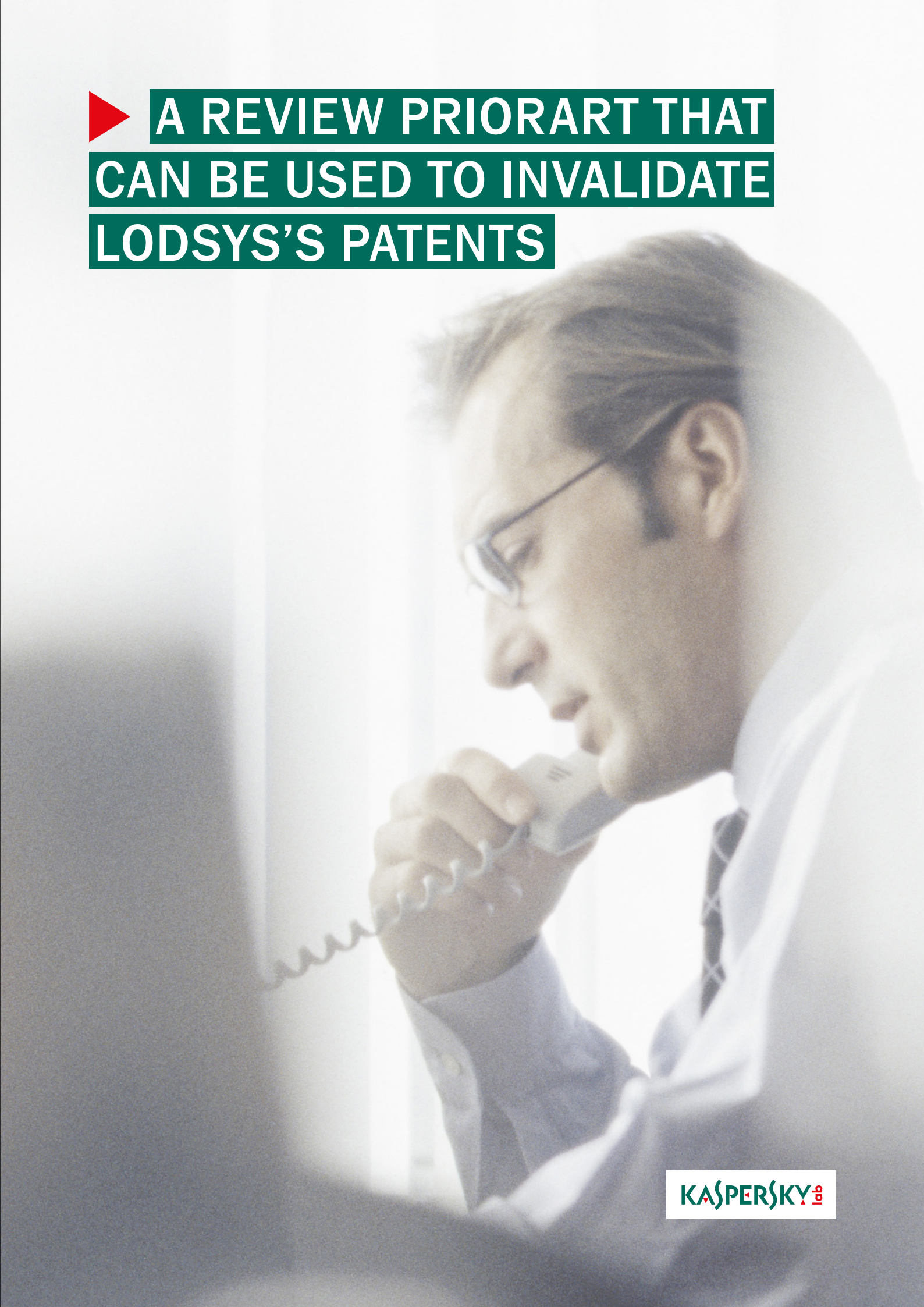
# A REVIEW PRIORART THAT CAN BE USED TO INVALIDATE LODSYS'S PATENTS



# A REVIEW PRIOR ART THAT CAN BE USED TO INVALIDATE LODSYS'S PATENTS

### U.S. PAT. NO. 4,567,359 ("LOCKWOOD")
**Anticipates: '908 Patent — claim 37**

To the degree that Lodsys may contend that multiple computers in the central data processing center perform the functions of collecting data from the terminals, processing data, storing data, or transmitting data, the central server computer may be viewed as a single entity performing the operations. Further, it would have been obvious to one of ordinary skill in the art at the time of the invention, to consolidate such functions into a central data processing center.

