<u>UNITED STATES PATENT AND TRADEMARK OFFICE</u>

BEFORE THE PATENT TRIAL AND APPEAL BOARD

In the *Inter Partes* Review of: Trial Number: _____

U.S. Patent No. 7,587,469

Filed: January 29, 2007

Issued: September 8, 2009 Attorney Docket No.:

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Inventors: Stephen J. Brown

Assignee: Health Hero Network, Inc.

Title: AUDIO INSTRUCTIONS FOR

APPLIANCES

Panel: To Be Assigned

PETITION FOR INTER PARTES REVIEW UNDER 37 C.F.R. § 42.100

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On behalf of Medtronic, Inc., ("Medtronic") and in accordance with 35 U.S.C. § 311 and 37 C.F.R. § 42.100, *inter partes* review is respectfully requested for claims 1-22 of U.S. Patent No. 7,587,469 ("the '469 Patent").

I. MANDATORY NOTICES UNDER 37 C.F.R. § 42.8(a)(1)

As set forth below and pursuant to 37 C.F.R. § 42.8(a)(1), the following mandatory notices are provided as part of this Petition.

A. Real Party-In-Interest Under 37 C.F.R. § 42.8(b)(1)

Medtronic, Inc., is the real party-in-interest for petitioner.

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

The '469 patent is presently the subject of a patent infringement lawsuit brought by Robert Bosch Healthcare Systems against Cardiocom, LLC ("Cardiocom") and Abbott Diabetes Care in the United States District Court for the Eastern District of Texas, Case No.: 2:13-cv-349.

Inclusive, there are two patent infringement lawsuits involving related patents:

Jurisdiction	Case Number	Patent in suit
Eastern District of Texas	2:13-cv-349	7,516,192
		7,769,605
		7,840,420
		7,870,249
		7,921,186
Northern District of	CV12-03864	6,368,273
California		6,968,375
		7,252,636

Jurisdiction	Case Number	Patent in suit
		7,941,327
		8,015,025
		8,140,663

The following concurrent and pending reexamination proceedings of patents related to the '469 Patent are pending with the U.S. Patent and Trademark Office:

Reexamination Control No.	Patent No.	Type of Proceeding	Examiner	Status
90/012,474	6,368,273	Ex Parte	Patel, Hetul B.	Granted, Pending
95/002,276 95/002,172	8,015,025	Inter Partes	Wehner, Cary Ellen	Granted, Pending (Merged)
95/002,237	6,968,375	Inter Partes	Patel, Hetul B.	Granted, Pending
95/002,178 95/002,221	8,140,663	Inter Partes	Patel, Hetul B.	Granted, Pending (Merged)
95/002,199	7,941,327	Inter Partes	Escalante, Ovidio	Granted, Pending
95/002,192 95/002,234	7,252,636	Inter Partes	Patel, Hetul B.	Granted, Pending (Merged)
90/013,104	7,252,636	Ex Parte	Patel, Hetul B.	Granted, Pending
90/013,105	8,140,663	Ex Parte	TBD	Filed

In addition, U.S. Patent Nos. 7,921,186; 7,840,420; and 7,587,469 are the subject of *Inter Partes* Review proceedings, bearing control numbers IPR2013-00431, IPR2013-00449, and IPR2013-0451 (the "'451 IPR proceedings"), respectively. Trial was instituted in these proceedings on January 16, 2014. U.S. Patent No. 7,516,192 is the subject of two Petitions for *Inter Partes* Review, bearing control numbers IPR2013-00468 and IPR2013-00499. Trial was instituted in these two proceedings on January 28, 2014.

The above *Inter Partes* Review proceedings were originally filed by Cardiocom. Medtronic acquired Cardiocom after Cardiocom filed the Petition for *Inter Partes* Review that resulted in institution of the '451 IPR proceedings (discussed in more detail below). Cardiocom is now a wholly-owned subsidiary of Medtronic. Medtronic has been identified as a real party-in-interest in all of the above proceedings at the U.S. Patent Office.

C. Lead and Back-Up Counsel under 37 C.F.R. § 42.8(b)(3)

Pursuant to 27 C.F.R. §§ 42.8(b)(3) and 42.10(a), Petitioner provides the following designation of counsel.

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Pursuant to 37 C.F.R. § 42.10(b), a Power of Attorney accompanies this Petition.

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

Service information for lead and back-up counsel is provided in the designation of lead and back-up counsel, above. Petitioners consent to service by electronic mail at the above-listed electronic mail addresses.

II. PAYMENT OF FEES UNDER 37 C.F.R. § 42.103

Payment of \$26,200.00 for the fees set forth in 37 C.F.R. § 42.15(a)(1-4) for this Petition for *Inter Partes* Review accompanies this request by way of credit card payment. Twenty-two claims are challenged, so excess claim fees in the amount of \$400.00 (under 37 C.F.R. § 42.15(a)(3)) and \$2,800.00 (under 37 C.F.R. § 42.15(a)(4)) are included. The undersigned further authorizes payment for any additional fees that might be due in connection with this Petition to be charged to Deposit Account No. 13-2725.

III. REQUIREMENTS FOR *INTER PARTES* REVIEW UNDER 37 C.F.R. §§ 42.104

As set forth below and pursuant to 37 C.F.R. §§ 42.104, each requirement for *inter partes* review of the '469 Patent is satisfied.

A. Grounds for Standing Under 37 C.F.R. § 42.104(a)

Petitioner hereby certifies that the '469 Patent is available for *inter partes* review and that the Petitioner is not barred or estopped from requesting *inter partes* review challenging the claims of the '469 Patent on the ground identified herein.

More particularly, Petitioner certifies that: (1) Petitioner is not the owner of the '469 patent; (2) Petitioner has not filed a civil action challenging the validity of a claim of the '469 Patent; (3) this Petition is filed less than one year after the date on which the Petitioner, the Petitioner's real party-in-interest, or a privy of the Petitioner was served with a complaint alleging infringement of the '469 Patent; (4) the estoppel provisions of 35 U.S.C. § 315(e)(1) do not prohibit this *inter partes* review; and (5) the '469 patent is a patent that is not described in section 3(n)(1) of the Leahy-Smith America Invents Act and so is available for this *inter partes* review, per 37 C.F.R. § 42.102(a)(2).

B. Identification of Challenge Under 37 C.F.R. § 42.104(b) and Relief Requested

The precise relief requested by Petitioner is that the Patent Trial and Appeal Board find claims 1-22 of the '469 Patent unpatentable.

1. Claims for Which Inter Partes review is Requested Under 37 C.F.R. § 42.104(b)(1)

Petitioner requests *inter partes* review of claims 1-22 of U.S. Patent No. 7,587,469.

2. The Specific Art and Statutory Ground(s) on Which the Challenge is Based Under 37 C.F.R. § 42.104(b)(2)

Inter partes review of the '469 Patent is requested in view of the following references: (1) U.S. Patent No. 6,014,626 to Cohen ("Cohen"); (2) European Publication No. 0 342 859 to Kaufman, et al. ("Kaufman"); and (3) U.S. Patent No. 5,367,667 to Wahlquist, et al. ("Wahlquist").

The combination of the patents listed above is prior art to the '469 Patent under pre-AIA 35 U.S.C. § 103(a), as established in Section V(A), below.

Claim Nos.	Proposed Statutory Rejections		
	for the '469 Patent		
1-6, 10-12,	Ground 1: Claims 1-6, 11-12, 17-18 are obvious under § 103(a)		
16-18, 22	over Cohen in view of Kaufman		
1-22	Ground 2: Claims 1-22 are obvious under § 103(a) over Cohen in		
	view of Kaufman, and further in view of Wahlquist		

3. How the Challenged Claims Are To Be Construed Under 37 C.F.R. § 42.104(b)(3)

A claim subject to *inter partes* review receives the "broadest reasonable construction in light of the specification of the patent in which it appears." 42 C.F.R. § 42.100(b). Petitioner submits, for the purposes of this IPR only, the constructions given in section IV, below.

The broadest reasonable interpretation in light of the specification for certain claim elements has already been determined at least on a preliminary basis in a related proceeding, *Cardiocom, LLC v. Robert Bosch Healthcare Sys., Inc.*, IPR2013-00451, Paper 23 (Jan. 16, 2014). Therefore, Petitioner submits that such

phrases should be construed consistent with their interpretation in that proceeding unless stated otherwise herein. Specifically, "household appliance" should be construed to mean "electronic equipment devised for home use." *Id.* at 8.

Additionally, "execute said computer programs to provide a diagnosis of said [primary device or household appliance]" should be construed to mean "execute said computer programs to provide data or information of a performed operation by the [primary device or household appliance]." *Id.* at 12. In the Decision instituting the '451 IPR proceedings, all other claim terms were presumed to have their ordinary and customary meaning. *Id.*

In addition to the terms construed in the '451 proceeding, claims 10, 16, and 22 recite that the computer program of the independent claims "comprises one or more script programs." '469 Patent, col. 21:61-62; col. 22:37-38; col. 24:6-7. Petitioner asserts the term "script program" should be construed as: "an interpreted software program (as opposed to compiled), whose program files comprise commands, written in ASCII text, and which must be read by an interpreter in order to be executed." This definition was adopted by the Director of the Central Reexamination Unit in a Decision on Petition in copending Reexamination No. 90/012,474. Ex. 1011 at p. 12. In reaching that decision, the Director was informed by many examples of script programs and script program execution provided in specification of the subject patent. The current '469 patent is related to U.S. Patent

No. 6,368,273, the subject of that proceeding, as a continuation-in-part application, and includes many of the same citations relied on by the Director. Stone Decl. at ¶27 (citing '469 Patent at col. 5:55-60, col. 7:1-10, col. 7-43-48, col. 7:56-59, Figs. 6A-6B).

Petitioner notes that this definition departs from the definition provided in copending matters, namely IPR2013-00431, IPR2013-00460, IPR2013-00468, IPR2013-00469. However, the definition adopted in those proceedings was based on a construction submitted by prior Petitioner, Cardiocom LLC, and did not have the benefit of the Director's construction, which issued after the Petitions in those matters were filed. Furthermore, as explained in the attached declaration of Dr. Robert T. Stone (Ex. 1007), the definition adopted in those proceedings encompasses non-script programs. Ex. 1007 at ¶29. Accordingly, Petitioner requests adoption of the Director's construction.

4. How the Construed Claims are Unpatentable Under 37 C.F.R. § 42.104(b)(4)

An explanation of how construed claims 1-22 of the '469 Patent are unpatentable under the statutory ground identified above, including the identification of where each element of the claim is found in the prior art patents or printed publications, is provided in Section VI, below, in the form of claim charts.

5. Supporting Evidence Under 37 C.F.R. § 42.104(b)(5)

The exhibit numbers of the supporting evidence relied upon to support the challenge and the relevance of the evidence to the challenge raised, including identification of specific portions of the evidence that support the challenge, are provided in Section VI, below, in the form of claim charts. An Appendix of Exhibits identifying the exhibits is also attached. Pursuant to 37 C.F.R. § 42.63(a), Exhibit Ex. 1007 is a Declaration by Robert T. Stone, Ph.D., Regarding U.S. Patent No. 7,587,469 Under 37 C.F.R. § 42.63(a) (hereinafter "Stone Declaration"), attesting to, among other issues, the invalidity of claims 1-22 of the '469 patent, reasons for intercombination of the references cited in this Petition, and supporting bases for the proposed grounds of unpatentability.

6. One of Ordinary Skill in the Art at the Time of Invention

One of ordinary skill in the art at the time of the '469 Patent would have a bachelor's degree in Electrical Engineering or Computer Science, or its equivalent, and at least 2 years of experience with the design and programming of patient monitoring systems and at least 1 year of experience with the design or programming of networked systems. Stone Decl. ¶ 22.

