable representations,	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") See also Declaration (Exhibit 1002) at paragraphs 39 and 48.
the web browser program and the HTML file also causing the computer to download and display an HTML lighting control form for allowing the lighting load state to be entered into the computer.	See page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraphs 39 and 48.
Claim 4: The computer of claim 1, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 1.*
the lighting control form includes a plurality of graphical display elements for entering the lighting load states into the computer.	See page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraph 49.
Claim 5: The computer of claim 2, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of claim 1 and claim 2.*
the web browser program	See page 4 ("With CyberHouse, you can control

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
and the HTML file instructions cause the computer to generate the lighting control request including coordinates of the selected representation and the lighting state entered into the computer when a representation on the image map is selected.	indoor and outdoor lighting according to . . . calculations (derived from your Latitude / Longitude coordinates) . . . and much more.") See also Declaration (Exhibit 1002) at paragraphs 50-51.
Claim 6: The computer of claim 1, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 1.*
the instructions are included in a web browser program, an HTML file and an applet,	See page 10 ("CyberHouse's client-server architecture enables remote and mobile users to dial into their home PCs . . . via the Internet. Once connected, you can check the status of and control all subsystems and devices on your HouseHold Web.") and page 4 ("CyberHouse is a home automation and facility management application for Windows that integrates the world of information processing with your environment. By this we mean the use of mainstream Windows applications with access to Internet sites designed to automate and manage your home or office. . . . Graphical layouts residing on OLE2.0 client windows, permitting you to include any object supported by Microsoft's OLE2.0 servers, such as architectural drawing packages, Microsoft Draw and Paint, Audio and Video sequences, and many more.") Compare *Parallel Networks, LLC v. Abercrombie & Fitch Co.*, 704 F.3d 958, 962 (Fed. Cir. 2013) ("An applet is a small program that typically performs one specific task. Examples include standalone programs, such as Microsoft Paint, or web-based programs that operate within an Internet browser and change the graphic content of a website in response to user input.") See also Declaration (Exhibit 1002) at paragraphs 52-53.

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
the web browser program, the HTML file and the applet causing the computer to download and display the pictograph	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") See also Declaration (Exhibit 1002) at paragraphs 39 and 54.
and display a control panel for allowing the lighting load state to be entered into the computer.	See page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraphs 39 and 54.
Claim 7: The computer of claim 6, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of claim 1 and claim 6.*
the lighting control panel includes a plurality of graphical display elements for entering the lighting load states into the computer.	See page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraph 49.
Claim 8: The computer of claim 6, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of claim 1 and claim 6.*
the web browser program, the HTML file and the applet cause the computer to generate the lighting control request including an identification of a lighting load and the lighting state entered into the computer.	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions. . . . Graphical layouts residing on OLE2.0 client windows, permitting you to include any object supported by Microsoft's OLE2.0 servers, such as architectural drawing packages, Microsoft Draw and Paint, Audio and Video sequences, and many more.") and page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraphs 43 and 54.
Claim 9: The computer of claim 1, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 1.*
the pictograph includes a clickable floor plan.	See page 4 ("Users control their facility through graphical Layout windows . . . . In the Layout shown

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
	here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") See also Declaration (Exhibit 1002) at paragraph 55.
Claim 10: The computer of claim 9, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of claim 1 and claim 9.*
the pictograph is link,able [sic] to other clickable floor plans.	See page 4 ("Multiple Layouts can display multiple facilities or different views of the same facility.") and page 5 ("Multiple Document Interface (MDI) permitting the concurrent viewing of multiple facilities, or multiple views of the same facility.") See also Declaration (Exhibit 1002) at paragraph 56.
Claim 11: The apparatus of claim 1, further comprising	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 1.*
an interface module adapted to be coupled to a power/communications bus; and wherein the instructions further instruct the computer to translate the lighting control requests into digital commands for the interface module,	See page 4 ("CyberHouse . . . controls electrical equipment, appliances, lighting through a two-way X10 interface, providing security, automation, monitoring, management and analysis of one or more facilities.") and page 6 ("X-10 devices that communicate over 110 volt power lines. . . . CyberHouse interfaces to [t]he X-10 system through a proprietary two-way interface adapter connected to the PC parallel printer port.") See generally the '993 patent (Exhibit 1001) at column 3, lines 26-50 (admitting that the recited features were already "commonly used in lighting control systems" when the '993 patent was filed). See also Declaration (Exhibit 1002) at paragraphs 57-58.
the digital commands indicating the identified lighting load and the lighting state of the identified lighting load.	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") and page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraph 59.
Independent Claim 12: A	See page 4 ("CyberHouse . . . controls electrical

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
method of controlling a plurality of lighting loads using a computer connectable to a computer network, the method comprising:	equipment, appliances, lighting through a two-way X10 interface, providing security, automation, monitoring, management and analysis of one or more facilities. . . . True Client/Server architecture with the CyberHouse Manager running as a server (like the Print Manager) and the CyberHouse Viewer running as a client on any networked computer"). See also Declaration (Exhibit 1002) at paragraph 38.
displaying a pictograph including a plurality of selectable representations of the lighting loads on the computer;	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") See also Declaration (Exhibit 1002) at paragraph 39.
displaying a control panel on the computer, the control panel allowing a lighting load state to be entered into the computer;	See page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraph 39.
generating a lighting control request when a lighting load state is entered into the computer and a selectable representation on the pictograph is selected; and	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") and page 7 ("CyberHouse's server application . . . . . works in conjunction with the Viewer, accepting instructions from you via the Viewer's graphical user interface.") See also Declaration (Exhibit 1002) at paragraph 40.
sending the lighting control request to the computer network	See page 4 ("CyberHouse can interconnect multiple facilities over networks and provide you with remote access when you're away. . . . True Client/Server architecture with the CyberHouse Manager running as a server (like the Print Manager) and the CyberHouse Viewer running as a client on any networked computer (including laptop over dialup phone line).") See also Declaration (Exhibit 1002) at paragraph 41.
whereby the lighting control	See page 4 ("In the Layout shown here, users view

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
request is used for controlling the lighting load corresponding to the selected representation.	animated icons to show activity and can control the environment through simple point and click mouse actions.") and page 7 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraph 42.
Claim 13: The method of claim 12, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 12.*
the lighting control requests are sent to the network using a TCP/IP protocol.	See page 4 ("CyberHouse is a home automation and facility management application for Windows that integrates the world of information processing with your environment. By this we mean the use of mainstream Windows applications with access to Internet sites designed to automate and manage your home or office.") and page 10 ("CyberHouse's client-server architecture enables remote and mobile users to dial into their home PCs . . . via the Internet. Once connected, you can check the status of and control all subsystems and devices on your HouseHold Web.") See also Declaration (Exhibit 1002) at paragraphs 60-61.
Claim 14: The method of claim 12, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 12.*
the lighting control requests include coordinates of the selected representation and the lighting load state.	See page 4 ("With CyberHouse, you can control indoor and outdoor lighting according to . . . calculations (derived from your Latitude / Longitude coordinates) . . . and much more.") See also Declaration (Exhibit 1002) at paragraph 50.
Claim 15: The method of claim 12, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 12.*
the lighting control requests include a lighting load identifier and the lighting load state.	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") and page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.")

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
	See also Declaration (Exhibit 1002) at paragraph 43.
Claim 16: An article of manufacture for a computer, the article comprising: computer memory; and a plurality of executable instruction encoded in the memory, the instructions, when executed, causing the computer to	See page 4 ("CyberHouse is a home automation and facility management application for Windows that integrates the world of information processing with your environment.") See also Declaration (Exhibit 1002) at paragraph 38.
display a pictograph and a control panel,	The figures on page 4 and page 8 each show a pictograph (light icon) and a control panel (slider). See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") and page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraph 39.
the pictograph including selectable representations of the lighting loads,	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") See also Declaration (Exhibit 1002) at paragraph 39.
the control panel allowing a lighting load state to be entered into the computer,	See page 8 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraph 39.
the instructions further causing the computer to generate a lighting control request when a representation on the pictograph is selected,	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") and page 7 ("CyberHouse's server application . . . . . works in conjunction with the Viewer, accepting instructions from you via the Viewer's graphical user interface.") See also Declaration (Exhibit 1002) at paragraph 40.

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
the lighting control request identifying a lighting load corresponding to the selected representation,	See the figure on page 4 ("PaulsLight") and the figure on page 7 ("Light1," "Light2," and "Light3"). See also page 7 ("This example can be expanded for more lights and/or more scenes.") See also Declaration (Exhibit 1002) at paragraph 43.
the lighting control request further identifying the lighting control state entered into the computer	See page 7 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraph 43.
and send the lighting control request to a computer network,	See page 4 ("CyberHouse can interconnect multiple facilities over networks and provide you with remote access when you're away. . . . True Client/Server architecture with the CyberHouse Manager running as a server (like the Print Manager) and the CyberHouse Viewer running as a client on any networked computer (including laptop over dialup phone line).") See also Declaration (Exhibit 1002) at paragraph 41.
whereby the lighting control request is used for controlling the lighting load corresponding to the selected representation.	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") and page 7 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraph 42.
Claim 17: The article of claim 16, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 16.*
the instructions are included in a web browser program and an HTML file,	See page 4 ("CyberHouse is a home automation and facility management application for Windows that integrates the world of information processing with your environment. By this we mean the use of mainstream Windows applications with access to Internet sites designed to automate and manage your home or office.") and page 10 ("CyberHouse's client-server architecture enables remote and mobile users to dial into their home PCs . . . via the Internet.