### U.S. PATENT NO. 4,862,268 ("CAMPBELL")
**Anticipates: '908 Patent — claim 37**

To the degree that Lodsys contends that this value information is not expressly taught, or inherent, in Campbell, it would have been obvious to one of ordinary skill in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to seek opinions carrying such information in the system of Campbell. One of ordinary skill would have been motivated to ask such questions to gain information on subscribers' preferences — e.g., shopping or cable television watching preferences.

Further, in the pay-per-view example, the provider of the content could be a vendor. To the degree that Lodsys contends that it is not expressly taught, or inherent, in Campbell's teachings that the Central Data Control System 12 — the "value information server"— accesses a vendor's remote computer via a public communications network—such as a cable line, phone line, fiber optic line, or paper — it would have been obvious to one of ordinary skill in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to connect the system of Campbell, with a vendor as the "remote computer" taught by Campbell via such a network. One would have been motivated to do so because a vendor could supply numerous forms of support to Campbell's system. For example, a vendor could provide content for the information retrieval, a sales channel for the subscriber opinion poll data, content for pay-per-view programming, or third-party billing services for pay-per-view.

In Campbell, the Central Data Control System has many components, including the programming control system (PCS) 50. The PCS is taught to be a "sophisticated control computer" with numerous types of memory. Campbell further teaches that the Central Data Control System receives and stores various types of interactive content, such as response/ opinion polling and pay-per-view billing information. To the degree that Lodsys contends that

it is not expressly taught, or inherent, in Campbell that such interaction scripts and the value information received from them are stored in the Central Data Control System, it would have been obvious to one of ordinary skill in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to store such information in the Central Data Control System because this would have allowed the operators of the system to analyze such information as the response/opinion data for internal operation purposes and for selling information to third parties. It was well known in the cable television industry at the time that response/opinion data was useful for such purposes.

### Anticipates‘078 Patent — claims 1-5, 10-14, 16, 24, 30, 37–38, 40-41, 45, 51-53, 60, 63, 66-67, and 69

Campbell discloses that information elicited from the subscriber is transmitted to be stored at the data control system located remotely from each addressable converter. See Campbell, 17:64-18:2 (“When the key number is entered correctly, the converter requests the data control system at the head end to authorize reception of the channel. The data control system then commands the converter to allow or disallow the selected program and retains billing information for the service as required.”); 23:53-57 (referring to the terminal unit as one part of an “interactive data acquisition [sic] and control system.”). To the extent that Campbell does not disclose that the specific data storage means used at the remotely located control system is a “database,” it would have been obvious to a person of ordinary skill in the art at the time of the invention.

## U.S. PATENT NO. 4,992,940 (“DWORKIN”)

### Anticipates: ‘078 patent — claims 1–7, 10–19,22, 24, 25, 30–32, 37–53, 60–67, 69, and 71–74

### In the alternative certain claims are obvious:

**Re claim 11**, it would be obvious to a person of ordinary skill in the art that a television could be used as part of a terminal.

**Re claim 12**, the “template” or “questionnaire” contains questions posed to a user. To the extent that Dworkin does not explicitly disclose the questions, they would be obvious to one of ordinary skill in the art in light of the use of a “questionnaire.” To the extent that Dworkin does not explicitly disclose questions concerning use of the commodity, they would be obvious to one of ordinary skill in the art in light of the use of a “questionnaire,” and offering users the option to provide feedback on the system through menus.

**Re claim 13**, to the extent that Dworkin does not explicitly disclose the forwarding of the answers to the vendor of the commodity, it would be obvious to one of ordinary skill in the art to forward the electronic mail suggestions intended for management to the vendor of the commodity.