IV. SUMMARY OF THE '469 PATENT

A. Description of the Alleged Invention of the '469 Patent

The '469 patent, entitled "Audio Instruction for Appliances," was filed on January 29, 2007. The '469 patent claims priority through a series of applications to U.S. Provisional Patent Application Nos. 60/041,751 and 60/041,746, both filed on March 28, 1997.

The '469 patent describes a system for remote monitoring. Ex. 1001, U.S. Patent No. 7,587,469, col. 4:6-10. The monitoring may be of an individual, for example to ensure compliance with a healthcare regimen, or can be "for any type of remote monitoring and program adherence application." '469 Patent, col. 4:11-14. Such applications include gathering data from remotely located devices. '469 Patent, col. 20:32-33. Such remotely located devices may include smart appliances, such as "refrigerator, telephone, stove, clock radio, VCR, or any other electrical or non-electrical device including the monitoring device 28." '469 Patent, col. 20:35-38.

Communication with a monitored patient occurs on a networked system 16 that includes a server 18 and a communication network 24, preferably the internet. '469 Patent, col. 4:19-23. The networked system 16 also includes at least one remote apparatus 26 that is in communication with the server 18 through the communication network 24. '469 Patent, col. 4:31-37. Each patient to be

monitored is provided with a monitoring device 28 that is connected to the apparatus 26. '469 Patent, col. 4:45-46; FIGS. 1, 2.

The server 18 includes a database 38 for storing script programs 40 that "are executed by each apparatus 26, to communicate queries and messages to a patient, receive responses 42 to the queries, collect monitoring device measurements 44, and to transmit responses 42 and measurements 44 to the server 18." '469 Patent, col. 4:63-5:1. The remote apparatus 26 includes a housing 62 having a display 64 and a number of input buttons 70A-70E. '469 Patent, col. 5:15-23. The remote apparatus 26 receives the script program from the server 18. '469 Patent, col. 10:23-25. User responses to the various queries and messages are received by the server 18 from the apparatus 26 and recorded and stored in the database 38. '469 Patent, col. 9:55-63. Examples of the monitoring device 28 can include "blood glucose meters, respiratory flow meters, blood pressure cuffs, electronic weight scales, and pulse rate monitors." '469 Patent, col. 4:51-53.

To communicate with a user, the remote apparatus 26 can include a microphone 88 and a speaker 89. '469 Patent, col. 6:13-16. The user may respond verbally to voice scripts. '469 Patent, col. 20:46-48. The server 18 "includes a voice recognition component for interpreting the user's verbal responses, records the response and determines the next question or request (verbal or otherwise) to be sent to the user according to the responses." '469 Patent, col. 20:51-55.

Thus, in the context of the claims of the '469 patent, the "household appliance" is any electronic device for home use, including alarm clocks, kitchen appliances, entertainment devices ('469 Patent, col. 3:2-7) and other "smart appliances" such as refrigerators, telephones, stoves, clock radios, VCRs, "or any other electrical or non-electrical device including the monitoring device." '469 Patent, col. 20:35-38; *See also Cardiocom*, IPR2013-00451, Paper 23 at 8 (construing "household appliance" to mean "electronic equipment devised for home use").

B. Summary of the Prosecution of the '469 Patent

The patent application that issued as the '469 patent was filed on January 29, 2007 as U.S. Patent Application Serial No. 11/668,092 (the "'092 application"). The claims of the '092 application were initially rejected over art that is not at issue in this Petition.

The Applicant amended claim 1 (which issued as claim 1) to recite a primary device that was able to "(iii) present said synthesized audio transmissions to an individual through a speaker and (iv) receive audible responses from said individual," as well as a secondary device that "(ii) comprises a user interface adapted to receive input responses from said individual and convert said input responses to a second digital file through speech recognition." Ex. 1005, Amendment After Final dated May 1, 2009, p. 2. The claims that issued as claims 10 and 17 were similarly amended.

The Applicant argued that a reference that "generally discussed a voice synthesizer [did] not teach or suggest presenting synthesized audio transmissions of [sic, or] and/or instructions to an individual through a speaker and/or receiving audible responses to one or more queries from the individual." *Id.* at 12. Following this Amendment After Final, an Examiner's amendment to claim 1 was entered that recited "(B) said primary device comprises a processor adapted to collect data relating to said primary device, and execute said computer programs to provide a diagnosis of a performance of said primary device." Ex. 1006, Notice of Allowance dated July 10, 2009, p. 6. The claims that issued as claims 11 and 17 were similarly amended, with the term "household appliance" replacing "primary device." *Id.*, pp. 8, 11. The remaining claims were subsequently allowed.

V. THERE IS A REASONABLE LIKELIHOOD THAT AT LEAST ONE CLAIM OF THE '469 PATENT IS UNPATENTABLE UNDER 37 C.F.R. § 42.104(b)(4)

A. Identification of the References as Prior Art

U.S. Patent No. 6,014,626 to Cohen ("Cohen") (Ex. 1002) was filed on August 12, 1999, claiming priority to an application filed on September 13, 1994. Cohen predates by about two and one-half years the earliest claimed effective filing date of the '469 patent. Cohen therefor qualifies as prior art under pre-AIA 35 U.S.C. §§ 102(a) and 102(e).

European Publication No. 0 342 859 to Kaufman, et al. ("Kaufman") (Ex. 1003) was filed on May 11, 1989, as Application No. 89304779.5, and published on November 23, 1989. Kaufman claimed priority to U.S. Application No. 194,018, filed April 12, 1988; and U.S. Application No. 07/201,779, filed June 2, 1988. Kaufman predates by about seven and one-half years the earliest claimed effective filing date of the '469 patent. Kaufman therefor qualifies as prior art under pre-AIA 35 U.S.C. §§ 102(b).

U.S. Patent No. 5,367,667 to Wahlquist et al. ("Wahlquist") (Ex. 1004) was filed on September 25, 1992, and issued on November 22, 1994. The issuance of Wahlquist predates by almost two and one-half years the earliest claimed effective filing date of the '469 patent. Wahlquist therefor qualifies as prior art under pre-AIA 35 U.S.C. § 102(b).

None of Cohen, Kaufman, and Wahlquist were of record during prosecution of the '469 Patent. Cohen is a continuation-in-part of U.S. Patent No. 5,633,910 to Cohen, which was of record during prosecution of the '469 Patent. U.S. Patent No. 5,633,910 was not, however, relied upon in any rejection of the claims. Kaufman claims priority to the application that issued as U.S. Patent No. 4,933,873, which was of record during prosecution of the '469 Patent, but was not relied upon in any rejection of the claims. Kaufman, however, includes disclosure not present in U.S. Patent No. 4,933,873.

B. Summary of Invalidity Arguments

Computer systems that send programs or instructions over a network have been known for decades. Indeed, the very purpose of a computer network is to allow programs, data, instructions, or other information to be sent quickly and efficiently from one device to a remote device. Such networked systems have been used to monitor computers or systems located remotely from a main computer, share files, remotely diagnose and repair electronic equipment, update software, play games, or provide instructions to a remote computer or its user. The '469 Patent is but one example of such a rudimentary system.

In the '451 IPR proceedings, the Board granted trial as to claims 1, 2, and 5-10, but denied trial as to claims 3, 4, and 11-22. With respect to claims 3, 4, and 11-22, the Board determined that the Petitioner failed to show sufficient evidence that Cohen taught the claimed "household appliance" or "primary and secondary devices housed within a single housing," as required by those claims. *Cardiocom*, IPR2013-00451, Paper 23 at 18, 24. With this Petition, Petitioner submits that Kaufman discloses both of these claim limitations. Specifically, Kaufman discloses a health monitoring device wherein "the invention pertains to a computer based system for providing at home or institutional assistance to a convalescing or injured patient." Kaufman, p. 2:10-12. Kaufman also discloses the primary and

secondary devices all being housed within a single housing unit 12 or 102 of the patient assistance system 10. *See, e.g.*, Kaufman, p. 2:44-45; p.6:9-15.

As outlined in the claim charts below, both Cohen and Kaufman disclose patient monitoring systems that may communicate with a central system or server. More specifically, Cohen discloses a remote monitoring system that allow servers, computers, and other equipment located discrete from each other to communicate and otherwise interact, so as to provide interaction with a patient to assess the patient's health status. This is done by the system of Cohen asking questions, collecting data, and giving instructions. Similarly, Kaufman describes a system that diagnoses both patients and the interface devices utilized by the patient. The system described in Kaufman interfaces with the patient by providing instructions, dispensing medications, and taking vital signs via various accessories (e.g., blood pressure cuff, thermometer). Both Cohen and Kaufman describe speech recognition and synthesis systems to more easily allow for communication with a patient. The speech recognition and synthesis systems of Cohen are resident on a central computer, while systems of Kaufman are resident on the patient interface system itself. Kaufman teaches use of a program written in BASIC as the control program for the system. BASIC is an interpreted language, and a BASIC program is a form of a script program.

Similar to the systems of Cohen and Kaufman, Wahlquist also teaches remote monitoring, but in the context of diagnosing and testing remotely-located electronic equipment, such as a computer. A computer described in Wahlquist sends programs to a remote user computer to initiate diagnostic tests on the remote computer and can send customized test programs to the user computer for execution.

VI. DETAILED EXPLANATION UNDER 37 C.F.R. §§ 42.104(b)

A. Ground 1 – Claims 1-6, 10-12, 16-18, and 22 of the '469 Patent are Obvious Over Cohen in View of Kaufman

Under the broadest reasonable constructions, above, the combination of Cohen and Kaufman explicitly and/or inherently discloses all elements of the claims of the '469 Patent. One of ordinary skill in the art would understand to combine Cohen and Kaufman because both references deal directly with remote monitoring systems utilizing a communications network in a patient assistance system environment. *See* Cohen, col. 3:17-22; Kaufman, p. 5:15-16. In general, Cohen is directed to remote monitoring of the health of patients (col. 3:17-22), and Kaufman relates to monitoring of the health of patients and ensuring proper operation of the home monitoring system itself (pp. 1:43-44; 6:39-44).

Cohen discloses that the processor is configured to consult a database 24 in a database server 560 to select one or more appropriate questions for a patient to

determine the patient's health status. Cohen, col. 3:58-60; col. 5:6-9; 16:35-38. Cohen describes a voice generator 22 that "translates the computer question into voice that the patient can hear." Cohen, col. 11:56-59. Verbal responses from the patient are received. Cohen, col. 9:17-24. Patient interaction with the monitoring system may be via a standard telephone, or more sophisticated users can utilize a personal computer. Cohen, col. 4:16-26. Thus, under the definition of "household appliance" provided above, both the telephone and computer described in Cohen would be considered a "household appliance" as recited in many claims of the '469 Patent, as both a computer and a telephone are electronic devices for the home. For ease of use, Cohen discloses a computer processor 21 capable of executing speech recognition programs during patient monitoring. Cohen, col. 9:8-16.

Kaufman discloses a patient assistance system that can communicate with a remote medical center via a modem 40 and telephone system. Kaufman, p. 5:15-16. The system is configured to communicate with such a remote medical computer so as to receive programmed instructions or information from said computer. Kaufman, p. 3:27-29. Kaufman teaches use of a program written in BASIC as the control program for the system. Kaufman, at p. 8:18-21. BASIC is an interpreted language and a BASIC program is a form of a script program. *See* Stone Decl. ¶¶ 51, 112. The system 100 interactively assists a patient by providing a variety of patient support functions. Kaufman, p. 2:46. These include an alarm

for providing reminders to perform an activity, a voice synthesizer for generating audible messages to the patient, and a speech detection circuit for analyzing responses to questions. Kaufman, pp. 2:51-3:7. Additionally, the system 100 has several monitoring devices adapted to collect data from the patient including a nasal cannula 54 to administer oxygen, a probe 56 for measuring blood oxygen levels, and a blood pressure cuff 60. Kaufman, p. 5:42-52.