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
	Once connected, you can check the status of and control all subsystems and devices on your HouseHold Web.") See also Declaration (Exhibit 1002) at paragraphs 45-47.
the web browser program and the HTML file causing the computer to download and display an image map including the selectable representations,	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") See also Declaration (Exhibit 1002) at paragraphs 39 and 48.
the web browser program and the HTML file also causing the computer to download and display an HTML lighting control form for allowing the lighting load state to be entered into the computer.	See page 7 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraphs 39 and 48.
Claim 18: The article of claim 17, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of claim 16 and claim 17.*
the web browser program and the HTML file instructions cause the computer to generate the lighting control request including coordinates of the selected representation and the lighting state entered into the computer when a representation on the image map is selected.	See page 4 ("With CyberHouse, you can control indoor and outdoor lighting according to . . . calculations (derived from your Latitude / Longitude coordinates) . . . and much more.") See also Declaration (Exhibit 1002) at paragraph 50.
Claim 19: The article of claim 16, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 16.*
the instructions are included in a web browser program, an HTML file and an applet,	See page 10 ("CyberHouse's client-server architecture enables remote and mobile users to dial into their home PCs . . . via the Internet. Once

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
the web browser program,	connected, you can check the status of and control all subsystems and devices on your HouseHold Web.") and page 4 ("CyberHouse is a home automation and facility management application for Windows that integrates the world of information processing with your environment. By this we mean the use of mainstream Windows applications with access to Internet sites designed to automate and manage your home or office. . . . Graphical layouts residing on OLE2.0 client windows, permitting you to include any object supported by Microsoft's OLE2.0 servers, such as architectural drawing packages, Microsoft Draw and Paint, Audio and Video sequences, and many more.") Compare *Parallel Networks,* 704 F.3d at 962 ("An applet is a small program that typically performs one specific task. Examples include standalone programs, such as Microsoft Paint, or web-based programs that operate within an Internet browser and change the graphic content of a website in response to user input.") See also Declaration (Exhibit 1002) at paragraphs 52-53.
the HTML file and the applet causing the computer to download and display the pictograph	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") See also Declaration (Exhibit 1002) at paragraphs 39 and 54.
and display a control panel for allowing the lighting load state to be entered into the computer.	See page 7 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraphs 39 and 54.
Claim 20: The article of claim 19, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of claim 16 and claim 19.*
the web browser program, the HTML file and the applet cause the computer to generate the lighting control	See page 4 ("In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions. . . . Graphical layouts residing on OLE2.0

'993 patent (Exhibit 1001)	***SavoySoft (Exhibit 1009)***
request including an identification of a lighting load and the lighting state entered into the computer when a representation on the pictograph is selected.	client windows, permitting you to include any object supported by Microsoft's OLE2.0 servers, such as architectural drawing packages, Microsoft Draw and Paint, Audio and Video sequences, and many more.") and page 7 ("The layout includes a top row of lights (three) with slider styles. . . . The slider controls permit manual adjustment of the lights.") See also Declaration (Exhibit 1002) at paragraphs 40, 43 and 54.
Claim 21: The article of claim 16, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 16.*
the pictograph includes a clickable floor plan.	See page 4 ("Users control their facility through graphical Layout windows . . . . In the Layout shown here, users view animated icons to show activity and can control the environment through simple point and click mouse actions.") See also Declaration (Exhibit 1002) at paragraph 55.
Claim 22: The article of claim 21, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of claim 16 and claim 21.*
the pictograph is linkable to other clickable floor plans.	See page 4 ("Multiple Layouts can display multiple facilities or different views of the same facility.") and page 5 ("Multiple Document Interface (MDI) permitting the concurrent viewing of multiple facilities, or multiple views of the same facility.") See also Declaration (Exhibit 1002) at paragraph 56.

2. Claims 1-22 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009)

To the extent that SavoySoft (Exhibit 1009) is not considered to be a unitary anticipatory reference, Petitioner submits that it would have been obvious to have combined its respective teachings directed to a functionality associated with a

single software product, CyberHouse Release 2. Moreover, to the extent that SavoySoft (Exhibit 1009) fails to fully disclose any limitation of claims 1-22, any such differences would have been sufficiently minor that the claims as a whole would nonetheless have been obvious to one skilled in the art at the time of the filing of the '993 patent. See also Declaration (Exhibit 1002) at paragraph 37.

3. Claims 1-22 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009) and House (Exhibit 1011)

Claims 1, 8, 15, 16 and 20 include limitations wherein a lighting control request identifies a lighting load and a lighting control state. As discussed in the chart claim above and in Declaration (Exhibit 1002) at paragraph 40, SavoySoft (Exhibit 1009) is believed to teach and/or suggest these limitations. Nonetheless, any possible deficiency of SavoySoft with respect to these limitations may be remedied by combining its teachings with House (Exhibit 1011) in the manner discussed in Declaration (Exhibit 1002) at paragraphs 62-65. House explicitly discloses the aforementioned limitations at pages 66-67:

> In the following examples, the first 11 bytes of each packet are the same with the exception of byte 11, where the invoke ID field is incremented. The first 11 bytes (hex) are: 0F 01 00 05 00 01 00 02 00 50 E0. As you recall, the first byte is the control byte and the next four bytes are the destination-address information in right-to-left order, followed by the source address, also in right-to-left order. The next two bytes are the NPDU and APDU headers. . . . The on command

> uses the SetValue method to send a value of 37h to the feature-select IV. This sets the current value to 100 by the definition of feature-select. The bytes (hex) then are: 21 02 45 66 F5 37. The 21 is the ID of the lighting context, 02 is the object number of the analog control, 45 is the SetValue method, 66 is the feature-se1ect IV (i.e., ASCII "f"), F5 is a delimiter, and 37 is an ASCII "7". The complete packet is: 0F 01 00 05 00 01 00 02 00 50 E8 21 02 45 66 F5 37. . . . To dim the light, we set the current_va1ue IV to the dim level desired. In this example, we'll use 50%. With a packet of 21 02 45 43 FS 35 30, the 21 is the ID of the lighting context, 02 is the object number of the analog control. 45 is the SetValue method, 43 is the current-value IV (ASClI "C"), F5 is a delimiter, and 35 30 is ASCII for "5" and "0" or 50%. The complete packet is: 0F 0l 00 01 00 14 00 15 00 50 EA 21 02 45 43 F5 35 30.

Accordingly, the above-quoted portion of House discloses a lighting control request ("packet") which identifies a lighting load ("destination-address information") and a lighting control state ("the dim level desired"). The combination of SavoySoft and House would be obvious as SavoySoft suggests that House's techniques would be beneficially incorporated therein for controlling CEBus light switches. Compare SavoySoft (Exhibit 1009) at page 3 ("CyberHouse is a home automation and facility management system for your home/office, providing . . . . support for a large and growing collection of devices, including . . . . CEBus Dimmer switch") and House (Exhibit 1011) at page 61 ("In

this article, I'll introduce you to packet construction and show you how to create CAL messages that control a CEBus light switch.")

4. Claims 6-8, 19 and 20 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009) and Corcoran96 (Exhibit 1012)

As discussed in the claim chart above and in Declaration (Exhibit 1002) at paragraph 53, it is believed that SavoySoft (Exhibit 1009) teaches and/or suggests the limitations of claims 6 and 19 directed to an applet when that term is given its broadest reasonable construction. Nonetheless, any potential deficiency of SavoySoft with respect to these limitations may be remedied by combining its teachings with Corcoran96 (Exhibit 1012) as discussed in Declaration at paragraphs 66-68. The proposed combination would have been obvious because SavoySoft suggests the desirability of providing web access to CEBus devices, and Corcoran96 teaches that the use of Java applets for this purpose is advantageous.

Compare SavoySoft (Exhibit 1009) at page 3 ("CyberHouse is a home automation and facility management system for your home/office, providing you with security, automation, monitoring and management of . . . . a large and growing collection of devices, including . . . . CEBus Dimmer switch"); page 9 ("A variety of communication techniques can be used together to build your HouseHold Web. These include . . . CEBus"); and page 10 ("CyberHouse's client-server architecture enables remote and mobile users to dial into their home PCs . . . via the Internet. Once connected, you can check the status of and control all

subsystems and devices on your HouseHold Web.") with Corcoran96 (Exhibit 1012) at page 236, left column ("Several methods of providing access to CEBus networks using the World Wide Web are described. Details of a working demonstration system are given. The system software incorporates CGI-Bin scripts and Java applets to support remote access to CEBus networks."); page 237, left column ("Java applets are executable code modules. These modules can be exported to a remote host in the same way that Hypertext documents are presently exported to a WWW browser. If the client-end browser incorporates a Virtual Java Machine (VJM) it recognizes and executes the applet."); and page 237, right column ("In our demonstration application Java applets provide a method of starting mini 'daemons' on the remote client. The applets then register and synchronise with the server-end software. This provides much richer application functionality and facilitates more sophisticated network link management and access security. . . . In this paper we have demonstrated the practical integration of a CEBus network with the WWW. This integration provides remote access to a new generation of consumer electronics products.")