**Re claim 15**, Dworkin explicitly identifies the prior art CompuServe Electronic Mall, which is a “publicly or privately accessible on-line computerized information service”



Dworkin 1:32-39. Dworkin discloses a system which is meant to better perform the function served by the CompuServe Electronic Mall by eliminating the need to consult multiple electronic catalogs through services like CompuServe. Dworkin 1:40-60. A person of ordinary skill in the art reading Dworkin would understand that the disclosed system could be an improved CompuServe-like “publicly or privately accessible on-line computerized information service.” Further, to the extent that Dworkin does not explicitly disclose this type of service, it would be obvious to one of ordinary skill in the art reading Dworkin that the disclosed system could be structure as an online service, like CompuServe.

**Re claim 17**, To the extent that Dworkin does not explicitly disclose the additional limitation claim 17, it would be obvious to one of ordinary skill in the art, in light of Dworkin’s disclosure of two-way interactions requesting help and offering feedback on improvements, to offer training based on those prior interactions with other users to increase the performance or satisfaction of the current user.

**Re claim 18**, to the extent Dworkin does not explicitly disclose hypertext, it would be obvious to a person of ordinary skill in the art to combine the menus and text displays described in Dworkin with well-understood hypertext concepts to produce a hypertext interface. One example of such a hypertext interface is given in the article “KMS: A Distributed Hypermedia System for Managing Knowledge in Organizations,” by Robert M. Akscyn, Donald L. McCracken, and Elise A. Yoder. Claim 18 is therefore obvious over Dworkin, either by itself, when combined with the knowledge of a person of ordinary skill in the art, or when combined with other prior art references, such as the Akscyn article.

**Re claim 19**, to the extent that Dworkin does not explicitly disclose that the help provided by the system would be triggered based on user comprehension, it renders this limitation obvious in light of the knowledge of one of ordinary skill in the art; it is obvious to provide help to a user based on that user’s comprehension of the use of the product.

**Re claim 25**, to the extent Dworkin does not anticipate claim 25, it alone renders claim 25 obvious, as it would be obvious to a person of ordinary skill in the art that a system which allows purchasing of any goods and services and allows requesting help and submitting suggestions to management would also support requests to service the system itself.

**Re claim 41**, it would be obvious to one of ordinary skill in the art in light of Dworkin alone that this information would be stored in the form of usage logs, and that the user-submitted value information would also be logical to obtain in the form of usage logs. Usage logs are a basic tool of networked computing, and have been so since long before Dworkin or the ’078 patent. Claim 41 is also, therefore, obvious.

**Re claim 49**, Dworkin either inherently discloses this claim or, standing alone, renders this claim obvious in light of the knowledge of one of ordinary skill in the art.

**Re claim 50**, to the extent Dworkin does not expressly disclose this limitation, it is obvious in light of Dworkin and the knowledge of a person of ordinary skill in the art.

**Re claim 51**, to the extent Dworkin does not explicitly disclose this limitation, its use of networked connections to users and third parties, collection of complaints and suggestions for those third parties, and allowing product and service ordering for third parties, all render the limitation obvious in light of the knowledge of one of ordinary skill in the art.

**Re claim 61**, to the extent Dworkin does not explicitly disclose this limitation, its use of networked connections to users and third parties, collection of complaints and suggestions for those third parties, and allowing product and service ordering for third parties, all render the limitation obvious in light of the knowledge of one of ordinary skill in the art.

**Re claim 64**, to the extent that Dworkin does not explicitly disclose this limitation, Dworkin would render this limitation obvious in light of the knowledge of a person of ordinary skill in the art.

**Re claim 65**, as explained with regard to claim 18 above, Dworkin either discloses or renders obvious the use of hypertext in its user interface.

**Re claim 69**, to the extent that Dworkin does not explicitly disclose the storage of the specific perception information in the remote database, Dworkin alone renders these limitations obvious in light of the knowledge of one of ordinary skill in the art. That is, it would be obvious, in the context of a system with multiple remote terminals, a central computer with a database, and in which user perception information is transferred to the central computer—as disclosed by Dworkin — to store that transferred information in the database.