In the Decision granting Institution of Inter Partes Review in the '451 IPR proceedings bearing control number IPR2013-00451, the Board granted review as to claims 1, 2, and 5-10 based on Cohen and Wahlquist under 35 U.S.C. § 103, but denied *inter partes* review of the '469 patent as to claims 3, 4, and 11-22. *Cardiocom*, IPR2013-00451, Paper 23 at 13. Review was denied as to claims 3, 4, and 11-22 because the Board determined that the art of record did not teach the "single housing" recited in claim 3 or the "household appliance" recited in claims 4 and 11-22. *Id.* In the present Petition, Petitioner submits that Kaufman discloses both the claimed "single housing" and the "household appliance."

It would be obvious to combine the cited art at least because both references are directed to patient assistance and monitoring systems for remotely monitoring patients in the home. Additionally, it would have been obvious to combine Cohen with Kaufman in order to ensure that the very device upon which the patient is interacting was properly functioning, else, accurate monitoring of the patient could

not be ensured. Kaufman discloses a single housing home monitoring system that interacts with a patient by running programs that utilize speech synthesis to provide instructions/queries and allowing the patient to interact with the system via a number of interface devices. Kaufman also teaches an interface with a central unit remote from the household unit. Thus, modifying Cohen to include both a device that both runs programs to provide verbal instructions/queries, as well as allows for interaction with the system via interface devices, would have been obvious because Kaufman discloses such a system, packaged in a single household appliance.

Additionally, sending computer programs over a network connection was common at the time of the invention as was sending instructions over a network connection, as disclosed in Cohen. Although Cohen describes speech recognition and synthesis occurring at the interface server, Kaufman describes such technologies being located at the home as part of the patient assistance system. Additional reasons to combine the art are described in the attached Declaration. Stone Decl. at ¶¶ 38, 43, 47, 68. In view of the motivations in the art generally at the time of invention of the '469 patent, it would have been obvious to modify the Cohen system to incorporate the patient assistance system described in Kaufman.

B. Ground 2 – All claims of the '469 Patent are Obvious Over Cohen in View of Kaufman, and further in view of Wahlquist

Under the broadest reasonable constructions, set forth above, the combination of Cohen, Kaufman, and Wahlquist explicitly or inherently discloses all elements of the claims of the '469 Patent.

Wahlquist discloses running diagnostic test programs on a user computer. Wahlquist, col. 2:38-43; col. 4:65-67; col. 8:59-68. These diagnostic tests may be local to the user computer and selected by a help desk operator, or may be downloaded from a help desk computer. Wahlquist, col. 4:65-67. The diagnostic tests enable a help desk operator to identify an operational problem or other information about the user computer. Wahlquist, col. 2:38-43. The diagnostic tests can include, in some cases, instructions or prompts provided to the user as to how to perform the desired diagnostic tests, as part of script programs transmitted to the user computer. Wahlquist, col. 9:61-66; Stone Decl. ¶¶ 26-29.

One of ordinary skill in the art would have understood to combine Wahlquist with the above combination of Cohen and Kaufman because all three references are directed to remote monitoring, either of a patient (Cohen), equipment (Wahlquist), or both (Kaufman). *See* Cohen, col. 3:17-22; Wahlquist, col. 4:65-67; Kaufman, p. 5:15-16. Thus, it would have been obvious based on the disclosure of Cohen to have some of the questions or instructions relate to the operation or

maintenance of the remote monitoring system. Stone Decl. at ¶ 92. Additionally, sending computer programs over a network connection, and in particular script programs (as disclosed in Wahlquist), was common at the time of the invention as was sending instructions over a network connection (as disclosed in Cohen and Kaufman). Both Cohen and Kaufman describe speech recognition and synthesis. In Cohen, this occurs at the interface server. In Kaufman, such technologies are located at the patient assistance system.

Furthermore, transmitting a generated diagnostic script file from the database server 560 to the home computer of Cohen, or the patient assistance system of Kaufman, as suggested by Wahlquist, would enable the systems of Cohen and Kaufman to operate more efficiently, for example by reducing bandwidth and connection time requirements by transmitting data files rather than an audio stream in real time. Stone Decl. at ¶93. Yet additional reasons to combine the art are described in the attached Declaration. Stone Decl. at ¶¶ 92, 93, 97, 104, 115-120. In view of the motivations in the art generally at the time of invention of the '469 patent, it would have been obvious to modify the combined system of Cohen and Kaufman system to incorporate the instructions and programs described in Wahlquist.

C. Claim Chart for Grounds 1-2

Claims from Ground 1: Cohen + Kaufman For Claims 1-6, 10-12, 16-18,

U.S. Patent	22
No. 7,587,469	Ground 2: Cohen + Kaufman + Wahlquist for Claims 1-22
1. A	Grounds 1 and 2:
communications network comprising:	Cohen teaches "a method and system for remotely monitoring the health status of patients, in particular outpatients, using telecommunications hardware systems already likely to exist in a patient's home, such as, for example, a telephone or personal computer with a modem." Cohen, col. 3:18-23.
	Kaufman discloses a communications network in the form of a patient assistance system with a modem connected to a remote medical center via a telephone system. Kaufman, p. 5:15-16. "The modem can be used for the purpose of communicating with a remote medical computer, for transferring patient information to the remote computer or for receiving programmed instructions or information from the remote computer." Kaufman, p. 3:27-29. See also, Kaufman FIG. 3.
	Ground 2:
	Wahlquist discloses "help desk computer 10 is connected via a network 40 to a database manager computer 20 and a communications link manager computer 30" attached to a multiline modem 50. Wahlquist 4:3-7. Additionally, Wahlquist discloses "a user computer 70, having a modem 60 connected to a network 80." Wahlquist, 4:18-19.
a	Grounds 1 and 2:
communications channel;	Cohen teaches that "separate systems can communicate over a network. For example, in the representative embodiment, the patient system 500 communicates with the interface server 530 through phone lines 13. The interface server 530 communicates with the database server through a LAN. It is also possible to combine the interface server 530 and database server 560 together into single program." Cohen, col. 11:43-49; FIG. 5. The LAN and the phone lines 13, together, comprise a communications channel.
	Kaufman discloses a communication channel in the form of a modem connected to a telephone system. "A modem is coupled

	to the automatic dialer in the interface. The modem can be used for the purpose of communicating with a remote medical computer, for transferring patient information to the remote computer or for receiving programmed instructions or information from the remote computer." Kaufman, p. 3:27-29.
a server;	Grounds 1 and 2:
	Cohen teaches that an "interface server 530 handles the process of getting answers from patients. It also allows access to the database 24 by the health care provider and other administrators. The database server 560 stores patient information. (The interface server 530 and the database server 560 can be regarded as comprising the central monitoring subsystem 11 of FIG. 2 above.)" Cohen, col. 11: 36-42.
	Kaufman discloses a server in the form of a remote medical computer at a remote medical center. Kaufman, p. 3:27-29; p. 5:15-20.
a primary	Grounds 1 and 2:
device in communication with said	Cohen discloses an interface server 530 in communication with the database server 560 via a server client communication 550. Cohen, col. 14:35-38.
through said communicatio ns channel,	Kaufman discloses a patient assistance system in communication with the remote medical computer at a remote medical center. Kaufman, p. 5:15-20.
wherein	Ground 2:
	Wahlquist discloses a user computer 70 and a database manager computer 20. These two computers are connected via a network 40 and a modem 50. Wahlquist, col. 4:1-7.
(A) said	Grounds 1 and 2:
primary device comprises a component adapted to	Cohen discloses a computer processor 21 that "is capable of executing additional software programs, such as DBMS programs, speech recognition and other programs capable of carrying out the operations involved in patient monitoring. The computer processor 21, in conjunction with software programs, is capable of actuating [a number of modules]." Cohen, col. 9:8-16.

The interactive patient assistance system in Kaufman has components for multiple purposes. Kaufman, Abstract. Grounds 1 and 2: (i) receive one or more Cohen discloses that the processor is configured to consult the computer database 24 in the database server 560 to select one or more programs appropriate questions for the patient. "Upon accepting a valid including one PIN, the computer processor 21 consults the retrieved patient or more record and the database 24 to select one or more appropriate queries. questions for the patient to respond to (step 32)." Cohen, col. instructions 16:35-38. or messages Kaufman discloses a patient assistance system that receives as a first computer programs ("programmed instructions") from the digital file server. "A modem is coupled to the automatic dialer in the from said interface. The modem can be used for the purpose of server, communicating with a remote medical computer, ... for receiving programmed instructions or information from the remote [medical] computer." Kaufman, at P. 3, 11. 27-29. Kaufman discloses queries, instructions and messages in the form of digital files on a computer system. In the BASIC program for the patient assistance system provided in the Addendum, the instructions of the program use a SPEAKFILE command to speak various files provided in the .MSG file type including files named WHO.MSG, FEEL.MSG, PHONE.MSG. The flow of the program in the Addendum is also presented as flow diagrams in FIGS. 11A-11E which indicate that the SPEAKFILE commands correspond to verbal prompts to the patient in the flow diagrams. Kaufman, FIGS. 11A-11E. Likewise, Kaufman discloses digital files in the form of questions. Several sections of the program include a SPEAKFILE command followed by a set "IF-THEN-ELSE" commands that perform different actions based a response selected by the patient. The flow diagrams show these as decisions indicating that a question was asked, and based on the response received, the flow branched. Kaufman, FIGS. 11A-11E. **Ground 2:** Wahlquist discloses a user computer 70 and a database manager computer 20. These two computers are connected via a network

40 and a modem 50. "The representative R is equipped with a computer 10 on which he records information related to the user's problem. The help desk computer 10 is connected via a network 40 to a database manager computer 20 and a communications link manager computer 30." Wahlquist, col. 4:1-7. A link manager downloads case and script files to the user computer and the user computer executes the script file. "The link manager then downloads the case and script files to the user's computer. The user computer then terminates communications with the link manager. The diagnostic program running on the user's computer then initiates execution of the script file." Wahlquist, col. 2:38-43; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." Col. 4:65-67. (ii) convert Grounds 1 and 2: the first Cohen discloses a voice generator 22 that "translates the digital file computer question into voice that the patient can hear." Cohen, into col. 11:56-59. synthesized Kaufman discloses that the "system also includes voice audio synthesizer circuitry for the purpose of generating audible transmissions. messages." Kaufman, p. 2:53. The program in the Addendum and flow diagrams in FIGS. 11A-11E further indicate that SPEAKFILE commands are used to convert digital .MSG files into synthesized audio transmissions in the form of verbal prompts to the patient. Kaufman, FIGS. 11A-11E. (iii) present Grounds 1 and 2: said Cohen discloses a voice generator 22 that "translates the synthesized computer question into voice that the patient can hear." Cohen, audio col. 11:56-59. The voice signal is sent to an outpatient transmissions subsystem, which may be a telephone handset, "the same kind of to an telephone already owned by most households." Cohen, col. 4:16individual 18; col. Such a handset has a speaker. through a Kaufman discloses that the "system also includes voice speaker and synthesizer circuitry for the purpose of generating audible messages." Kaufman, p. 2:53.