5. Claims 6-8, 19 and 20 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009), House (Exhibit 1011) and Corcoran96 (Exhibit 1012)

It would have been obvious to combine SavoySoft (Exhibit 1009) with both House (Exhibit 1011) and Corcoran96 (Exhibit 1012) to remedy the respective

deficiencies discussed above with reference to grounds 3 and 4. The combination of these three references would have obvious for at least the reasons discussed above with regard to grounds 3 and 4, noting that each of the references is directed to remote control of CEBus devices. See also Declaration (Exhibit 1002) at paragraph 69.

6. Claims 3-5, 14, 17 and 18 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009), Corcoran96 (Exhibit 1012), and Fleishman (Exhibit 1013)

Claims 3 and 17 include limitations wherein selectable representations are included in an image map, and claims 5, 14 and 18 specify that the lighting control request includes coordinates of the selected representation. To the extent that SavoySoft (Exhibit 1009) alone fails to teach or suggest these limitations, such deficiency may be remedied by combining its teachings with those of Corcoran96 (Exhibit 1012) and Fleishman (Exhibit 1013) as discussed in Declaration (Exhibit 1002) at paragraphs 70-74.

SavoySoft suggests the desirability of providing remote access to CEBus devices. See SavoySoft (Exhibit 1009) at page 3 ("CyberHouse is a home automation and facility management system for your home/office, providing you with security, automation, monitoring and management of . . . . a large and growing collection of devices, including . . . . CEBus Dimmer switch"); page 9 ("A variety of communication techniques can be used together to build your

HouseHold Web. These include . . . CEBus"); and page 10 ("CyberHouse's client-server architecture enables remote and mobile users to dial into their home PCs . . . via the Internet. Once connected, you can check the status of and control all subsystems and devices on your HouseHold Web.")

Corcoran96 (Exhibit 1012) suggests that one solution for providing remote access to CEBus devices involves CGI scripts. See Corcoran96 at page 236, left column ("Several methods of providing access to CEBus networks using the World Wide Web are described. Details of a working demonstration system are given. The system software incorporates CGI-Bin scripts . . . to support remote access to CEBus networks.") and page 237, left column ("The Common Gateway Interface (CGI) is a standard for interfacing external applications with a HTTP server. It defines a mechanism to allow a WWW client to transmit input data to an executable program which resides on the server. This executable generates a dynamic document from the input data which is returned to the client. CGI was designed as an enhancement for HTTP servers to allow dynamic documents to be generated in response to user input.")

Fleishman (Exhibit 1013) teaches that CGI scripts are typically used to implement image maps, and the advantages associated with their use. See Fleishman at page 1 ("One of the things that mystifies newcomers to the Web is how to set up an image so that when you click on something in it, you're taken to a

specific location on the Web. The answer: image mapping. Image maps allow a user to click on an image, have that click translated into a set of (x,y) coordinates in pixels relative to the image, and then have those coordinates translated into a location or resource on the Internet. The process only *seems* mysterious.") and page 3 ("These coordinates are transmitted to a Common Gateway Interface-enabled program, which interprets them and maps these coordinates against shapes you've defined and assigned to specific Internet resources, such as Web pages.")

Fleishman specifically teaches arrangements wherein an image map includes selectable representations, and that selecting one of the representations shown on the image map will cause transmission of a request including the coordinates of the selected representation on the image map in the manner recited in claims 3, 5, 14, 17 and 18. Thus, to the extent that SavoySoft alone fails to teach or suggest the limitations of these claims, such deficiency is remedied by Fleishman, which would be obvious to combine with SavoySoft in view of Corcoran96.

7. Claims 3-5, 14, 17 and 18 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009), House (Exhibit 1011), Corcoran96 (Exhibit 1012), and Fleishman (Exhibit 1013)

It would have been obvious to combine SavoySoft (Exhibit 1009) with House (Exhibit 1011), Corcoran96 (Exhibit 1012) and Fleishman (Exhibit 1013) to remedy the respective deficiencies discussed above with reference to grounds 3

and 6. The combination of these references would have obvious for the reasons discussed with reference to grounds 3 and 6. See also Declaration at paragraph 75.

8. Claims 3-8, 14 and 17-20 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009) and REC-html32 (Exhibit 1014)

As discussed in the claim chart above and Declaration (Exhibit 1002) at paragraphs 48-50, 56 and 76, it is believed that SavoySoft (Exhibit 1009), either alone or in view of the common knowledge of one skilled in the art, teaches and/or suggests at least the limitations of claims 3, 6, 14, 17 and 19 directed to the use of a web browser program and an HTML file. As discussed in Declaration (Exhibit 1002) at paragraphs 77-86, to the extent that SavoySoft (Exhibit 1009) alone fails to teach and/or suggest the further limitations of claims 3-5, 14, 17 and 18 directed to the use of an image map and of claims 6-8, 14, 19 and 20 directed to the use of an applet, such deficiencies are remedied by combining the relevant teachings of SavoySoft heretofore identified with the teachings of REC-html32 (Exhibit 1014) identified in the following claim chart:

'993 patent (Exhibit 1001)	***REC-html32 (Exhibit 1014)***
Claim 3: The computer of claim 1, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 1.*
the instructions are included in a web browser program and an HTML file,	See page 1 ("The HyperText Markup Language (HTML) is a simple markup language used to create hypertext documents that are portable from one platform to another. . . . This specification defines HTML version 3.2. HTML 3.2 aims to capture

'993 patent (Exhibit 1001)	***REC-html32 (Exhibit 1014)***
	recommended practice as of early '96 and as such to be used as a replacement for HTML 2.0") and page 2 ("HTML 3.2 is W3C's specification for HTML, developed in early `96 together with vendors including IBM, Microsoft, Netscape Communications Corporation, Novell, SoftQuad, Spyglass, and Sun Microsystems. HTML 3.2 adds widely deployed features . . . while providing full backwards compatibility with the existing standard HTML 2.0.") See also Declaration (Exhibit 1002) at paragraph 78.
the web browser program and the HTML file causing the computer to download and display a pictograph-based image map including the selectable representations,	See page 27 ("ismap . . . use server image map") and page 28 ("When the IMG element is part of a hypertext link, and the user clicks on the image, the ISMAP attribute causes the location to be passed to the server.") See also Declaration (Exhibit 1002) at paragraph 79.
the web browser program and the HTML file also causing the computer to download and display an HTML lighting control form for allowing the lighting load state to be entered into the computer.	See page 10 ("FORM fill-out forms . . . . This element is used to define a fill-out form for processing by HTTP servers.") and page 16 ("This is used to define an HTML form, and you can have more than one form in the same document. . . . Forms can contain a wide range of HTML markup including several kinds of form fields such as single and multi-line text fields, radio button groups, checkboxes, and menus.") See also Declaration (Exhibit 1002) at paragraph 80.
Claim 4: The computer of claim 1, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 1.*
the lighting control form includes a plurality of graphical display elements for entering the lighting load states into the computer.	See page 16 ("This is used to define an HTML form, and you can have more than one form in the same document. . . . Forms can contain a wide range of HTML markup including several kinds of form fields such as single and multi-line text fields, radio button groups, checkboxes, and menus.") See also

'993 patent (Exhibit 1001)	***REC-html32 (Exhibit 1014)***
	Declaration (Exhibit 1002) at paragraph 81.
Claim 5: The computer of claim 2, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of claim 1 and claim 2.*
the web browser program and the HTML file instructions cause the computer to generate the lighting control request including coordinates of the selected representation and the lighting state entered into the computer when a representation on the image map is selected.	See page 28 ("When the IMG element is part of a hypertext link, and the user clicks on the image, the ISMAP attribute causes the location to be passed to the server. . . . The location clicked is passed to the server as follows. The user agent derives a new URL from the URL specified by the HREF attribute by appending '?' the x coordinate ',' and the y coordinate of the location in pixels. The link is then followed using the new URL. For instance, if the user clicked at the location x=10, y=27 then the derived URL will be: '*/cgibin/navbar.map?10,27*'.") See also Declaration (Exhibit 1002) at paragraph 82.
Claim 6: The computer of claim 1, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 1.*
the instructions are included in a web browser program, an HTML file and an applet,	See page 2 ("HTML 3.2 is W3C's specification for HTML, developed in early `96 together with vendors including IBM, Microsoft, Netscape Communications Corporation, Novell, SoftQuad, Spyglass, and Sun Microsystems. HTML 3.2 adds widely deployed features such as . . . applets . . . while providing full backwards compatibility with the existing standard HTML 2.0.") and page 29 ("This element is supported by all Java enabled browsers. It allows you to embed a Java applet into HTML documents.") See also Declaration (Exhibit 1002) at paragraph 84.
the web browser program, the HTML file and the applet causing the computer to download and display the pictograph	See page 30 ("These required attributes give the initial width and height (in pixels) of the applet display area, not counting any windows or dialogs that the applet brings up.") See also Declaration (Exhibit 1002) at paragraph 85.
and display a control panel for allowing the lighting	See page 30 ("These required attributes give the initial width and height (in pixels) of the applet