**Re claim 72**, as explained with regard to claims 63 and 64 above, Dworkin both anticipates this limitation and renders it obvious in light of the knowledge of one of ordinary skill in the art.

**Re claim 73**, in the alternative to anticipation, Dworkin renders claim 73 obvious. The idea of using customer feedback for these purposes was common long before Dworkin or the '078 patent. As the patent examiner explained during the reexamination of the '078 patent, "an ordinary artisan at the time of the invention would have understood that using submitted user suggestions for the purposes of implementing design changes to the system would be the only reason to accept such suggestions from the users." Right of Appeal Notice, Application 95/000,639, at 52 (June 12, 2013).

Motivation to combine the elements of the prior art can be found in the reference. For example: "Locating and purchasing equipment, especially technical products such as computer equipment, can be tedious and time-consuming." Dworkin at 1:13-15. "Thus, a user who wants to find a desired product, having a set of minimum specifications, at the lowest price, must consult the catalogs of a myriad of vendors, and may also need to spend considerable time on the telephone or in personal visits to stores." Id. at 1:23-28. "Thus, the systems of the prior art are essentially equivalent to the old methods of consulting individual catalogs or visiting individual stores." Id. at 1:50-52.

## U.S. PATENT NO. 5,347,632 ("FILEPP")

**Anticipates: '078 patent — claims 1-7, 10, 15-16, 19, 22, 24, 25, 27-28, 30-32, 37-47, 51-53, 60, 61, 62, 66, 67, 69, 71, and 73-74**

## U.S. PATENT NO. 5,956,505 ("MANDULEY")

**Anticipates: '078 patent — claims 1–7, 10, 14-16, 19, 22, 24-25, 30-34, 38–41, 43, 44, 46-48, 50-53 , 69–72, and 74**

**Renders Obvious: '078 patent — claims 11–13, 18, 27–29, 36–37, 45, 60–64, 65–68, 73, either by itself or in combination with the other mentioned references.**

**Re Claims 37, 60, and 71**,Manduley discloses ordering hardware and billing the holder of a device for any applicable charges. See Manduley at 8:23-28. When hardware is ordered, or billing is involved, it would be obvious to one skilled in the art that a third party such as a credit card company or bank, or a vendor of hardware, would be provided information.

## QUBE SYSTEM ("QUBE")

QUBE was an innovative cable television system that was in operation from about 1977–1984. In 1977, Warner Cable launched the QUBE system in Columbus, OH. QUBE was a premium add-on to regular cable channels, which in-turn subscribers paid a premium over receiving over-the-air channels like NBC, ABC, and CBS for free with an antenna. This subscription system included 30 channels — a large number for the time — delivered to subscribers' homes, where they could interact with the broadcast content through a specially designed remote control. Of those 30 channels, 10 were original QUBE interactive channels, 10 were community access channels, and 10 were pay-per-view channels. Some examples of materials that describe the QUBE system include:

- QUBE Wikipedia Article ("QUBE Wikipedia Article"), retrieved May 17, 2013 from http://en.wikipedia.org/wiki/QUBE, produced as EA0008073–8077
- Warner Cable's QUBE: What It is – Why It Is Important – And What effects It May Have ("QUBE Report"), The Videocassette and CATV Newsletter, retrieved October 4, 2012 from http://www.qube-tv.com/qube-tv/QUBE-REPORT.pdf (late 1970s)
- How Do You Like Your Eggs? ("Eggs Article"), retrieved from http://www.game-showutopia.net/eggs/howdoyoulikeyoureggs.htm on May 17, 2013
- How to Solve Warner's Qube ("Warner's QUBE Article"), Pittsburgh Post-Gazette, Web. April 14, 1982, p. 4, retrieved from http://news.google.com/newspapers ?nid=1129&dat=19820414&id=tdlaAAAAIBAJ&sjid=mG0DAAAAIBAJ&pg=6542,2956365 on May 17, 2013
- The QUBE Initiative_1978 ("QUBE Initiative")
- QUBE Home Show Pilot Part 1 ("Home Show Pilot"), retrieved on June 2, 2013 from http://www.youtube.com/watch?v=rIN26viLegc&feature=relmfu
- Ken Freed, "When Cable Went Qubist" ("Qubist Article"), retrieved July 2, 2013 from http://media-visions.com/itv-qube.html
- Consider deposing Scott Kurnit