The synthesized transmissions are presented through a "loudspeaker 110 which is coupled to the voice synthesis and 20 recognition unit 36 discussed previously." Kaufman, p. 6:19-20. (iv) receive Grounds 1 and 2: audible "The outpatient subsystem 12 of this alternative embodiment is a responses telephone handset for transmitting the user's verbal commands. from said Ideally, the telephone handset also can generate DTMF signals. individual The patient's responses are transmitted over a and telecommunications system 13 to the interface module 21A where the signals are digitized, if they are not in a digital format already, and identified as either the voice or DTMF signals." Cohen, col. 9:17-24. A "hands-free microphone 112 is also provided, coupled to the voice synthesis and recognition unit 36, for purposes of audio input by the patient P." Kaufman, p. 6:20-21. (B) said Grounds 1 and 2: primary Kaufman describes a system 10 that includes a processor device (programmable control computer 46) as part of a programmable comprises a computer to interact with the interface devices. processor adapted to 5 PHONE LINES collect data relating to TELEPHONE AUTOMATIC MODEM DIALER UNIT HAND SET said primary BLOOD VOICE device, and SYNTHESIS/ RECOG UNIT MONITORING FUNCTION INPUTS PROGRAMMABLE CONTROL COMPUTER execute said computer AUDIÓ IN programs to PRINTER PROGRAMMA BLE provide a MEDICATION CLOCK/ CALENDAR ULTRASONIC SYSTEM OUTPUTS diagnosis of a 30^J performance Fig. 3 DISPLAY DISPLAY of said primary device; and "It will be understood that the system 50 functions at all times under the control of the programmable unit 46 to insure proper carrying out of the above described functions. Further, by means

of the voice synthesis and recognition unit 36 the patient is

always able to provide verbal commands to the unit 50." Kaufman, p. 6:1-3.

"Attached hereto as an Addendum is a listing of a program usable with the system 100. The first group of instruction, up to line 400 of the Addendum, is a plurality of interface sub-routines to enable the processor 46 to interact with various of the interface devices. The portion of the program from line 400 on to the end is written in BASIC and is the control program for the system 100." Kaufman, p. 8:18-21.

One example of diagnosis of the patient assistance system's performance in Kaufman includes that a drawer can be opened to dispense supplies, devices, or medication. The device can check or "diagnose" if the drawer has since been closed. "1401 'FOR J=1 TO COUNT 'CHECK THAT DRAWER IS CLOSED." Kaufman, p. 11:1401 of code.

Kaufman also executes programs to determine if certain operations have been completed and the state of the testing devices for those operations. "Similarly, the switch 126 can be used to prompt the system 100 to the fact that the thermometer has been properly positioned and a temperature reading can be made. Finally, the button or switch 126 can be used to prompt the system 100 to the fact that a product, such as a medication, has been removed from the unit 126 and has been taken by the patient P." Kaufman, p. 6:40-44.

Ground 2:

Wahlquist discloses that the user's computer 70 includes a computer identification code. Wahlquist, col. 5:52-54. When a link manager requests an identification code of the user's computer 70, that user's computer interrogates itself to determine its identification code, to respond to the link manager. "In step 124, the link manager computer 30 interrogates the user's computer 70 for its computer identification code. The computer identification code may be stored in ROM at a known address." Wahlquist, col. 5:52-56. Wahlquist discloses running diagnostic tests downloaded from a help desk. "The link manager then downloads the case and script files to the user's computer. The user computer then terminates communications with the link

manager. The diagnostic program running on the user's computer then initiates execution of the script file." Wahlquist, col. 2:38-43. "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." Col. 4:65-67. "The script file may also instruct the user's computer 70 to send copies of various user computer 70 system files such as network or configuration system files to the link manager computer 30." Col. 6:33-36. a secondary Grounds 1 and 2: device Cohen discloses an operator interface 12, e.g., a telephone operatively handset, that transmits patient responses over a connected to telecommunications system 13. "The outpatient subsystem 12 of said primary this alternative embodiment is a telephone handset for device, transmitting the user's verbal commands. The patient's wherein said responses are transmitted over a telecommunications system 13 secondary to the interface module 21A where the signals are digitized, if device they are not in a digital format already, and identified as either the voice or DTMF signals." Cohen, col. 9:17-24. Cohen indicates that more sophisticated patients could interface via a computer with a modem to communicate with a central monitoring system. "Further, the telephone used in the present invention need not be in addition to the one used for everyday calls; nor is any additional telephone line required. (More sophisticated patients can use a computer with a modem to communicate with the central monitoring subsystem.)" Cohen, col. 4:16-26. Kaufman discloses secondary devices that are connected to the primary device. For instance, Kaufman teaches the use of a microphone for collecting audible responses, a telephone handset, and also a keyboard or a touchscreen along with medical testing devices, such as cuffs, thermometers, and other analyzers. Kaufman, p. 8:25-38; p. 6:20-21; p. 5:57-58. (i) is adapted Grounds 1 and 2: to be operated Cohen discloses obtaining responses from a patient based on by said operations in response to questions. "The computer processor individual in asks the patient to identify himself or herself, for example, by response to entering an alphanumeric identification or patient code using the said

synthesized audio transmissions and touch tone keypad. For example, the patient presses the keys corresponding to the assigned patient code on the keypad on the patient's touch-tone telephone." Cohen, col. 4:59-64.

Kaufman teaches using the synthesized audio transmissions to prompt the individual to operate the device, such as use the device to take a temperature or blood pressure or provide an audible response. In response to prompts from the patient assistance system, the patient interacts with the patient assistance system, via the microphone or other input, to provide answers to the prompts. Kaufman, p. 6:20-21. "As an alternate, a keyboard could be used for operator input instead of voice recognition circuitry. Instead of a keyboard a touch-sensitive screen can be used." Kaufman, p. 3:11-12.

(ii) comprises a user interface adapted to receive input responses from said individual and convert said input responses to a second digital file through speech recognition.

Grounds 1 and 2:

Cohen indicates that patients could interface via a computer with a modem to communicate with a central monitoring system. "Further, the telephone used in the present invention need not be in addition to the one used for everyday calls; nor is any additional telephone line required. (More sophisticated patients can use a computer with a modem to communicate with the central monitoring subsystem.)" Cohen, col. 4:16-26. Computers are known to include speech recognition software and functionality. *See* FIG. 5A.

"A hands-free microphone 112 is also provided, coupled to the voice synthesis and recognition unit 36, for purposes of audio input by the patient P." Kaufman, p. 6:20-21. "As an alternate, a keyboard could be used for operator input instead of voice recognition circuitry. Instead of a keyboard a touch-sensitive screen can be used." Kaufman, p. 3:11-12.

Kaufman discloses recording input responses. The BASIC program provided in the Addendum indicates that at least one patient input response is recorded. "1010 FEEL\$="NONE" 'RECORD FEELING & GO ON TO BP". Kaufman, p. 11:8.

Kaufman discloses that the patient assistance system can perform voice recording. See FIG. 12, Speech Processor 36 including "Voice Recording". Kaufman further discloses that any "information of value" may be recorded by the patient assistance

	system on its magnetic recording system. Kaufman, p. 5:21-23.
2 . The	Grounds 1 and 2:
network of claim 1, wherein said component	Cohen discloses a voice generator 22 that is present on the interface server 530 which must necessarily "translate[] the computer question into voice that the patient can hear." Cohen, col. 11:56-59.
comprises an audio processor adapted to:	Cohen discloses an interface module 21A disposed within the interface server 530 that digitizes voice signals. "The interface module 21A answers the incoming telephone call and, under the control of the computer processor 21 and utilizing the Voice/DTMF module 22A and the ASR ("automatic speech recognition") module 23A, directs the patient to enter his or her personal identification number ("PIN") by either pressing the appropriate keys on the telephone keypad of the patient's telephone or saying certain voice commands. The interface module 21A ensures that all DTMF and voice signals are digitized and the Voice/DTMF module 22A and the ASR module 23A decode the respective DTMF and voice signals before passing the decoded information to the computer processor 21 (step 31A)." Cohen, col. 17:1-12.
	Kaufman discloses audio synthesizing. "The system also includes voice synthesizer circuitry for the purpose of generating audible messages." Kaufman, p. 2:53-54.
receive a first	Grounds 1 and 2:
set of electrical signals corresponding to any of said queries, instructions, and	Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient. "Upon accepting a valid PIN, the computer processor 21 consults the retrieved patient record and the database 24 to select one or more appropriate questions for the patient to respond to (step 32)." Cohen, col. 16:35-38.
messages;	Kaufman discloses prompting patients with queries and messages. "The voice synthesizer circuitry can also be used to communicate with the patient when the preprogrammed schedule needs to be varied. That circuitry can also prompt verbal responses usable to determine general patient condition."

	Kaufman, p. 3:3-5.
convert said	Grounds 1 and 2:
first set of electrical signals to a second set of electrical signals	Cohen discloses a voice generator 22 that is present on the interface server 530 which must necessarily "translate[] the computer question into voice that the patient can hear." Cohen, col. 11:56-59. Kaufman discloses that the "system also includes voice synthesizer circuitry for the purpose of generating audible
capable of being audibly synthesized; and	messages." Kaufman, p. 2:53. The program in the Addendum and flow diagrams in FIGS. 11A-11E further indicate that SPEAKFILE commands are used to convert digital .MSG files into synthesized audio transmissions in the form of verbal prompts to the patient. Kaufman, FIGS. 11A-11E.
audibly	Grounds 1 and 2:
synthesize said second set of electrical signals.	Cohen discloses a voice generator 22 "translates the computer question into voice that the patient can hear." Cohen, col. 11:56-59. The questions are then delivered to the patient via the telephone handset, "the same kind of telephone already owned by most households." Cohen, col. 4:16-18. Cohen indicates that more sophisticated patients could interface via a computer with a modem to communicate with a central monitoring system (which includes the interface device 530). Cohen, col. 4:16-26.
	Kaufman discloses "a loudspeaker 110 which is coupled to the voice synthesis and 20 recognition unit 36 discussed previously." Kaufman, p. 6:19-20.
3. The	Grounds 1 and 2:
network of claim 1, wherein the primary and secondary devices are housed within a single housing unit.	Kaufman discloses the primary and secondary device all being housed within a single housing unit 12 or 102 of the patient assistance system 10. "The system can provide a variety of functions useful to an individual 45 who may be debilitated or convalescing from an injury or an illness." Kaufman, p. 2:44-45; see also p. 6: 9-15. Kaufman also teaches the housing may include a video display unit 14, display 16b, monitors such as blood pressure/pulse monitoring cuff stored in region 24, voice synthesizer and recognition unit 36, modem 40, telephone handset 44, for voice communication with the patient,

	microphone for collecting audible responses, a telephone handset, and also a keyboard or a touchscreen along with medical testing devices, such as cuffs, thermometers, and other analyzers. Kaufman, p. 8:25-38; p. 6:20-21; p. 5:11-14, 57-58; p. 4:31-44, 53-58, .
4. The network of	Grounds 1 and 2: Kaufman discloses that "the invention pertains to a computer
claim 3, wherein said housing unit comprises a household appliance.	based system for providing at home or institutional assistance to a convalescing or injured patient." Kaufman, p. 2:10-12.
5. The	Grounds 1 and 2:
network of claim 1, wherein said component comprises an audio processor adapted to detect said audible responses, and convert	An interface module 21A disposed within the interface server 530 digitizes audible responses received from a secondary device (i.e., a telephone handset or a computer with a modem). "The outpatient subsystem 12 of this alternative embodiment is a telephone handset for transmitting the user's verbal commands. Ideally, the telephone handset also can generate DTMF signals. The patient's responses are transmitted over a telecommunications system 13 to the interface module 21A where the signals are digitized, if they are not in a digital format already, and identified as either the voice or DTMF signals." Cohen, col. 9:17-24.
and convert the detected audible responses to data transmissions.	Kaufman also teaches this feature. "A hands-free microphone 112 is also provided, coupled to the voice synthesis and recognition unit 36, for purposes of audio input by the patient P." Kaufman, p. 6:20-21. "Speech detection circuitry can be used to analyze those responses or requests. That circuitry can then signal the control unit with an identification of those responses." Kaufman, p. 3:6-7.
	"The system 10 can also include a magnetic recording system." Kaufman, p. 5:21-23.
6. The	Grounds 1 and 2:
network of claim 5,	The interface server 530 communicates the converted audible

wherein said primary device comprises a transmitter adapted to transmit said data transmissions generated by said audio processor to said server. responses to the database server 560 via a server client communication 550. "The interface server 530 communicates with the database server through a LAN." Cohen, cols. 11:46-47. "The Server/Client Communication 550 is, in the representative embodiment, a local area network (LAN) that allows the interface server 530 to communicate with the database server 560. It is possible that these two servers are actually running on the same computer, and possibly as part of the same program, in which case there is no need for the Server/Client Communication 550." 14:35-41; FIGS. 5-5A. Thus, a transmitter in the interface server 530 to send such data would be inherent.