'993 patent (Exhibit 1001)	***REC-html32 (Exhibit 1014)***
load state to be entered into the computer.	display area, not counting any windows or dialogs that the applet brings up.") See also Declaration (Exhibit 1002) at paragraph 85.
Claim 7: The computer of claim 6, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of claim 1 and claim 6.*
the lighting control panel includes a plurality of graphical display elements for entering the lighting load states into the computer.	See page 30 ("These required attributes give the initial width and height (in pixels) of the applet display area, not counting any windows or dialogs that the applet brings up.") See also Declaration (Exhibit 1002) at paragraph 86.
Claim 14: The method of claim 12, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 12.*
the lighting control requests include coordinates of the selected representation and the lighting load state.	See page 28 ("When the IMG element is part of a hypertext link, and the user clicks on the image, the ISMAP attribute causes the location to be passed to the server. . . . The location clicked is passed to the server as follows. The user agent derives a new URL from the URL specified by the HREF attribute by appending '?' the x coordinate ',' and the y coordinate of the location in pixels. The link is then followed using the new URL. For instance, if the user clicked at the location x=10, y=27 then the derived URL will be: '*/cgibin/navbar.map?10,27*'.") See also Declaration (Exhibit 1002) at paragraph 82.
Claim 17: The article of claim 16, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 16.*
the instructions are included in a web browser program and an HTML file,	See page 1 ("The HyperText Markup Language (HTML) is a simple markup language used to create hypertext documents that are portable from one platform to another. . . . This specification defines HTML version 3.2. HTML 3.2 aims to capture recommended practice as of early '96 and as such to be used as a replacement for HTML 2.0") and page 2 ("HTML 3.2 is W3C's specification for HTML, developed in early `96 together with vendors including IBM, Microsoft, Netscape

'993 patent (Exhibit 1001)	***REC-html32 (Exhibit 1014)***
	Communications Corporation, Novell, SoftQuad, Spyglass, and Sun Microsystems. HTML 3.2 adds widely deployed features . . . while providing full backwards compatibility with the existing standard HTML 2.0.") See also Declaration (Exhibit 1002) at paragraph 78.
the web browser program and the HTML file causing the computer to download and display an image map including the selectable representations,	See page 27 ("ismap . . . use server image map") and page 28 ("When the IMG element is part of a hypertext link, and the user clicks on the image, the ISMAP attribute causes the location to be passed to the server.") See also Declaration (Exhibit 1002) at paragraph 79.
the web browser program and the HTML file also causing the computer to download and display an HTML lighting control form for allowing the lighting load state to be entered into the computer.	See page 10 ("FORM fill-out forms . . . . This element is used to define a fill-out form for processing by HTTP servers.") and page 16 ("This is used to define an HTML form, and you can have more than one form in the same document. . . . Forms can contain a wide range of HTML markup including several kinds of form fields such as single and multi-line text fields, radio button groups, checkboxes, and menus.") See also Declaration (Exhibit 1002) at paragraph 80.
Claim 18: The article of claim 17, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of claim 16 and claim 17.*
the web browser program and the HTML file instructions cause the computer to generate the lighting control request including coordinates of the selected representation and the lighting state entered into the computer when a representation on the image map is selected.	See page 28 ("When the IMG element is part of a hypertext link, and the user clicks on the image, the ISMAP attribute causes the location to be passed to the server. . . . The location clicked is passed to the server as follows. The user agent derives a new URL from the URL specified by the HREF attribute by appending '?' the x coordinate ',' and the y coordinate of the location in pixels. The link is then followed using the new URL. For instance, if the user clicked at the location x=10, y=27 then the derived URL will be: '*/cgibin/navbar.map?10,27*'.") See also Declaration (Exhibit 1002) at paragraph 82.

'993 patent (Exhibit 1001)	***REC-html32 (Exhibit 1014)***
Claim 19: The article of claim 16, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 16.*
the instructions are included in a web browser program, an HTML file and an applet, the web browser program,	See page 2 ("HTML 3.2 is W3C's specification for HTML, developed in early `96 together with vendors including IBM, Microsoft, Netscape Communications Corporation, Novell, SoftQuad, Spyglass, and Sun Microsystems. HTML 3.2 adds widely deployed features such as . . . applets . . . while providing full backwards compatibility with the existing standard HTML 2.0.") and page 29 ("This element is supported by all Java enabled browsers. It allows you to embed a Java applet into HTML documents.") See also Declaration (Exhibit 1002) at paragraph 84.
the HTML file and the applet causing the computer to download and display the pictograph	See page 30 ("These required attributes give the initial width and height (in pixels) of the applet display area, not counting any windows or dialogs that the applet brings up.") See also Declaration (Exhibit 1002) at paragraph 85.
and display a control panel for allowing the lighting load state to be entered into the computer.	See page 30 ("These required attributes give the initial width and height (in pixels) of the applet display area, not counting any windows or dialogs that the applet brings up.") See also Declaration (Exhibit 1002) at paragraph 85.

9. Claims 3-8, 14 and 17-20 are obvious under 35 U.S.C. §103(a) over SavoySoft (Exhibit 1009), House (Exhibit 1011) and REC-html32 (Exhibit 1014)

It would have been obvious to combine SavoySoft (Exhibit 1009) with House (Exhibit 1010) and REC-html32 (Exhibit 1014) to remedy the respective deficiencies discussed above with reference to grounds 3 and 8. The combination

of these references would have obvious for the reasons discussed with reference to grounds 3 and 8. See also Declaration (Exhibit 1002) at paragraph 87.

10. Claims 1, 2, 9-12, 15, 16, 21 and 22 are anticipated under 35 U.S.C. §102(b) by Wilson (Exhibit 1015)

As discussed in Declaration (Exhibit 1002) at paragraphs 89-104, Wilson (Exhibit 1015) discloses claims 1, 2, 9-12, 15, 16, 21 and 22 as follows:

'993 patent	*Wilson (Exhibit 1015)*
Independent Claim 1: A computer for controlling a plurality of lighting loads,	See column 24, lines 18-36 ("Now referring to FIG. 8A, a general block diagram of an alternative embodiment of a peripheral data acquisition, monitor, and adaptive control system 400 is shown. The system 400, in this embodiment, utilizes the X-10 power-line carrier code format transmitted over an AC power line of a home to monitor and control various household appliances, such as a table lamp, coffee maker, dishwasher, etc. . . . The host PC 12 is coupled to the I/O Bridge device 14, the keyboard 16, the mouse 18, and the modem 20, via the various interconnect cables described above. Since a MACINTOSH II computer is used in this embodiment, the mouse 18 is shown connected to the keyboard 16 instead of the PC 12.") See also Declaration (Exhibit 1002) at paragraph 89.
the computer comprising: a display; and memory encoded with executable instructions,	See column 8, lines 38-51 ("The PC shown in FIG. 1 is a MACINTOSH PLUS computer having a display screen 22 with a cursor indicator controlled by a mouse 18, and a floppy disk drive 24 adapted for 3½ inch floppy disks.")
the instructions, when executed, causing the computer to show a pictograph and a control panel on the display,	See column 30, line 52, to column 31, line 44 ("Hence, the peripheral data acquisition, monitor, and adaptive control system of the present invention is very user-friendly when the sequence of screen displays first illustrates zones or physical locations of a number of devices, then illustrates the particular location and function of each device in the

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	group, and then illustrates the soft control panel of the chosen device, wherein commands are input by the user to perform the desired control function.") See also Declaration (Exhibit 1002) at paragraph 90.
the pictograph including selectable representations of the lighting loads,	See column 30, lines 9-25 ("Once the user chooses a particular location or room of the house, the next screen display would illustrate the chosen location or room, and present a representative icon showing the exact location and function of each electronic device, similar to FIG. 4B. For example, if the living room was selected, the screen display would show an icon for a remotely-controlled television, a VCR, a lamp, an overhead fan, etc., all in the same room. Once the user moves the mouse pointer over the various electronically-controlled devices, the devices are highlighted and a text description (if not already present) would appear on the screen. Once a particular piece of electronically-controlled equipment is selected by the user, the program would move to the third level of screen displays to illustrate a pictorial view of the control panel of the specific device chosen in the previous screen.") See also Declaration (Exhibit 1002) at paragraph 91.
the control panel allowing a lighting load state to be entered into the computer,	See column 27, line 65, to column 28, line 2, with reference to FIG. 9A ("In this example, the X-10 input window is used to monitor the status of the master bedroom lamp. The command button 506 is used to indicate whether an 'on', 'off', 'dim', or 'bright' command has been selected by the user.") and column 30, lines 21-44 ("Once a particular piece of electronically-controlled equipment is selected by the user, the program would move to the third level of screen displays to illustrate a pictorial view of the control panel of the specific device chosen in the previous screen. Continuing with the example of the VCR, a soft control panel illustrating the appropriate controls and displays would be shown, similar to that shown in FIG. 4C. The user would then be able to operate the controls using the mouse