**Anticipates: '908 Patent — claim 37**

To the degree that Lodsys may contend that multiple computers in the QUBE central office perform the functions of collecting response information from the black boxes, processing the data, storing

information, and transmitting information, the central server computer may be viewed as a single entity performing the operations. Further, it would have been obvious to one of ordinary skill in the art at the time of the invention, to consolidate such functions into one central server computer.

**Anticipates: '078 patent — claims 1–5, 7, 10–17, 19, 22, 24, 29, 30, 32–35, 37–53, 60–64, and 66–74**

**Renders Obvious: '078 patent — claims 18, 25–28, 31, 36, and 65**

## PLATO COMPUTER SYSTEM ("PLATO")

PLATO (Programmed Logic for Automatic Teaching Operations) is a computer assisted teaching system that was first developed in the 1960's and was publicly used in some form up until 2006. PLATO was a networked computer system consisting of a mainframe computer interconnected to thousands of end-user terminals. The mainframe delivered content in the form of educational lessons and games to be accessed by users at the terminals, which were essentially computers with keyboards and plasma touch screen interfaces. This delivered content was created by PLATO users called authors. End-users were able to provide feedback on the delivered content through a built-in mechanism called TERM-comment. PLATO end users could also use this built-in comment feature to provide feedback on the PLATO system itself. In addition to soliciting feedback from end users at terminals, PLATO also provided authors with a way of monitoring how the users interacted with their lessons and games. For instance, an author could gather data on a variety of things, ranging from how long users viewed a certain lesson, to what types of errors they were encountering, to how they were doing on various levels of their games. All of this feedback information from users at the terminals was gathered and stored at the mainframe in the form of student and program data files. These files could be accessed and analyzed by authors, as well as any other users, system managers, or analysts to whom the authors provided data access. Some examples of materials that describe the PLATO system as it was publicly used and sold include:

- "PLATO User's Guide," Control Data Corporation, 1981 ("1981 Guide")
- "PLATO: Changing How the World Learns," Control Data Corporation, 1982 ("1982 Guide");
- "Control Data: PLATO System Overview," Control Data Corporation, 1977 ("1977 Guide");
- "PLATO Evaluation Report," Allen Avner, September 21 1979 ("1979 PLATO Survey");
- PLATO (Computer System) Wikipedia Article ("PLATO Wikipedia Article")
- http://www.cyber1.org/
- Consider deposing Brian Dear

**Anticipates: '908 Patent — claim 37**

To the degree that Lodsys may contend that multiple computers in the central computer perform the functions of collecting response information from the end-user terminals,



processing the data, storing information, and transmitting information, the central computer may be viewed as a single entity performing the operations. Further, it would have been obvious to one of ordinary skill in the art at the time of the invention, to consolidate such functions into one central computer. For example, one of ordinary skill in the art at the time of the invention would have been motivated to do so to reduce the amount and cost of computer equipment necessary to run the PLATO service.

**Anticipates: '078 patent — claims 1-5, 7, 10-17, 19, 22, 24, 30, 32-34, 37- 53, 60-64, and 66-74**

## COMPUSERVE

The CompuServe Information Service ("CompuServe") was an early online information service that was created in 1969 and dominated the industry throughout the 1980. Although the details of the service changed over time, as of 1990, CompuServe offered many services—some offered by CompuServe itself, and some offered by third parties such as American Express to anyone with a computer and a modem. These services include, among other things, the ability to provide feedback to CompuServe or third parties, and the ability to communicate with other users of the service through electronic mail or live "chat." The CompuServe service has been described in many publications, including:

- Mick O'Leary, Compuserve at the Crossroads, Nov-Dec 1999
- Charles Bowen and David Peyton, How to Get the Most out of CompuServe, February 1989 ("Bowen;
- Charles Bowen and David Peyton, "Compuserve Information Manager: The Complete Sourcebook", 1990 ("Bowen Sourcebook"),
- Alfred Glossbrenner, Alfred Glossbrenner's Master Guide to CompuServe, 1987 ("Glossbrenner"),
- CompuServe Information Manager Users Guide, November 1989

**Anticipates: '078 patent — claims 1–4, 7,10–16, 19, 22, 24–25, 30–40, 42–53, 60–64, and 66–74**

**Renders Obvious: '078 patent — claims 18 and 65**

Independent claims 1 and 60 both require "a communication element associated with each of the units of the commodity capable of carrying results of the two-way local interaction from each of the units of the commodity to a central location." Users of CompuServe connected to the service using a PC with a modem, which communicated the user's input to CompuServe's servers ("central location"). "Physically, the CompuServe Information Service consists of about 40 Digital Equipment Corporation (DEC) mainframes . . . These are machines you're 'talking' to when you go online with CompuServe." Glossbrenner at 6.A person of ordinary skill in the art would know that that the perception information would have been stored in

a database in the mainframes used by CompuServe. Database use was well understood at the time—particularly in the context of mainframes like those used in CompuServe — and was the only realistic way to store that data. Further, CompuServe provided access to many, many searchable third-party databases. See, e.g., Bowen at 321, 326-28, 352; O'Leary at 2-3 ("databases by the dozen"). It would have been obvious in light of CompuServe itself (and the database services accessible on CompuServe) to store the user data in a database.

**Re claim 50**, CompuServe discloses the ability to use the service in demonstration Mode. To the extent this feature is not disclosed, it would be obvious to a person of ordinary skill in the art at the time of the '078 patent that any product or service could be operated as a demonstration unit.

**Re claims 11-14**, to the extent that CompuServe does not explicitly disclose these limitations, they would be obvious to one of ordinary skill in the art in light of CompuServe alone or in combination with the QUBE system.

**Re claim 18 and 65**, to the extent CompuServe does not explicitly disclose hypertext, it would be obvious to a person of ordinary skill in the art to combine the menus and text displays described in Dworkin with well-understood hypertext concepts to produce a hypertext interface. One example of such a hypertext interface is given in the article "KMS: A Distributed Hypermedia System for Managing Knowledge in Organizations," by Robert M. Akscyn, Donald L. McCracken, and Elise A. Yoder. CompuServe therefore anticipates claim 16 and renders claims 18 or 65 obvious in light of the knowledge of one of ordinary skill in the art, alone or in combination with Akscyn.

**Re claim 33**, To the extent that CompuServe does not explicitly disclose filtering the results from claim 33, it would be obvious to combine the other search and filter capabilities in CompuServe with the feedback and help capabilities.

**Re claim 45**, to the extent the limitation of claim 45 is not explicitly disclosed, it is obvious in light of the knowledge of a person of ordinary skill in the art.

## SANDRA CARD, TOC/DOC AT CALTECH: EVOLUTION OF CITATION ACCESS ONLINE ("CARD")

Card is an article published in Information technology and libraries (Vol. 8, No. 2, pp. 146-160) in June of 1989, that describes an online table of contents / document delivery system for library services called TOC/DOC, which was used at Caltech at least by November 1988. Card describes a table of contents and document delivery system that was used at Caltech in the November 1988 timeframe. Card at p. 146. The system of Card was implemented through Caltech's local area network CITNET to allow computers or terminals with a connection to CITNET (through, for example, Ethernet-based technology) to use the TOC/DOC system to access library information and resource materials. Card at pp. 146-47. The TOC/DOC system featured an IBM server to which the various computers could connect remotely from other parts of campus through the local area network. Card at p. 153. Among the features of the TOC/DOC system was a Feedback feature that allowed users to make comments or ask questions regarding the system, some of which led to changes to the menu structure of the system. Card at p. 158. Another exemplary feature of the TOC/DOC system was allowing a user to fill out a form requesting resource materials (e.g., an article that the user wanted)



which could be delivered to the user subject to potential billing to the account information provided in the request. Card at p. 147.