Kaufman teaches transmitting data transmissions generated by said audio processor to said server.

Kaufman discloses that the system can record "any other information of value". Kaufman, p. 5:21-23, such as "Voice Recordings" at FIG. 12.

Kaufman can transmit the collected data via a modem. "A modem is coupled to the automatic dialer in the interface. The modem can be used for the purpose of communicating with a remote medical computer, for transferring patient information to the remote computer or for receiving programmed instructions or information from the remote computer." Kaufman, p. 3:27-29.

7. The network of claim 1, wherein said server is adapted to generate said computer programs that are executable by said secondary device.

Ground 2:

Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient. Cohen, col. 16:35-38. Cohen indicates that more sophisticated patients could interface via a computer with a modem to communicate with a central monitoring system. "The interface server 530 communicates with the database server through a LAN." Cohen, col. 4:16-26. Accordingly, the patient computer receives data from the database server 560 via the interface server 530.

Kaufman teaches the server sending the patient assistance system patient information and that the system may be operated by a simple BASIC control program. "The modem can be used for the purpose of communicating with a remote medical computer, for transferring patient information to the remote computer or for

receiving programmed instructions or information from the remote computer." Kaufman, p. 3:27-29.

Wahlquist discloses generating a computer programs at a server that are executable at a secondary device. Wahlquist teaches "creating a computerized diagnostic script file on a service computer." Wahlquist, col. 8:50. The script file is a program that "instructs the computer to execute selected test files resident on the user's diagnostic disk." Col. 2:43-45. That script program is downloadable from the server. "While the preferred embodiment calls for downloading of the case and script files to the user's computer 70, it will be appreciated that special test programs not resident on the user's U diagnostic disk may also be downloaded at this time." Col. 5:68-6:2. "The diagnostic program running on the user's computer then initiates execution of the script file. The script file instructs the computer to execute selected test files resident on the user's diagnostic disk. The script file also specifies the creation of various log files which record the results of the tests. Upon completion of all of the test programs specified in the script file, the diagnostic program will cause the user's computer to reset." Wahlquist, col. 2:42-49; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." 4:65-67.

8. The network of claim 7, wherein said secondary device comprises a user interface adapted to

Ground 2:

Cohen discloses an operator interface 12, e.g., a telephone handset, that transmits patient responses over a telecommunications system 13 to the interface server 530. "The outpatient subsystem 12 of this alternative embodiment is a telephone handset for transmitting the user's verbal commands. Ideally, the telephone handset also can generate DTMF signals. The patient's responses are transmitted over a telecommunications system 13 to the interface module 21A where the signals are digitized, if they are not in a digital format already, and identified as either the voice or DTMF signals." Cohen, col. 9:17-24. Cohen indicates that more sophisticated patients could interface via a computer with a modem to communicate with a central monitoring system. "Further, the telephone used in the present invention need not be in addition to

the one used for everyday calls; nor is any additional telephone line required. (More sophisticated patients can use a computer with a modem to communicate with the central monitoring subsystem.)" Cohen, col. 4:16-26.

Kaufman also describes a user interface adapted for output and input such as speakers, display devices, a microphone for collecting audible responses, a keyboard or a touchscreen, and medical testing devices, such as cuffs, thermometers, and other analyzers. E.g. Kaufman, p. 8:25-38; p. 6:20-21.

(i) output said any of queries, instructions, or messages, and

Ground 2:

Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient to be outputted via the telephone. "Upon accepting a valid PIN, the computer processor 21 consults the retrieved patient record and the database 24 to select one or more appropriate questions for the patient to respond to (step 32)." Cohen, col. 16:35-38. Cohen discloses a voice generator 22 "translates the computer question into voice that the patient can hear." Cohen, col. 11:56-59. The resulting translated output is then communicated to the patient device (e.g., a computer) for output to the patient.

Kaufman discloses prompting patients with queries and messages. "The voice synthesizer circuitry can also be used to communicate with the patient when the preprogrammed schedule needs to be varied. That circuitry can also prompt verbal responses usable to determine general patient condition." Kaufman, p. 3:3-5.

(ii) input responses to said any of queries, instructions, or messages.

Ground 2:

Cohen discloses an operator interface 12, e.g., a telephone handset, that receives patient response inputs and transmits them over a telecommunications system 13 to the interface server 530. "The outpatient subsystem 12 of this alternative embodiment is a telephone handset for transmitting the user's verbal commands. Ideally, the telephone handset also can generate DTMF signals. The patient's responses are transmitted over a telecommunications system 13 to the interface module 21A where the signals are digitized, if they are not in a digital format

already, and identified as either the voice or DTMF signals." Cohen, col. 9:17-24. Cohen indicates that more sophisticated patients could interface via a computer with a modem to communicate with a central monitoring system. "Further, the telephone used in the present invention need not be in addition to the one used for everyday calls; nor is any additional telephone line required. (More sophisticated patients can use a computer with a modem to communicate with the central monitoring subsystem.)" Cohen, col. 4:16-26.

Kaufman discloses a "hands-free microphone 112 is also provided, coupled to the voice synthesis and recognition unit 36, for purposes of audio input by the patient P." Kaufman, p. 6:20-21. "As an alternate, a keyboard could be used for operator input instead of voice recognition circuitry. Instead of a keyboard a touch-sensitive screen can be used." Kaufman, p. 3:11-12.

9. The network of claim 8, wherein said output comprises any of visual output and audio output. and wherein said input comprises any of data entry input, graphic user interface input, and audio input.

Ground 2:

Cohen discloses at least audible inputs and outputs. Specifically, Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient. "The outpatient subsystem 12 of this alternative embodiment is a telephone handset for transmitting the user's verbal commands. Ideally, the telephone handset also can generate DTMF signals. The patient's responses are transmitted over a telecommunications system 13 to the interface module 21A where the signals are digitized, if they are not in a digital format already, and identified as either the voice or DTMF signals." Cohen, col. 9:17-24. Cohen indicates that more sophisticated patients could interface via a computer with a modem to communicate with a central monitoring system. "Further, the telephone used in the present invention need not be in addition to the one used for everyday calls; nor is any additional telephone line required. (More sophisticated patients can use a computer with a modem to communicate with the central monitoring subsystem.)" Cohen, col. 4:16-26. Cohen discloses a voice generator 22 "translates the computer question into voice that the patient can hear." Cohen, col. 11:56-59. An interface module 21A disposed within the interface server 530 digitizes audible responses received from a secondary device

(i.e., a telephone handset or a computer with a modem). Cohen, col. 9:17-24. Kaufman teaches both audio and video output. "The system also includes voice synthesizer circuitry for the purpose of generating audible messages." Kaufman, p. 2:53-54. "The system 10 includes a housing 12 carried by the housing 12 is a video display unit 14." Kaufman, p. 4:32. Kaufman also discloses various inputs. "A hands-free microphone 112 is also provided. coupled to the voice synthesis and recognition unit 36, for purposes of audio input by the patient P." Kaufman, p. 6:20-21. "As an alternate, a keyboard could be used for operator input instead of voice recognition circuitry. Instead of a keyboard a touch-sensitive screen can be used." Kaufman, p. 3:11-12. **10.** The Grounds 1 and 2: network of Kaufman teaches use of a program written in BASIC as the claim 1, control program for the system. Kaufman, at p. 8:18-21. BASIC wherein said is an interpreted language and a BASIC program is a form of a one or more script program. See Stone Decl. ¶¶ 51, 112. computer **Ground 2:** programs comprises Wahlquist discloses the use of script programs. "The link one or more manager then downloads the case and script files to the user's script computer. The user computer then terminates communications programs. with the link manager. The diagnostic program running on the user's computer then initiates execution of the script file." Wahlquist, col. 2:38-43; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." Col. 4:65-67. 11. A system Grounds 1 and 2: for Cohen teaches "a method and system for remotely monitoring communicatin the health status of patients, in particular outpatients, using g with a telecommunications hardware systems already likely to exist in a household patient's home, such as, for example, a telephone or personal appliance, computer with a modem." Cohen, col. 3:18-23. said system Kaufman discloses a communications network in the form of a comprising: patient assistance system with a modem connected to a remote medical center via a telephone system. Kaufman, p. 5:15-16. See

also, Kaufman FIG. 3.

The household appliance has been construed to mean "electronic equipment devised for home use." Cardiocom, LLC v. Robert Bosch Healthcare Sys., Inc., IPR2013-00451, Paper 23 at 8 (Jan. 16, 2014) (hereinafter "Jan. 16 Decision").

Kaufman discloses that "the invention pertains to a computer based system for providing at home or institutional assistance to a convalescing or injured patient." Kaufman, p. 2:10-12.

a communications channel where a portion of the channel is a wireless channel;

Grounds 1 and 2:

Cohen teaches that "separate systems can communicate over a network. For example, in the representative embodiment, the patient system 500 communicates with the interface server 530 through phone lines 13. The interface server 530 communicates with the database server through a LAN. It is also possible to combine the interface server 530 and database server 560 together into single program." Cohen, col. 11:43-49; FIG. 5. The LAN and the phone lines 13, together, comprise a communications channel.

Kaufman discloses a modem connected to a telephone system. "A modem is coupled to the automatic dialer in the interface. The modem can be used for the purpose of communicating with a remote medical computer, for transferring patient information to the remote computer or for receiving programmed instructions or information from the remote computer." Kaufman, p. 3:27-29. One of skill in the art would have understood that communication via use of modem could have been either wireless or wired.

a household appliance in communicatio n with said server through said communicatio ns channel, wherein **Grounds 1 and 2:** Cohen discloses an interface server 530 that is in communication with the database server 560 via a server client communication 550. Cohen, col. 14:35-38.

Kaufman discloses that "the invention pertains to a computer based system for providing at home or institutional assistance to a convalescing or injured patient." Kaufman, p. 2:10-12.

Kaufman discloses a patient assistance system in communication with the remote medical computer at a remote medical center. Kaufman, p. 5:15-20.