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	pointer on the simulated VCR controls, and would be able to monitor the device using the simulated VCR readouts duplicated on the screen. This feature is particularly useful if the soft control panel shown in the third level of the screen displays simulates an actual control panel of the device being controlled. Hence, the peripheral data acquisition, monitor, and adaptive control system of the present invention is very user-friendly when the sequence of screen displays first illustrates zones or physical locations of a number of devices, then illustrates the particular location and function of each device in the group, and then illustrates the soft control panel of the chosen device, wherein commands are input by the user to perform the desired control function.") See also Declaration (Exhibit 1002) at paragraph 92.
the instructions further causing the computer to generate a lighting control request when a representation on the pictograph is selected,	See column 27, line 65, to column 28, line 2, with reference to FIG. 9A ("In this example, the X-10 input window is used to monitor the status of the master bedroom lamp. The command button 506 is used to indicate whether an 'on', 'off', 'dim', or 'bright' command has been selected by the user.") and column 30, line 52, to column 31, line 44 ("Hence, the peripheral data acquisition, monitor, and adaptive control system of the present invention is very user-friendly when the sequence of screen displays first illustrates zones or physical locations of a number of devices, then illustrates the particular location and function of each device in the group, and then illustrates the soft control panel of the chosen device, wherein commands are input by the user to perform the desired control function.") See also Declaration (Exhibit 1002) at paragraph 93.
the lighting control request identifying a lighting load corresponding to the selected representation,	See column 28, lines 11-15 ("Note that the master bedroom lamp would normally be connected to an X-10 lamp module such as module 414 of FIG. 8A. The lamp would then be assigned an X-10 output channel (see FIG. 3I) in order to be controlled by the PC.") and column 29, lines 31-44 ("In Step 601 of FIG. 10A, the application

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	software program, such as a dedicated INIT, calls for a particular remote X-10 module to be turned on. As discussed above, the INITs are the driver programs in the preferred embodiment. However, this may not be the case for other types of PC's. In Step 602, the application software program creates the associated I/O Bridge command to select the specified X-10 module. During this step, information is sent to the I/O Bridge device 14 to generate the X-10 transmission select code. In the preferred embodiment, four data bytes are used: an X-10 identifier byte, the X-10 house code, the X-10 number code, and an I/O Bridge control byte.") See also Declaration (Exhibit 1002) at paragraph 94.
the lighting control request further identifying the lighting control state entered into the computer,	See column 27, line 65, to column 28, line 2, with reference to FIG. 9A ("In this example, the X-10 input window is used to monitor the status of the master bedroom lamp. The command button 506 is used to indicate whether an 'on', 'off', 'dim', or 'bright' command has been selected by the user."); and column 30, line 52, to column 31, line 44 ("Hence, the peripheral data acquisition, monitor, and adaptive control system of the present invention is very user-friendly when the sequence of screen displays first illustrates zones or physical locations of a number of devices, then illustrates the particular location and function of each device in the group, and then illustrates the soft control panel of the chosen device, wherein commands are input by the user to perform the desired control function.") See also Declaration (Exhibit 1002) at paragraph 95.
and send the lighting control request to a computer network,	See column 6, line 55, to column 7, line 10 ("In accordance with another aspect of the present invention, the system further provides the ability to interface the PC, via the keyboard port, with a wireless or AC power-line transmission media, such as an infrared (I/R), radio frequency (RF), or AC power line carrier (X-10) transmission link. . . . The interface device also executes instructions from the PC to provide control signals,

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	modulates the control signals onto the wireless or AC power-line transmission media, and receives, demodulates, and outputs the signals to the electrically-controlled device.") and column 29, line 58, to column 30, line 2, with reference to FIG. 10A ("In Step 606, the application software program creates the I/O Bridge command needed to activate the selected module(s). Hence, another four bytes of data are sent to the I/O Bridge to provide the X-10 function code to be transmitted to the X-10 module, e.g., an 'on' command. Again, the I/O Bridge command is sent to the I/O Bridge via the keyboard interface in Step 607. In Step 608, the I/O Bridge device synthesizes the proper bit sequence to transmit the function code to the previously-selected X-10 module. Next, in Step 609, the bit sequence is set to the power-line carrier modulator of the interface module 404, again synchronized with the AC line frequency.") See also Declaration (Exhibit 1002) at paragraph 96.
whereby the lighting control request is used for controlling the lighting load corresponding to the selected representation.	See column 27, line 65, to column 28, line 2, with reference to FIG. 9A ("In this example, the X-10 input window is used to monitor the status of the master bedroom lamp. The command button 506 is used to indicate whether an 'on', 'off', 'dim', or 'bright' command has been selected by the user.") and column 30, line 52, to column 31, line 44 ("Hence, the peripheral data acquisition, monitor, and adaptive control system of the present invention is very user-friendly when the sequence of screen displays first illustrates zones or physical locations of a number of devices, then illustrates the particular location and function of each device in the group, and then illustrates the soft control panel of the chosen device, wherein commands are input by the user to perform the desired control function.")
Claim 2: The computer of claim 1,	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 1.*
further comprising means for connecting	See column 6, line 55, to column 7, line 10 ("In accordance with another aspect of the present invention,

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to a computer network,	the system further provides the ability to interface the PC, via the keyboard port, with a wireless or AC power-line transmission media, such as an infrared (I/R), radio frequency (RF), or AC power line carrier (X-10) transmission link.") and column 24, lines 37-43 ("The I/O Bridge device 14 is coupled to the AC power line 402 via an X-10 two-way interface module 404 and I/O adapter circuitry 406. The two-way interface module 404 is available from X-10 (USA) Inc. as Model No. TW523. Since it is a two-way interface module, it can transmit and receive X-10 codes via the AC power line 402.") See also Declaration (Exhibit 1002) at paragraph 97.
the instructions further instructing the computer to send the lighting control request to the computer network.	See column 6, line 55, to column 7, line 10 ("The interface device also executes instructions from the PC to provide control signals, modulates the control signals onto the wireless or AC power-line transmission media, and receives, demodulates, and outputs the signals to the electrically-controlled device.") and column 29, line 58, to column 30, line 2, with reference to FIG. 10A ("In Step 606, the application software program creates the I/O Bridge command needed to activate the selected module(s). Hence, another four bytes of data are sent to the I/O Bridge to provide the X-10 function code to be transmitted to the X-10 module, e.g., an 'on' command. Again, the I/O Bridge command is sent to the I/O Bridge via the keyboard interface in Step 607. In Step 608, the I/O Bridge device synthesizes the proper bit sequence to transmit the function code to the previously-selected X-10 module. Next, in Step 609, the bit sequence is set to the power-line carrier modulator of the interface module 404, again synchronized with the AC line frequency.") See also Declaration (Exhibit 1002) at paragraph 96.
Claim 9: The computer of claim 1, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 1.*
the pictograph includes a clickable floor plan.	See column 30, lines 9-25 ("Once the user chooses a particular location or room of the house, the next screen

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	display would illustrate the chosen location or room, and present a representative icon showing the exact location and function of each electronic device, similar to FIG. 4B. For example, if the living room was selected, the screen display would show an icon for a remotely-controlled television, a VCR, a lamp, an overhead fan, etc., all in the same room. Once the user moves the mouse pointer over the various electronically-controlled devices, the devices are highlighted and a text description (if not already present) would appear on the screen. Once a particular piece of electronically-controlled equipment is selected by the user, the program would move to the third level of screen displays to illustrate a pictorial view of the control panel of the specific device chosen in the previous screen.") See also Declaration (Exhibit 1002) at paragraph 98.
Claim 10: The computer of claim 9, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of claim 1 and claim 9.*
the pictograph is link,able [sic] to other clickable floor plans.	See column 30, line 52, to column 31, line 13 ("The automated home system of FIG. 8A is particularly well adapted to operate in accordance with the software control program screen display sequence described previously in FIGS. 4A-4D, wherein a sequence of pictorial location displays, such as floorplans, are presented to orient the user as to the specific location of the device being controlled and/or monitored. More specifically, FIG. 4A, which illustrates a pictorial representation of the overall physical layout of a particular facility, could readily be modified to present a bird's eye view of the user's home, including any outdoor devices that are electrically monitored and controlled by the system. Such a graphical overview could be made by scanning a copy of the survey of the property, or simply by drawing a representative floorplan of the user's home using a painting or drawing application program. This screen display of the 'big picture' would illustrate the approximate physical location

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	of groups of devices being monitored and controlled. The display at this level would probably not include a representative icon for every device in each room. Instead, the user would be directed to move the mouse pointer over the various rooms or locations, select a particular location, and proceed with the next level of screen displays. Once the user chooses a particular location or room of the house, the next screen display would illustrate the chosen location or room, and present a representative icon showing the exact location and function of each electronic device, similar to FIG. 4B.") See also Declaration (Exhibit 1002) at paragraph 99.
Claim 11: The apparatus of claim 1, further comprising	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 1.*
an interface module adapted to be coupled to a power/communications bus; and	See column 25, lines 27-34 ("Again, referring to FIG. 8A, it can be seen that a number of X-10 modules are connected to the AC power line 402 via AC outlets 408. An X-10 lamp module 414 (such as X-10 model no. LM511), an X-10 wall switch module (such as X-10 model no. WS711), or an X-10 wall receptacle module (such as model no. SR227) can be used to control a table lamp 416.") and column 28, lines 11-15 ("Note that the master bedroom lamp would normally be connected to an X-10 lamp module such as module 414 of FIG. 8A. The lamp would then be assigned an X-10 output channel (see FIG. 3I) in order to be controlled by the PC.") See also Declaration (Exhibit 1002) at paragraphs 100-101.
wherein the instructions further instruct the computer to translate the lighting control requests into digital commands for the interface module, the digital commands indicating the	See column 29, line 22, to column 30, line 2 ("FIG. 10A illustrates the system operation for an X-10 code output generated by the MASTER CONTROL program in the PC. . . . In Step 601 of FIG. 10A, the application software program, such as a dedicated INIT, calls for a particular remote X-10 module to be turned on. As discussed above, the INITs are the driver programs in the preferred embodiment. However, this may not be the case for other types of PC's. In Step 602, the application software

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identified lighting load and the lighting state of the identified lighting load.	program creates the associated I/O Bridge command to select the specified X-10 module. During this step, information is sent to the I/O Bridge device 14 to generate the X-10 transmission select code. In the preferred embodiment, four data bytes are used: an X-10 identifier byte, the X-10 house code, the X-10 number code, and an I/O Bridge control byte. In Step 603, the I/O Bridge command is sent from the host PC 12 to the I/O Bridge device 14 via the keyboard port. Next, in Step 604, the I/O Bridge itself synthesizes the proper bit sequence to transmit the X-10 transmission select code for the X-10 module. In other words, the I/O Bridge generates the proper X-10 code based upon the I/O Bridge command information. In Step 605, the X-10 code bit sequence is sent through the I/O adapter circuitry 406 to the power-line carrier modulator of the interface module 404 via the PA5 output. As discussed above, the bit sequence must be synchronized with the AC line frequency. This is accomplished using the PA4 tachometer input line. In Step 606, the application software program creates the I/O Bridge command needed to activate the selected module(s). Hence, another four bytes of data are sent to the I/O Bridge to provide the X-10 function code to be transmitted to the X-10 module, e.g., an 'on' command. Again, the I/O Bridge command is sent to the I/O Bridge via the keyboard interface in Step 607. In Step 608, the I/O Bridge device synthesizes the proper bit sequence to transmit the function code to the previously-selected X-10 module. Next, in Step 609, the bit sequence is set to the power-line carrier modulator of the interface module 404, again synchronized with the AC line frequency.") See also Declaration (Exhibit 1002) at paragraphs 100 and 102-103.
Independent Claim 12: A method of controlling a plurality of lighting loads using a computer	See column 24, lines 18-36 ("Now referring to FIG. 8A, a general block diagram of an alternative embodiment of a peripheral data acquisition, monitor, and adaptive control system 400 is shown. The system 400, in this embodiment, utilizes the X-10 power-line carrier code

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connectable to a computer network, the method comprising:	format transmitted over an AC power line of a home to monitor and control various household appliances, such as a table lamp, coffee maker, dishwasher, etc. . . . The host PC 12 is coupled to the I/O Bridge device 14, the keyboard 16, the mouse 18, and the modem 20, via the various interconnect cables described above. Since a MACINTOSH II computer is used in this embodiment, the mouse 18 is shown connected to the keyboard 16 instead of the PC 12.") See also column 6, line 55, to column 7, line 10 ("In accordance with another aspect of the present invention, the system further provides the ability to interface the PC, via the keyboard port, with a wireless or AC power-line transmission media, such as an infrared (I/R), radio frequency (RF), or AC power line carrier (X-10) transmission link.") See also Declaration (Exhibit 1002) at paragraphs 89 and 96.
displaying a pictograph including a plurality of selectable representations of the lighting loads on the computer;	See column 30, lines 9-25 ("Once the user chooses a particular location or room of the house, the next screen display would illustrate the chosen location or room, and present a representative icon showing the exact location and function of each electronic device, similar to FIG. 4B. For example, if the living room was selected, the screen display would show an icon for a remotely-controlled television, a VCR, a lamp, an overhead fan, etc., all in the same room. Once the user moves the mouse pointer over the various electronically-controlled devices, the devices are highlighted and a text description (if not already present) would appear on the screen. Once a particular piece of electronically-controlled equipment is selected by the user, the program would move to the third level of screen displays to illustrate a pictorial view of the control panel of the specific device chosen in the previous screen.") See also Declaration (Exhibit 1002) at paragraphs 90 and 91.
displaying a control panel on the computer, the control panel	See column 27, line 65, to column 28, line 2, with reference to FIG. 9A ("In this example, the X-10 input window is used to monitor the status of the master

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allowing a lighting load state to be entered into the computer;	bedroom lamp. The command button 506 is used to indicate whether an 'on', 'off', 'dim', or 'bright' command has been selected by the user.") and column 30, lines 21-44 ("Once a particular piece of electronically-controlled equipment is selected by the user, the program would move to the third level of screen displays to illustrate a pictorial view of the control panel of the specific device chosen in the previous screen. Continuing with the example of the VCR, a soft control panel illustrating the appropriate controls and displays would be shown, similar to that shown in FIG. 4C. The user would then be able to operate the controls using the mouse pointer on the simulated VCR controls, and would be able to monitor the device using the simulated VCR readouts duplicated on the screen. This feature is particularly useful if the soft control panel shown in the third level of the screen displays simulates an actual control panel of the device being controlled. Hence, the peripheral data acquisition, monitor, and adaptive control system of the present invention is very user-friendly when the sequence of screen displays first illustrates zones or physical locations of a number of devices, then illustrates the particular location and function of each device in the group, and then illustrates the soft control panel of the chosen device, wherein commands are input by the user to perform the desired control function.") See also Declaration (Exhibit 1002) at paragraphs 90 and 92.
generating a lighting control request when a lighting load state is entered into the computer and a selectable representation on the pictograph is selected; and	See column 27, line 65, to column 28, line 2, with reference to FIG. 9A ("In this example, the X-10 input window is used to monitor the status of the master bedroom lamp. The command button 506 is used to indicate whether an 'on', 'off', 'dim', or 'bright' command has been selected by the user.") and column 30, line 52, to column 31, line 44 ("Hence, the peripheral data acquisition, monitor, and adaptive control system of the present invention is very user-friendly when the sequence of screen displays first illustrates zones or physical

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	locations of a number of devices, then illustrates the particular location and function of each device in the group, and then illustrates the soft control panel of the chosen device, wherein commands are input by the user to perform the desired control function.") See also Declaration (Exhibit 1002) at paragraph 93.
sending the lighting control request to the computer network	See column 6, line 55, to column 7, line 10 ("The interface device also executes instructions from the PC to provide control signals, modulates the control signals onto the wireless or AC power-line transmission media, and receives, demodulates, and outputs the signals to the electrically-controlled device.") and column 29, line 58, to column 30, line 2, with reference to FIG. 10A ("In Step 606, the application software program creates the I/O Bridge command needed to activate the selected module(s). Hence, another four bytes of data are sent to the I/O Bridge to provide the X-10 function code to be transmitted to the X-10 module, e.g., an 'on' command. Again, the I/O Bridge command is sent to the I/O Bridge via the keyboard interface in Step 607. In Step 608, the I/O Bridge device synthesizes the proper bit sequence to transmit the function code to the previously-selected X-10 module. Next, in Step 609, the bit sequence is set to the power-line carrier modulator of the interface module 404, again synchronized with the AC line frequency.") See also Declaration (Exhibit 1002) at paragraphs 96.
whereby the lighting control request is used for controlling the lighting load corresponding to the selected representation.	See column 27, line 65, to column 28, line 2, with reference to FIG. 9A ("In this example, the X-10 input window is used to monitor the status of the master bedroom lamp. The command button 506 is used to indicate whether an 'on', 'off', 'dim', or 'bright' command has been selected by the user.") and column 30, line 52, to column 31, line 44 ("Hence, the peripheral data acquisition, monitor, and adaptive control system of the present invention is very user-friendly when the sequence of screen displays first illustrates zones or physical locations of a number of devices, then illustrates the

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	particular location and function of each device in the group, and then illustrates the soft control panel of the chosen device, wherein commands are input by the user to perform the desired control function.")
Claim 15: The method of claim 12, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 12.*
the lighting control requests include a lighting load identifier and the lighting load state.	See column 29, line 22, to column 30, line 2 ("In Step 601 of FIG. 10A, the application software program, such as a dedicated INIT, calls for a particular remote X-10 module to be turned on. As discussed above, the INITs are the driver programs in the preferred embodiment. However, this may not be the case for other types of PC's. In Step 602, the application software program creates the associated I/O Bridge command to select the specified X-10 module. During this step, information is sent to the I/O Bridge device 14 to generate the X-10 transmission select code. In the preferred embodiment, four data bytes are used: an X-10 identifier byte, the X-10 house code, the X-10 number code, and an I/O Bridge control byte. . . . In Step 606, the application software program creates the I/O Bridge command needed to activate the selected module(s). Hence, another four bytes of data are sent to the I/O Bridge to provide the X-10 function code to be transmitted to the X-10 module, e.g., an 'on' command.") See also Declaration (Exhibit 1002) at paragraphs 94 and 95.
Claim 16: An article of manufacture for a computer, the article comprising: computer memory; and a plurality of executable instruction encoded in the memory, the instructions, when executed, causing the computer to	See column 29, lines 20-30 ("FIGS. 10A and 10B are flowcharts illustrating the operation of the peripheral data acquisition, monitor, and adaptive control system using X-10 modules. FIG. 10A illustrates the system operation for an X-10 code output generated by the MASTER CONTROL program in the PC. . . . Both of these Figures generally correspond to the system shown in FIG. 8A.")