(A) said	Grounds 1 and 2:
household appliance comprises a component adapted to	Kaufman discloses that "the invention pertains to a computer based system for providing at home or institutional assistance to a convalescing or injured patient." Kaufman, p. 2:10-12.
(i) receive	Grounds 1 and 2:
one or more computer programs including one or more queries, instructions or messages as a first digital file from said server,	Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient. "Upon accepting a valid PIN, the computer processor 21 consults the retrieved patient record and the database 24 to select one or more appropriate questions for the patient to respond to (step 32)." Cohen, col. 16:35-38.
	Kaufman discloses a patient assistance system that includes a computer program and that receives computer programs ("programmed instructions") from the server. "A modem is coupled to the automatic dialer in the interface. The modem can be used for the purpose of communicating with a remote medical computer, for receiving programmed instructions or information from the remote [medical] computer." Kaufman, at P. 3, ll. 27-29.
	Kaufman discloses queries, instructions and messages in the form of digital files. In the BASIC program provided in the Addendum, the instructions of the program use a SPEAKFILE command to speak various files provided in the .MSG file type including files named WHO.MSG, FEEL.MSG, PHONE.MSG. The flow of the program in the Addendum is also presented as flow diagrams in FIGS. 11A-11E which indicate that the SPEAKFILE commands correspond to verbal prompts to the patient in the flow diagrams. Kaufman, FIGS. 11A-11E. Likewise, Kaufman discloses digital files in the form of
	questions. Several sections of the program include a SPEAKFILE command followed by a set "IF-THEN-ELSE" commands that perform different actions based a response selected by the patient. The flow diagrams show these as decisions indicating that a question was asked, and based on the

response received, the flow branched. Kaufman, FIGS. 11A-11E. Ground 2: Wahlquist discloses a user computer 70 and a database manager computer 20. These two computers are connected via a network 40 and a modem 50. "The representative R is equipped with a computer 10 on which he records information related to the user's problem. The help desk computer 10 is connected via a network 40 to a database manager computer 20 and a communications link manager computer 30." Wahlquist, col. 4:1-7. A link manager downloads case and script files to the user computer and the user computer executes the script file. "The link manager then downloads the case and script files to the user's computer. The user computer then terminates communications with the link manager. The diagnostic program running on the user's computer then initiates execution of the script file." Wahlquist, col. 2:38-43; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." Col. 4:65-67. (ii) convert Grounds 1 and 2: the first Cohen discloses a voice generator 22 that "translates the digital file computer question into voice that the patient can hear." Cohen, into col. 11:56-59. synthesized Kaufman discloses that the "system also includes voice audio synthesizer circuitry for the purpose of generating audible transmissions, messages." Kaufman, p. 2:53. The program in the Addendum and flow diagrams in FIGS. 11A-11E further indicate that SPEAKFILE commands are used to convert digital .MSG files into synthesized audio transmissions in the form of verbal prompts to the patient. Kaufman, FIGS. 11A-11E. (iii) present Grounds 1 and 2: said Cohen discloses a voice generator 22 that "translates the synthesized computer question into voice that the patient can hear." Cohen, audio col. 11:56-59. The voice signal is sent to an outpatient transmissions subsystem, which may be a telephone handset, "the same kind of

telephone already owned by most households." Cohen, col. 4:16-18; col. Such a handset has a speaker.
Kaufman discloses that the "system also includes voice synthesizer circuitry for the purpose of generating audible messages." Kaufman, p. 2:53. The synthesized transmissions are presented through a "loudspeaker 110 which is coupled to the voice synthesis and 20 recognition unit 36 discussed previously." Kaufman, p. 6:19-20.
Grounds 1 and 2:
Cohen discloses that patient verbal commands are transmitted from the handset to the interface module 21A. "The outpatient subsystem 12 of this alternative embodiment is a telephone handset for transmitting the user's verbal commands. Ideally, the telephone handset also can generate DTMF signals. The patient's responses are transmitted over a telecommunications system 13 to the interface module 21A where the signals are digitized, if they are not in a digital format already, and identified as either the voice or DTMF signals." Cohen, col. 9:17-24.
Kaufman discloses that a "hands-free microphone 112 is also provided, coupled to the voice synthesis and recognition unit 36, for purposes of audio input by the patient P." Kaufman, p. 6:20-21.
Grounds 1 and 2:
Cohen discloses obtaining responses from a patient based on operations in response to questions. "The computer processor asks the patient to identify himself or herself, for example, by entering an alphanumeric identification or patient code using the touch tone keypad. For example, the patient presses the keys corresponding to the assigned patient code on the keypad on the patient's touch-tone telephone." Cohen, col. 4:59-64. Kaufman teaches using the synthesized audio transmissions to prompt the individual to operate the device, such as use the device to take a temperature or blood pressure or provide an audible response. In response to prompts from the patient assistance system, the patient interacts with the patient assistance system, via the microphone or other input, to provide answers to

	the prompts. Kaufman, p. 6:20-21. "As an alternate, a keyboard could be used for operator input instead of voice recognition circuitry. Instead of a keyboard a touch-sensitive screen can be used." Kaufman, p. 3:11-12.
(ii) comprises	Grounds 1 and 2:
a user interface adapted to receive input responses from said individual and convert said input responses to a second digital file through speech recognition and	Cohen indicates that patients could interface via a computer with a modem to communicate with a central monitoring system. "Further, the telephone used in the present invention need not be in addition to the one used for everyday calls; nor is any additional telephone line required. (More sophisticated patients can use a computer with a modem to communicate with the central monitoring subsystem.)" Cohen, col. 4:16-26. Computers are known to include speech recognition software and functionality. <i>See</i> FIG. 5A.
	"A hands-free microphone 112 is also provided, coupled to the voice synthesis and recognition unit 36, for purposes of audio input by the patient P." Kaufman, p. 6:20-21. "As an alternate, a keyboard could be used for operator input instead of voice recognition circuitry. Instead of a keyboard a touch-sensitive screen can be used." Kaufman, p. 3:11-12.
	Kaufman discloses recording input responses. The BASIC program provided in the Addendum indicates that at least one patient input response is recorded. "1010 FEEL\$="NONE" 'RECORD FEELING & GO ON TO BP". Kaufman, p. 11:8.
	Kaufman discloses that the patient assistance system can perform voice recording. See FIG. 12, Speech Processor 36 including "Voice Recording". Kaufman further discloses that any "information of value" may be recorded by the patient assistance system on its magnetic recording system. Kaufman, p. 5:21-23.
(C) said household appliance includes a processor adapted to collect data relating to	Grounds 1 and 2:
	Kaufman describes a system 10 that includes a processor (programmable control computer 46) as part of a programmable computer to interact with the interface devices.
	"It will be understood that the system 50 functions at all times under the control of the programmable unit 46 to insure proper carrying out of the above described functions. Further, by means

said
household
appliance,
and execute
said computer
programs to
provide a
diagnosis of a
performance
of said
household
appliance.

of the voice synthesis and recognition unit 36 the patient is always able to provide verbal commands to the unit 50." Kaufman, p. 6:1-3.

"Attached hereto as an Addendum is a listing of a program usable with the system 100. The first group of instruction, up to line 400 of the Addendum, is a plurality of interface sub-routines to enable the processor 46 to interact with various of the interface devices. The portion of the program from line 400 on to the end is written in BASIC and is the control program for the system 100." Kaufman, p. 8:18-21.

One example of diagnosis of the patient assistance system's performance in Kaufman includes that a drawer can be opened to dispense supplies, devices, or medication. The device can check or "diagnose" if the drawer has since been closed. "1401 'FOR J=1 TO COUNT 'CHECK THAT DRAWER IS CLOSED." Kaufman, p. 11:1401 of code.

Kaufman also executes programs to determine if certain operations have been completed and the state of the testing devices for those operations. "Similarly, the switch 126 can be used to prompt the system 100 to the fact that the thermometer has been properly positioned and a temperature reading can be made. Finally, the button or switch 126 can be used to prompt the system 100 to the fact that a product, such as a medication, has been removed from the unit 126 and has been taken by the patient P." Kaufman, p. 6:40-44.

Ground 2:

Wahlquist discloses that the user's computer 70 includes a computer identification code. Wahlquist, col. 5:52-54. When a link manager requests an identification code of the user's computer 70, that user's computer interrogates itself to determine its identification code, to respond to the link manager. "In step 124, the link manager computer 30 interrogates the user's computer 70 for its computer identification code. The computer identification code may be stored in ROM at a known address." Wahlquist, col. 5:52-56. Wahlquist discloses running diagnostic tests downloaded from a help desk. "The link manager then downloads the case and script files to the user's computer. The

	user computer then terminates communications with the link manager. The diagnostic program running on the user's computer then initiates execution of the script file." Wahlquist, col. 2:38-43; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." Col. 4:65-67. "The script file may also instruct the user's computer 70 to send copies of various user computer 70 system files such as network or configuration system files to the link manager computer 30." Col. 6:33-36.
12. The	Grounds 1 and 2:
system of claim 11, wherein said component comprises an audio processor adapted to:	Cohen discloses a voice generator 22 that is present on the interface server 530 which must necessarily "translate[] the computer question into voice that the patient can hear." Cohen, col. 11:56-59. Cohen discloses an interface module 21A disposed within the interface server 530 that digitizes voice signals. Cohen, col. 17:1-12.
	Kaufman discloses audio synthesizing. "The system also includes voice synthesizer circuitry for the purpose of generating audible messages." Kaufman, p. 2:53-54.
receive a first	Grounds 1 and 2:
set of electrical signals corresponding to any of said queries, instructions, and messages;	Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient. "Upon accepting a valid PIN, the computer processor 21 consults the retrieved patient record and the database 24 to select one or more appropriate questions for the patient to respond to (step 32)." Cohen, col. 16:35-38.
	Kaufman discloses prompting patients with queries and messages. "The voice synthesizer circuitry can also be used to communicate with the patient when the preprogrammed schedule needs to be varied. That circuitry can also prompt verbal responses usable to determine general patient condition." Kaufman, p. 3:3-5.
convert said	Grounds 1 and 2:
first set of electrical	Cohen discloses a voice generator 22 that is present on the interface server 530 which must necessarily "translate[] the

signals to a
second set of
electrical
signals
capable of
being audibly
synthesized;
and
audibly

computer question into voice that the patient can hear." Cohen, col. 11:56-59.

Kaufman discloses that the "system also includes voice synthesizer circuitry for the purpose of generating audible messages." Kaufman, p. 2:53. The program in the Addendum and flow diagrams in FIGS. 11A-11E further indicate that SPEAKFILE commands are used to convert digital .MSG files into synthesized audio transmissions in the form of verbal prompts to the patient. Kaufman, FIGS. 11A-11E.

synthesize said second set of electrical signals.

Grounds 1 and 2:

Cohen discloses a voice generator 22 "translates the computer question into voice that the patient can hear." Cohen, col. 11:56-59. The questions are then delivered to the patient via the telephone handset, "the same kind of telephone already owned by most households." Cohen, col. 4:16-18. Cohen indicates that more sophisticated patients could interface via a computer with a modem to communicate with a central monitoring system (which includes the interface device 530). Cohen, col. 4:16-26.

Kaufman discloses "a loudspeaker 110 which is coupled to the voice synthesis and 20 recognition unit 36 discussed previously." Kaufman, p. 6:19-20.

13. The system of claim 11, wherein said server is adapted to generate said computer programs, and wherein said computer programs are executable by said household appliance.

Ground 2:

Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient. Cohen, col. 16:35-38. Cohen indicates that more sophisticated patients could interface via a computer with a modem to communicate with a central monitoring system. "The interface server 530 communicates with the database server through a LAN." Cohen, col. 4:16-26. Accordingly, the patient computer receives data from the database server 560 via the interface server 530.

Kaufman teaches the server sending the patient assistance system programmed instructions. "The modem can be used for the purpose of communicating with a remote medical computer, ... for receiving programmed instructions or information from the remote [medical] computer." Kaufman, p. 3:27-29.