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display a pictograph and a control panel,	See column 30, line 52, to column 31, line 44 ("Hence, the peripheral data acquisition, monitor, and adaptive control system of the present invention is very user-friendly when the sequence of screen displays first illustrates zones or physical locations of a number of devices, then illustrates the particular location and function of each device in the group, and then illustrates the soft control panel of the chosen device, wherein commands are input by the user to perform the desired control function.") See also Declaration (Exhibit 1002) at paragraph 90.
the pictograph including selectable representations of the lighting loads,	See column 30, lines 9-25 ("Once the user chooses a particular location or room of the house, the next screen display would illustrate the chosen location or room, and present a representative icon showing the exact location and function of each electronic device, similar to FIG. 4B. For example, if the living room was selected, the screen display would show an icon for a remotely-controlled television, a VCR, a lamp, an overhead fan, etc., all in the same room. Once the user moves the mouse pointer over the various electronically-controlled devices, the devices are highlighted and a text description (if not already present) would appear on the screen. Once a particular piece of electronically-controlled equipment is selected by the user, the program would move to the third level of screen displays to illustrate a pictorial view of the control panel of the specific device chosen in the previous screen.") See also Declaration (Exhibit 1002) at paragraph 91.
the control panel allowing a lighting load state to be entered into the computer,	See column 27, line 65, to column 28, line 2, with reference to FIG. 9A ("In this example, the X-10 input window is used to monitor the status of the master bedroom lamp. The command button 506 is used to indicate whether an 'on', 'off', 'dim', or 'bright' command has been selected by the user.") and column 30, lines 21-44 ("Once a particular piece of electronically-controlled equipment is selected by the user, the program would move to the third level of screen displays to

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	illustrate a pictorial view of the control panel of the specific device chosen in the previous screen. Continuing with the example of the VCR, a soft control panel illustrating the appropriate controls and displays would be shown, similar to that shown in FIG. 4C. The user would then be able to operate the controls using the mouse pointer on the simulated VCR controls, and would be able to monitor the device using the simulated VCR readouts duplicated on the screen. This feature is particularly useful if the soft control panel shown in the third level of the screen displays simulates an actual control panel of the device being controlled. Hence, the peripheral data acquisition, monitor, and adaptive control system of the present invention is very user-friendly when the sequence of screen displays first illustrates zones or physical locations of a number of devices, then illustrates the particular location and function of each device in the group, and then illustrates the soft control panel of the chosen device, wherein commands are input by the user to perform the desired control function.") See also Declaration (Exhibit 1002) at paragraph 92.
the instructions further causing the computer to generate a lighting control request when a representation on the pictograph is selected,	See column 27, line 65, to column 28, line 2, with reference to FIG. 9A ("In this example, the X-10 input window is used to monitor the status of the master bedroom lamp. The command button 506 is used to indicate whether an 'on', 'off', 'dim', or 'bright' command has been selected by the user.") and column 30, line 52, to column 31, line 44 ("Hence, the peripheral data acquisition, monitor, and adaptive control system of the present invention is very user-friendly when the sequence of screen displays first illustrates zones or physical locations of a number of devices, then illustrates the particular location and function of each device in the group, and then illustrates the soft control panel of the chosen device, wherein commands are input by the user to perform the desired control function.") See also Declaration (Exhibit 1002) at paragraph 93.

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the lighting control request identifying a lighting load corresponding to the selected representation,	See column 28, lines 11-15 ("Note that the master bedroom lamp would normally be connected to an X-10 lamp module such as module 414 of FIG. 8A. The lamp would then be assigned an X-10 output channel (see FIG. 3I) in order to be controlled by the PC.") and column 29, lines 31-44 ("In Step 601 of FIG. 10A, the application software program, such as a dedicated INIT, calls for a particular remote X-10 module to be turned on. As discussed above, the INITs are the driver programs in the preferred embodiment. However, this may not be the case for other types of PC's. In Step 602, the application software program creates the associated I/O Bridge command to select the specified X-10 module. During this step, information is sent to the I/O Bridge device 14 to generate the X-10 transmission select code. In the preferred embodiment, four data bytes are used: an X-10 identifier byte, the X-10 house code, the X-10 number code, and an I/O Bridge control byte.") See also Declaration (Exhibit 1002) at paragraph 94.
the lighting control request further identifying the lighting control state entered into the computer	See column 27, line 65, to column 28, line 2, with reference to FIG. 9A ("In this example, the X-10 input window is used to monitor the status of the master bedroom lamp. The command button 506 is used to indicate whether an 'on', 'off', 'dim', or 'bright' command has been selected by the user."); and column 30, line 52, to column 31, line 44 ("Hence, the peripheral data acquisition, monitor, and adaptive control system of the present invention is very user-friendly when the sequence of screen displays first illustrates zones or physical locations of a number of devices, then illustrates the particular location and function of each device in the group, and then illustrates the soft control panel of the chosen device, wherein commands are input by the user to perform the desired control function.") See also Declaration (Exhibit 1002) at paragraph 95.
and send the lighting control request to a	See column 6, line 55, to column 7, line 10 ("In accordance with another aspect of the present invention,

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computer network,	the system further provides the ability to interface the PC, via the keyboard port, with a wireless or AC power-line transmission media, such as an infrared (I/R), radio frequency (RF), or AC power line carrier (X-10) transmission link. . . . The interface device also executes instructions from the PC to provide control signals, modulates the control signals onto the wireless or AC power-line transmission media, and receives, demodulates, and outputs the signals to the electrically-controlled device.") and column 29, line 58, to column 30, line 2, with reference to FIG. 10A ("In Step 606, the application software program creates the I/O Bridge command needed to activate the selected module(s). Hence, another four bytes of data are sent to the I/O Bridge to provide the X-10 function code to be transmitted to the X-10 module, e.g., an 'on' command. Again, the I/O Bridge command is sent to the I/O Bridge via the keyboard interface in Step 607. In Step 608, the I/O Bridge device synthesizes the proper bit sequence to transmit the function code to the previously-selected X-10 module. Next, in Step 609, the bit sequence is set to the power-line carrier modulator of the interface module 404, again synchronized with the AC line frequency.") See also Declaration (Exhibit 1002) at paragraph 96.
whereby the lighting control request is used for controlling the lighting load corresponding to the selected representation.	See column 27, line 65, to column 28, line 2, with reference to FIG. 9A ("In this example, the X-10 input window is used to monitor the status of the master bedroom lamp. The command button 506 is used to indicate whether an 'on', 'off', 'dim', or 'bright' command has been selected by the user.") and column 30, line 52, to column 31, line 44 ("Hence, the peripheral data acquisition, monitor, and adaptive control system of the present invention is very user-friendly when the sequence of screen displays first illustrates zones or physical locations of a number of devices, then illustrates the particular location and function of each device in the group, and then illustrates the soft control panel of the

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	chosen device, wherein commands are input by the user to perform the desired control function.")
Claim 21: The article of claim 16, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of independent claim 16.*
the pictograph includes a clickable floor plan.	See column 30, lines 9-25 ("Once the user chooses a particular location or room of the house, the next screen display would illustrate the chosen location or room, and present a representative icon showing the exact location and function of each electronic device, similar to FIG. 4B. For example, if the living room was selected, the screen display would show an icon for a remotely-controlled television, a VCR, a lamp, an overhead fan, etc., all in the same room. Once the user moves the mouse pointer over the various electronically-controlled devices, the devices are highlighted and a text description (if not already present) would appear on the screen. Once a particular piece of electronically-controlled equipment is selected by the user, the program would move to the third level of screen displays to illustrate a pictorial view of the control panel of the specific device chosen in the previous screen.") See also Declaration (Exhibit 1002) at paragraph 98.
Claim 22: The article of claim 21, wherein	*As discussed above, the prior art teaches and/or suggests the limitations of claim 16 and claim 21.*
the pictograph is linkable to other clickable floor plans.	See column 30, line 52, to column 31, line 13 ("The automated home system of FIG. 8A is particularly well adapted to operate in accordance with the software control program screen display sequence described previously in FIGS. 4A-4D, wherein a sequence of pictorial location displays, such as floorplans, are presented to orient the user as to the specific location of the device being controlled and/or monitored. More specifically, FIG. 4A, which illustrates a pictorial representation of the overall physical layout of a particular facility, could readily be modified to present a bird's eye view of the user's home, including any outdoor devices that are electrically

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	monitored and controlled by the system. Such a graphical overview could be made by scanning a copy of the survey of the property, or simply by drawing a representative floorplan of the user's home using a painting or drawing application program. This screen display of the 'big picture' would illustrate the approximate physical location of groups of devices being monitored and controlled. The display at this level would probably not include a representative icon for every device in each room. Instead, the user would be directed to move the mouse pointer over the various rooms or locations, select a particular location, and proceed with the next level of screen displays. Once the user chooses a particular location or room of the house, the next screen display would illustrate the chosen location or room, and present a representative icon showing the exact location and function of each electronic device, similar to FIG. 4B.") See also Declaration (Exhibit 1002) at paragraph 99.

11. Claims 1, 2, 9-12, 15, 16, 21 and 22 are obvious under 35 U.S.C. §103(a) over Wilson (Exhibit 1015)

To the extent that Wilson (Exhibit 1015) fails to fully disclose any limitation of claims 1, 2, 9-12, 15, 16, 21 and 22, any such differences would have been sufficiently minor that the claims as a whole would nonetheless have been obvious to one skilled in the art at the time of the filing of the '993 patent. See also Declaration (Exhibit 1002) at paragraph 88.

12. Claims 6-8, 13, 19 and 20 are obvious under 35 U.S.C. §103(a) over Wilson (Exhibit 1015) and Corcoran96 (Exhibit 1012)

Corcoran96 (Exhibit 1012) is directed to CEBus powerline networks rather than X-10 powerline networks of the type discussed in the cited portions of Wilson

(Exhibit 1015). However, SavoySoft (Exhibit 1009) evidences that one skilled in the art would have understood that X-10 devices and CEBus devices can both be coupled to a single lighting control system, and further teaches the desirability of providing web access to such a lighting control system. See SavoySoft (Exhibit 1009) at page 3 ("CyberHouse is a home automation and facility management system for your home/office, providing you with security, automation, monitoring and management of . . . . a large and growing collection of devices, including X-10 series of power line modules [and] CEBus Dimmer switch."); page 9 ("A variety of communication techniques can be used together to build your HouseHold Web. These include . . . X-10 [and] CEBus"); and page 10 ("CyberHouse's client-server architecture enables remote and mobile users to dial into their home PCs . . . via the Internet. Once connected, you can check the status of and control all subsystems and devices on your HouseHold Web.")

Corcoran96 (Exhibit 1012) teaches the desirability of arrangements of the types recited in claims 6-8, 19 and 20 (e.g., arrangements including web browser program, an HTML file and an applet) for providing the aforementioned remote access to a lighting control system. See Corcoran96 (Exhibit 1012) at page 236, left column ("Several methods of providing access to CEBus networks using the World Wide Web are described. Details of a working demonstration system are given. The system software incorporates CGI-Bin scripts and Java applets to

support remote access to CEBus networks."); page 237, left column ("Java applets are executable code modules. These modules can be exported to a remote host in the same way that Hypertext documents are presently exported to a WWW browser. If the client-end browser incorporates a Virtual Java Machine (VJM) it recognizes and executes the applet."); and page 237, right column ("In our demonstration application Java applets provide a method of starting mini 'daemons' on the remote client. The applets then register and synchronise with the server-end software. This provides much richer application functionality and facilitates more sophisticated network link management and access security. . . . In this paper we have demonstrated the practical integration of a CEBus network with the WWW. This integration provides remote access to a new generation of consumer electronics products.") Moreover, as discussed in Declaration (Exhibit 1002) at paragraphs 108-109, Corcoran96 implicitly, inherently, and/or obviously teaches the use of TCP/IP as recited in claim 13. Accordingly, it would have been obvious for one skilled in the art to have combined Wilson and Corcoran96 to reach the limitations of claims 6-8, 13, 19 and 20. See also Declaration (Exhibit 1002) at paragraphs 105-109.

13. Claims 3-5, 14, 17 and 18 are obvious under 35 U.S.C. §103(a) over Wilson (Exhibit 1015), Corcoran96 (Exhibit 1012), and Fleishman (Exhibit 1013)

Corcoran96 (Exhibit 1012) is directed to CEBus powerline networks rather than X-10 powerline networks of the type discussed in the cited portions of Wilson (Exhibit 1015). However, SavoySoft (Exhibit 1009) evidences that one skilled in the art would have understood that X-10 devices and CEBus devices can both be coupled to a single lighting control system, and further teaches the desirability of providing remote access to such a lighting control system. See SavoySoft (Exhibit 1009) at page 3 ("CyberHouse is a home automation and facility management system for your home/office, providing you with security, automation, monitoring and management of . . . . a large and growing collection of devices, including X-10 series of power line modules [and] CEBus Dimmer switch.") and page 10 ("CyberHouse's client-server architecture enables remote and mobile users to dial into their home PCs . . . via the Internet. Once connected, you can check the status of and control all subsystems and devices on your HouseHold Web.")

Corcoran96 (Exhibit 1012) suggests that one solution for providing web access to a powerline-based lighting control system involves CGI scripts. See Corcoran96 at page 236, left column ("Several methods of providing access to CEBus networks using the World Wide Web are described. Details of a working demonstration system are given. The system software incorporates CGI-Bin scripts

. . . to support remote access to CEBus networks.") and page 237, left column ("The Common Gateway Interface (CGI) is a standard for interfacing external applications with a HTTP server. It defines a mechanism to allow a WWW client to transmit input data to an executable program which resides on the server. This executable generates a dynamic document from the input data which is returned to the client. CGI was designed as an enhancement for HTTP servers to allow dynamic documents to be generated in response to user input.")

Fleishman (Exhibit 1013) teaches that CGI scripts are typically used to implement image maps, and the advantages associated with their use. See Fleishman at page 1 ("One of the things that mystifies newcomers to the Web is how to set up an image so that when you click on something in it, you're taken to a specific location on the Web. The answer: image mapping. Image maps allow a user to click on an image, have that click translated into a set of (x,y) coordinates in pixels relative to the image, and then have those coordinates translated into a location or resource on the Internet. The process only *seems* mysterious.") and page 3 ("These coordinates are transmitted to a Common Gateway Interface-enabled program, which interprets them and maps these coordinates against shapes you've defined and assigned to specific Internet resources, such as Web pages.")

Fleishman specifically teaches arrangements wherein an image map includes selectable representations, and that selecting one of the representations shown on

the image map will cause transmission of a request including the coordinates of the selected representation on the image map in the manner recited in claims 3, 5, 14, 17 and 18. Thus, Fleishman remedies the deficiency of Wilson with regard to claims 3, 5, 14, 17 and 18, and Corcoran96 provides the motivation for combining Wilson with Fleishman. See also Declaration (Exhibit 1002) at paragraphs 110-113.

14. Claims 3-8, 13, 14 and 17-20 are obvious under 35 U.S.C. §103(a) over Wilson (Exhibit 1015) and REC-html32 (Exhibit 1014)

As discussed in Declaration (Exhibit 1002) paragraphs 114-117, the common knowledge of one skilled in the art would have provided sufficient motivation modify Wilson (Exhibit 1015) so to include at least the limitations of claims 3, 6, 14, 17 and 19 directed to the use of a web browser program and an HTML file. See *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1326-27 (Fed. Cir. 2008) ("When the '099 patent's application was filed on May 29, 1998, the use of web browsers was well known. . . . We therefore begin with an understanding that the modification of Parity® to incorporate web browser functionality represents a combination of two well known prior art elements to a person of ordinary skill in the art. . . . The record in this case demonstrates that adapting existing electronic processes to incorporate modern internet and web browser technology was similarly commonplace at the time the '099 patent application was filed.") See also *Soverain Software LLC v. Newegg Inc.*, 705 F.3d

1333, 1344 (Fed. Cir. 2013) ("Newegg is correct that the use of hypertext to communicate a 'statement document' or 'transaction detail document' was a routine incorporation of Internet technology into existing processes.") As discussed in Declaration (Exhibit 1002) at paragraph 119, such arrangements would implicitly, inherently, and/or obviously include the use of TCP/IP as recited in claim 13.

It would have been obvious to further modify Wilson to incorporate the teachings of *REC-html32* (Exhibit 1014) identified in the claim chart shown above with regard to ground 8 so to teach and/or suggest the further limitations of claims 3-5, 14, 17 and 18 directed to the use of an image map and of claims 6-8, 14, 19 and 20 directed to the use of an applet. See Declaration (Exhibit 1002) at paragraphs 120-127. Motivation for such modification may be found in the above-cited portions of REC-html32, as discussed in Declaration (Exhibit 1002) at paragraph 118.

VII. CONCLUSION

Petitioner requests the Board institute *Inter Partes* review on each challenged claim and on each above unpatentability ground.

Respectfully submitted,

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