Wahlquist discloses generating a computer programs at a server that are executable at a secondary device. Wahlquist teaches "creating a computerized diagnostic script file on a service computer." Wahlquist, col. 8:50. The script file is a program that "instructs the computer to execute selected test files resident on the user's diagnostic disk." Col. 2:43-45. That script program is downloadable from the server. "While the preferred embodiment calls for downloading of the case and script files to the user's computer 70, it will be appreciated that special test programs not resident on the user's U diagnostic disk may also be downloaded at this time." Col. 5:68-6:2. "The diagnostic program running on the user's computer then initiates execution of the script file. The script file instructs the computer to execute selected test files resident on the user's diagnostic disk. The script file also specifies the creation of various log files which record the results of the tests. Upon completion of all of the test programs specified in the script file, the diagnostic program will cause the user's computer to reset." Wahlquist, col. 2:42-49; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." 4:65-67.

14. The system of claim 13, wherein said processor is adapted to output any of said queries, instructions or messages to said individual to teach said individual how to operate and maintain said household

Ground 2:

Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient to be outputted via the telephone. "Upon accepting a valid PIN, the computer processor 21 consults the retrieved patient record and the database 24 to select one or more appropriate questions for the patient to respond to (step 32)." Cohen, col. 16:35-38. Cohen discloses a voice generator 22 "translates the computer question into voice that the patient can hear." Cohen, col. 11:56-59. The resulting translated output is then communicated to the patient device (e.g., a computer) for output to the patient.

Kaufman discloses prompting patients with queries and messages. "The voice synthesizer circuitry can also be used to communicate with the patient when the preprogrammed schedule needs to be varied. That circuitry can also prompt verbal responses usable to determine general patient condition."

appliance.	Kaufman, p. 3:3-5.
	Wahlquist discloses running diagnostic tests downloaded from a help desk. "The link manager then downloads the case and script files to the user's computer. The user computer then terminates communications with the link manager. The diagnostic program running on the user's computer then initiates execution of the script file." Wahlquist, col. 2:38-43; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." Col. 4:65-67. The diagnostic tests may be performed by the user by providing keystrokes. "FIG. 2A represents an alternative embodiment of the present invention where an interactive voice response ("IVR") system utilizing automatic speech recognition ("ASR") allows a user to respond to the system's questions with either DTMF signals (e.g., by pressing the buttons on the telephone keypad) or verbal commands (e.g., saying a number or phrase)." Wahlquist, col. 8:59-68.
15. The	Ground 2:
system of claim 14, wherein said output comprises any of data output and audio output.	Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient to be outputted via the telephone. "Upon accepting a valid PIN, the computer processor 21 consults the retrieved patient record and the database 24 to select one or more appropriate questions for the patient to respond to (step 32)." Cohen, col. 16:35-38. Cohen discloses a voice generator 22 "translates the computer question into voice that the patient can hear." Cohen, col. 11:56-59. The resulting translated output is then communicated to the patient device (e.g., a computer) for output to the patient.
	Kaufman discloses prompting patients with queries and messages. "The voice synthesizer circuitry can also be used to communicate with the patient when the preprogrammed schedule needs to be varied. That circuitry can also prompt verbal responses usable to determine general patient condition." Kaufman, p. 3:3-5.
16. The	Grounds 1 and 2:
system of	Kaufman teaches use of a program written in BASIC as the

claim 11, wherein said one or more computer programs comprises one or more script programs. control program for the system. Kaufman, at p. 8:18-21. BASIC is an interpreted language and a BASIC program is a form of a script program. *See* Stone Decl. ¶¶ 51, 112.

Ground 2:

Wahlquist discloses the use of script programs. "The link manager then downloads the case and script files to the user's computer. The user computer then terminates communications with the link manager. The diagnostic program running on the user's computer then initiates execution of the script file." Wahlquist, col. 2:38-43; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." Col. 4:65-67.

17. A method of communicatin g with a household appliance, said method comprising:

Grounds 1 and 2:

Cohen teaches "a method and system for remotely monitoring the health status of patients, in particular outpatients, using telecommunications hardware systems already likely to exist in a patient's home, such as, for example, a telephone or personal computer with a modem." Cohen, col. 3:18-23.

Kaufman discloses a communications network in the form of a patient assistance system with a modem connected to a remote medical center via a telephone system. Kaufman, p. 5:15-16. Kaufman, p. 3:27-29. See also, Kaufman FIG. 3.

Kaufman discloses that "the invention pertains to a computer based system for providing at home or institutional assistance to a convalescing or injured patient." Kaufman, p. 2:10-12.

wirelessly transmitting one or more computer programs from a server to a household appliance, wherein said computer

Grounds 1 and 2:

Cohen teaches "a method and system for remotely monitoring the health status of patients, in particular outpatients, using telecommunications hardware systems already likely to exist in a patient's home, such as, for example, a telephone or personal computer with a modem." Cohen, col. 3:18-23. One of skill in the art would have understood that communication via use of modem could have been either wireless or wired.

Kaufman discloses a communications network in the form of a patient assistance system with a modem connected to a remote medical center via a telephone system. Kaufman, p. 5:15-16. "A

programs include one or more queries, instructions or messages as a first digital file; modem is coupled to the automatic dialer in the interface. The modem can be used for the purpose of communicating with a remote medical computer, for transferring patient information to the remote computer or for receiving programmed instructions or information from the remote [medical] computer." Kaufman, p. 3:27-29. See also, Kaufman FIG. 3.

Kaufman discloses that "the invention pertains to a computer based system for providing at home or institutional assistance to a convalescing or injured patient." Kaufman, p. 2:10-12.

Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient. "Upon accepting a valid PIN, the computer processor 21 consults the retrieved patient record and the database 24 to select one or more appropriate questions for the patient to respond to (step 32)." Cohen, col. 16:35-38.

Kaufman discloses queries, instructions and messages in the form of digital files. In the BASIC program provided in the Addendum, the instructions of the program use a SPEAKFILE command to speak various files provided in the .MSG file type including files named WHO.MSG, FEEL.MSG, PHONE.MSG. The flow of the program in the Addendum is also presented as flow diagrams in FIGS. 11A-11E which indicate that the SPEAKFILE commands correspond to verbal prompts to the patient in the flow diagrams. Kaufman, FIGS. 11A-11E.

Likewise, Kaufman discloses digital files in the form of questions. Several sections of the program include a SPEAKFILE command followed by a set "IF-THEN-ELSE" commands that perform different actions based a response selected by the patient. The flow diagrams show these as decisions indicating that a question was asked, and based on the response received, the flow branched. Kaufman, FIGS. 11A-11E.

Ground 2:

Wahlquist discloses running diagnostic tests downloaded from a help desk. "The diagnostic program running on the user's computer then initiates execution of the script file. The script file instructs the computer to execute selected test files resident on

	the user's diagnostic disk. The script file also specifies the creation of various log files which record the results of the tests. Upon completion of all of the test programs specified in the script file, the diagnostic program will cause the user's computer to reset." Wahlquist, col. 2:42-49; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." 4:65-67.
receiving said	Grounds 1 and 2:
first digital file at said household appliance;	Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient. "Upon accepting a valid PIN, the computer processor 21 consults the retrieved patient record and the database 24 to select one or more appropriate questions for the patient to respond to (step 32)." Cohen, col. 16:35-38.
	Kaufman discloses queries, instructions and messages in the form of digital files. In the BASIC program provided in the Addendum, the instructions of the program use a SPEAKFILE command to speak various files provided in the .MSG file type including files named WHO.MSG, FEEL.MSG, PHONE.MSG. The flow of the program in the Addendum is also presented as flow diagrams in FIGS. 11A-11E which indicate that the SPEAKFILE commands correspond to verbal prompts to the patient in the flow diagrams. Kaufman, FIGS. 11A-11E.
	Likewise, Kaufman discloses digital files in the form of questions. Several sections of the program include a SPEAKFILE command followed by a set "IF-THEN-ELSE" commands that perform different actions based a response selected by the patient. The flow diagrams show these as decisions indicating that a question was asked, and based on the response received, the flow branched. Kaufman, FIGS. 11A-11E.
converting	Grounds 1 and 2:
said first digital file into synthesized	Cohen discloses a voice generator 22 that "translates the computer question into voice that the patient can hear." Cohen, col. 11:56-59.

audio transmissions ;	Kaufman discloses that the "system also includes voice synthesizer circuitry for the purpose of generating audible messages." Kaufman, p. 2:53. The program in the Addendum and flow diagrams in FIGS. 11A-11E further indicate that SPEAKFILE commands are used to convert digital .MSG files into synthesized audio transmissions in the form of verbal prompts to the patient. Kaufman, FIGS. 11A-11E.
presenting	Grounds 1 and 2:
said synthesized audio transmissions to an individual through a speaker; and	Cohen discloses a voice generator 22 that "translates the computer question into voice that the patient can hear." Cohen, col. 11:56-59. The voice signal is sent to an outpatient subsystem, which may be a telephone handset, "the same kind of telephone already owned by most households." Cohen, col. 4:16-18; col. Such a handset has a speaker.
	Kaufman discloses that the "system also includes voice synthesizer circuitry for the purpose of generating audible messages." Kaufman, p. 2:53.
	The synthesized transmissions are presented through a "loudspeaker 110 which is coupled to the voice synthesis and 20 recognition unit 36 discussed previously." Kaufman, p. 6:19-20.
wherein (A)	Grounds 1 and 2:
said household appliance (i) is adapted to be operated by an individual in response to the synthesized audio transmissions and	Cohen discloses obtaining responses from a patient based on operations in response to questions. "The computer processor asks the patient to identify himself or herself, for example, by entering an alphanumeric identification or patient code using the touch tone keypad. For example, the patient presses the keys corresponding to the assigned patient code on the keypad on the patient's touch-tone telephone." Cohen, col. 4:59-64.
	Kaufman teaches using the synthesized audio transmissions to prompt the individual to operate the device, such as use the device to take a temperature or blood pressure or provide an audible response. In response to prompts from the patient assistance system, the patient interacts with the patient assistance system, via the microphone or other input, to provide answers to the prompts. Kaufman, p. 6:20-21. "As an alternate, a keyboard could be used for operator input instead of voice recognition

	circuitry. Instead of a keyboard a touch-sensitive screen can be used." Kaufman, p. 3:11-12.
(ii) comprises	Grounds 1 and 2:
a user interface adapted to receive input responses from said individual and convert said input responses to a second digital file through speech recognition and	Cohen indicates that patients could interface via a computer with a modem to communicate with a central monitoring system. "Further, the telephone used in the present invention need not be in addition to the one used for everyday calls; nor is any additional telephone line required. (More sophisticated patients can use a computer with a modem to communicate with the central monitoring subsystem.)" Cohen, col. 4:16-26. Computers are known to include speech recognition software and functionality. <i>See</i> FIG. 5A.
	"A hands-free microphone 112 is also provided, coupled to the voice synthesis and recognition unit 36, for purposes of audio input by the patient P." Kaufman, p. 6:20-21. "As an alternate, a keyboard could be used for operator input instead of voice recognition circuitry. Instead of a keyboard a touch-sensitive screen can be used." Kaufman, p. 3:11-12.
	Kaufman discloses recording input responses. The BASIC program provided in the Addendum indicates that at least one patient input response is recorded. "1010 FEEL\$="NONE" 'RECORD FEELING & GO ON TO BP". Kaufman, p. 11:8.
	Kaufman discloses that the patient assistance system can perform voice recording. See FIG. 12, Speech Processor 36 including "Voice Recording". Kaufman further discloses that any "information of value" may be recorded by the patient assistance system on its magnetic recording system. Kaufman, p. 5:21-23.
(B) said	Grounds 1 and 2:
household appliance comprises a processor adapted to collect data relating to said household	Kaufman describes a system 10 that includes a processor (programmable control computer 46) as part of a programmable computer to interact with the interface devices.
	"It will be understood that the system 50 functions at all times under the control of the programmable unit 46 to insure proper carrying out of the above described functions. Further, by means of the voice synthesis and recognition unit 36 the patient is always able to provide verbal commands to the unit 50."

appliance, and execute said computer programs to provide a diagnosis of a performance of said household appliance. Kaufman, p. 6:1-3.

"Attached hereto as an Addendum is a listing of a program usable with the system 100. The first group of instruction, up to line 400 of the Addendum, is a plurality of interface sub-routines to enable the processor 46 to interact with various of the interface devices. The portion of the program from line 400 on to the end is written in BASIC and is the control program for the system 100." Kaufman, p. 8:18-21.

One example of diagnosis of the patient assistance system's performance in Kaufman includes that a drawer can be opened to dispense supplies, devices, or medication. The device can check or "diagnose" if the drawer has since been closed. "1401 'FOR J=1 TO COUNT 'CHECK THAT DRAWER IS CLOSED." Kaufman, p. 11:1401 of code.

Kaufman also executes programs to determine if certain operations have been completed and the state of the testing devices for those operations. "Similarly, the switch 126 can be used to prompt the system 100 to the fact that the thermometer has been properly positioned and a temperature reading can be made. Finally, the button or switch 126 can be used to prompt the system 100 to the fact that a product, such as a medication, has been removed from the unit 126 and has been taken by the patient P." Kaufman, p. 6:40-44.

Ground 2:

Wahlquist discloses that the user's computer 70 includes a computer identification code. Wahlquist, col. 5:52-54. When a link manager requests an identification code of the user's computer 70, that user's computer interrogates itself to determine its identification code, to respond to the link manager. "In step 124, the link manager computer 30 interrogates the user's computer 70 for its computer identification code. The computer identification code may be stored in ROM at a known address." Wahlquist, col. 5:52-56. Wahlquist discloses running diagnostic tests downloaded from a help desk. "The link manager then downloads the case and script files to the user's computer. The user computer then terminates communications with the link manager. The diagnostic program running on the user's computer

	then initiates execution of the script file." Wahlquist, col. 2:38-43; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." Col. 4:65-67. "The script file may also instruct the user's computer 70 to send copies of various user computer 70 system files such as network or configuration system files to the link manager computer 30." Col. 6:33-36.
18. The	Grounds 1 and 2:
method of claim 17, further comprising: receiving a first set of electrical signals corresponding	Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient. "Upon accepting a valid PIN, the computer processor 21 consults the retrieved patient record and the database 24 to select one or more appropriate questions for the patient to respond to (step 32)." Cohen, col. 16:35-38. Kaufman discloses prompting patients with queries and
to any of said queries, instructions, or messages;	messages. "The voice synthesizer circuitry can also be used to communicate with the patient when the preprogrammed schedule needs to be varied. That circuitry can also prompt verbal responses usable to determine general patient condition." Kaufman, p. 3:3-5.
converting	Grounds 1 and 2:
said first set of electrical signals to a second set of electrical signals capable of being audibly synthesized; and	Cohen discloses a voice generator 22 that is present on the interface server 530 which must necessarily "translate[] the computer question into voice that the patient can hear." Cohen, col. 11:56-59.
	Kaufman discloses that the "system also includes voice synthesizer circuitry for the purpose of generating audible messages." Kaufman, p. 2:53. The program in the Addendum and flow diagrams in FIGS. 11A-11E further indicate that SPEAKFILE commands are used to convert digital .MSG files into synthesized audio transmissions in the form of verbal prompts to the patient. Kaufman, FIGS. 11A-11E.
audibly	Grounds 1 and 2:
synthesizing said second	Cohen discloses a voice generator 22 "translates the computer question into voice that the patient can hear." Cohen, col. 11:56-

set of
electrical
signals.

59. The questions are then delivered to the patient via the telephone handset, "the same kind of telephone already owned by most households." Cohen, col. 4:16-18. Cohen indicates that more sophisticated patients could interface via a computer with a modem to communicate with a central monitoring system (which includes the interface device 530). Cohen, col. 4:16-26.

Kaufman discloses "a loudspeaker 110 which is coupled to the voice synthesis and 20 recognition unit 36 discussed previously." Kaufman, p. 6:19-20.

19. The method of claim 17, further comprising said server generating said computer programs, wherein said computer programs are executable by said household appliance.

Ground 2:

Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient. Cohen, col. 16:35-38. Cohen indicates that more sophisticated patients could interface via a computer with a modem to communicate with a central monitoring system. "The interface server 530 communicates with the database server through a LAN." Cohen, col. 4:16-26. Accordingly, the patient computer receives data from the database server 560 via the interface server 530.

Kaufman teaches the server sending the patient assistance system programmed instructions. "The modem can be used for the purpose of communicating with a remote medical computer, ... for receiving programmed instructions or information from the remote [medical] computer." Kaufman, p. 3:27-29.

Wahlquist discloses generating computer programs at a server that are executable at a secondary device. Wahlquist teaches "creating a computerized diagnostic script file on a service computer." Wahlquist, col. 8:50. The script file is a program that "instructs the computer to execute selected test files resident on the user's diagnostic disk." Col. 2:43-45. That script program is downloadable from the server. "While the preferred embodiment calls for downloading of the case and script files to the user's computer 70, it will be appreciated that special test programs not resident on the user's U diagnostic disk may also be downloaded at this time." Col. 5:68-6:2. "The diagnostic program running on the user's computer then initiates execution of the script file. The script file instructs the computer to execute selected test files

resident on the user's diagnostic disk. The script file also specifies the creation of various log files which record the results of the tests. Upon completion of all of the test programs specified in the script file, the diagnostic program will cause the user's computer to reset." Wahlquist, col. 2:42-49; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." 4:65-67.

20. The method of claim 19, further comprising said household appliance collecting data relating to said household appliance, and executing said computer programs to provide a diagnosis of a performance of said household appliance.

Ground 2:

Kaufman describes a system 10 that includes a processor (programmable control computer 46) as part of a programmable computer to interact with the interface devices.

"It will be understood that the system 50 functions at all times under the control of the programmable unit 46 to insure proper carrying out of the above described functions. Further, by means of the voice synthesis and recognition unit 36 the patient is always able to provide verbal commands to the unit 50." Kaufman, p. 6:1-3.

"Attached hereto as an Addendum is a listing of a program usable with the system 100. The first group of instruction, up to line 400 of the Addendum, is a plurality of interface sub-routines to enable the processor 46 to interact with various of the interface devices. The portion of the program from line 400 on to the end is written in BASIC and is the control program for the system 100." Kaufman, p. 8:18-21.

One example of diagnosis of the patient assistance system's performance in Kaufman includes that a drawer can be opened to dispense supplies, devices, or medication. The device can check or "diagnose" if the drawer has since been closed. "1401 'FOR J=1 TO COUNT 'CHECK THAT DRAWER IS CLOSED." Kaufman, p. 11:1401 of code.

Kaufman also executes programs to determine if certain operations have been completed and the state of the testing devices for those operations. "Similarly, the switch 126 can be used to prompt the system 100 to the fact that the thermometer has been properly positioned and a temperature reading can be made. Finally, the button or switch 126 can be used to prompt

the system 100 to the fact that a product, such as a medication, has been removed from the unit 126 and has been taken by the patient P." Kaufman, p. 6:40-44.

Wahlquist discloses that the user's computer 70 includes a computer identification code. Wahlquist, col. 5:52-54. When a link manager requests an identification code of the user's computer 70, that user's computer interrogates itself to determine its identification code, to respond to the link manager. "In step 124, the link manager computer 30 interrogates the user's computer 70 for its computer identification code. The computer identification code may be stored in ROM at a known address." Wahlquist, col. 5:52-56. Wahlquist discloses running diagnostic tests downloaded from a help desk. "The link manager then downloads the case and script files to the user's computer. The user computer then terminates communications with the link manager. The diagnostic program running on the user's computer then initiates execution of the script file." Wahlquist, col. 2:38-43; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." Col. 4:65-67. "The script file may also instruct the user's computer 70 to send copies of various user computer 70 system files such as network or configuration system files to the link manager computer 30." Col. 6:33-36.

21. The method of claim 20, further comprising said household appliance outputting any of said queries, instructions, and messages to said individual to

Ground 2:

Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient to be outputted via the telephone. "Upon accepting a valid PIN, the computer processor 21 consults the retrieved patient record and the database 24 to select one or more appropriate questions for the patient to respond to (step 32)." Cohen, col. 16:35-38. Cohen discloses a voice generator 22 "translates the computer question into voice that the patient can hear." Cohen, col. 11:56-59. The resulting translated output is then communicated to the patient device (e.g., a computer) for output to the patient.

Kaufman discloses prompting patients with queries and messages. "The voice synthesizer circuitry can also be used to communicate with the patient when the preprogrammed schedule

teach said individual how to operate and maintain said household appliance, wherein said outputting comprises any of data output and audio output.

needs to be varied. That circuitry can also prompt verbal responses usable to determine general patient condition." Kaufman, p. 3:3-5.

Wahlquist discloses running diagnostic tests downloaded from a help desk. "The link manager then downloads the case and script files to the user's computer. The user computer then terminates communications with the link manager. The diagnostic program running on the user's computer then initiates execution of the script file." Wahlquist, col. 2:38-43; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." Col. 4:65-67. The diagnostic tests may be performed by the user by providing keystrokes. "FIG. 2A represents an alternative embodiment of the present invention where an interactive voice response ("IVR") system utilizing automatic speech recognition ("ASR") allows a user to respond to the system's questions with either DTMF signals (e.g., by pressing the buttons on the telephone keypad) or verbal commands (e.g., saying a number or phrase)." Wahlquist, col. 8:59-68.

Cohen discloses that the processor is configured to consult the database 24 in the database server 560 to select one or more appropriate questions for the patient to be outputted via the telephone. "Upon accepting a valid PIN, the computer processor 21 consults the retrieved patient record and the database 24 to select one or more appropriate questions for the patient to respond to (step 32)." Cohen, col. 16:35-38. Cohen discloses a voice generator 22 "translates the computer question into voice that the patient can hear." Cohen, col. 11:56-59. The resulting translated output is then communicated to the patient device (e.g., a computer) for output to the patient.

Kaufman discloses prompting patients with queries and messages. "The voice synthesizer circuitry can also be used to communicate with the patient when the preprogrammed schedule needs to be varied. That circuitry can also prompt verbal responses usable to determine general patient condition." Kaufman, p. 3:3-5.

22. The method of

Grounds 1 and 2:

claim 17, wherein said one or more computer programs comprises one or more script programs. Kaufman teaches use of a program written in BASIC as the control program for the system. Kaufman, at p. 8:18-21. BASIC is an interpreted language and a BASIC program is a form of a script program. *See* Stone Decl. ¶¶ 51, 112.

Ground 2:

Wahlquist discloses the use of script programs. "The link manager then downloads the case and script files to the user's computer. The user computer then terminates communications with the link manager. The diagnostic program running on the user's computer then initiates execution of the script file." Wahlquist, col. 2:38-43; "These tests are generally resident on the user's diagnostic disk, but may be downloaded from the help desk for operation on the user's computer 70." Col. 4:65-67.

VII. CONCLUSION

For the foregoing reasons, inter partes review of claims 1-22 of U.S. Patent

No. 7,587,469 is respectfully requested.

Respectfully submitted,

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CERTIFICATE OF SERVICE ON PATENT OWNER

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on the 14th day of February, 2014, a complete and entire copy of this Petition for *Inter Partes* Review Under 37 C.F.R. §42.100, the associated Appendix of Exhibits, Exhibits 1001-1012, and Petitioner's Power of Attorney were provided via Federal Express, postage prepaid, to the Patent Owner by serving the correspondence address of record for the '469 Patent, as well as litigation counsel for the copending lawsuit captioned in the foregoing Petition (litigation counsel also served by e-mail):

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