**Anticipates: '078 patent — claims 1-5, 10, 14-16, 22, 24, 30-32, 37, 40, 42, 44-48, 51-53, 60, 63-64, 66-67, 69, and 71-74**

**Renders Obvious: '078 patent — claims 6, 7, 11–13, 17–19, 25–29, 33–36, 38, 39, 41, 43, 49, 50, 61, 62, 65, 68, 70**

## MELVYL, ONLINE CATALOG SYSTEM FOR THE UNIVERSITY OF CALIFORNIA ("MELVYL")

MELVYL describes an interactive online catalog system that was used at the University of California campuses in the 1980s timeframe. The system of MELVYL was implemented through network capabilities to allow terminals from statewide University of California campuses access to the database. Among the features of the MELVYL system was a comment feature that allowed users to make comments or ask questions regarding the system. Another exemplary feature of the MELVYL system was allowing a user to answer a questionnaire about the use of the MELVYL system. Based on reviewing the information provided in response to the questionnaires and comments, the Division of Library Automation staff ("DLA staff") assessed user needs and opinions regarding the MELVYL system. Additionally, MELVYL disclosed a comprehensive contextual HELP system. For example, one of the features of the HELP system is that it monitored for three of the same user errors in a row, after which it would automatically determine what the error was and provide assistance to the user regarding that specific error. In addition monitoring for automatic engaging of the HELP feature, the MELVYL also monitored a number of other interactions with the system, including information about the system, each session, searches, and pages displayed to the user. MELVYL was described by at least three publications, including:

- Ray Larson, Evaluating Public Access Online Catalogs, Library Plans and Policies, University of California, Berkeley, July 1981 ("Larson");
- Clifford Lynch, In Depth: University of California MELVYL, 2, Computing Resources for an Online Catalog, Information Technology and Libraries, Am. Library Assoc., March 1983 ("Lynch");
- Gary Lawrence, University of California Users Look at MELVYL, Advances in Library Administration and Organization, Vol. 3, JAI Press, Inc., 1984 ("Lawrence").

**Anticipates: '078 patent — claims 1–5, 10, 14–17, 19, 22, 30–32, 37–47, 51–53, 60, 63–64, 66, 67, 69–74**

**Renders Obvious: '078 patent — claims 6, 7, 11–13, 18, 24–29, 33–36, 48, 49, 50, 61, 62, 65, and 68**

Motivation to combine the elements of the prior art can be found in the reference. For example: "The primary goal of DLA's Phase I project has been to generate specifications

for, develop, and test on-line data collection and evaluation programs that would aid in determining the needs of the University of California's user community." Larson Ref. at iv. "The information and analyses of the data to be collected in Phase II will help guide the design, development and deployment (e.g., terminal allocation, etc.) of the production version of the on-line catalog scheduled for release in 1982." Id. at iv. "The other main goal in developing the user interaction monitoring and evaluation programs described in this report is to advance the state of knowledge concerning the behavior and requirements of on-line catalog users. This information should be of interest to library staff and administrators who are developing, or considering, public on-line catalogs, as well as to the library research community." Id. at iv. "In order for an information system, such as on line catalog, to provide effective and efficient service to its intended users, two things are required: first, the system, must be flexible enough to change over time in accordance with the needs of its users, and second, some way must be found to determine those needs, providing feedback to the system design and development process." Id. at iv. "[S]pecial efforts must be made to develop a system that is 'user-friendly' and to determine who is using the catalog, how they are using it, and what their needs and expectations are." Id. at 1. "In order to make such data collection cost-effective and efficient[,] DLA incorporated a software transaction monitor into the 'Patron Interface' and developed a sub-system to administer questionnaires on-line." Id. at 1.

## DR. BARBARA N. FLAGG, FORMATIVE EVALUATION FOR EDUCATIONAL TECHNOLOGIES, 1990 ("FLAGG 1990")

Formative Evaluation for Educational Technologies is a hardcover textbook published by Lawrence Erlbaum Associates in 1990. Dr. Barbara N. Flagg is the author.

### Anticipates: '908 Patent — claim 37

### Renders Obvious: '908 Patent — claim 37 in combination with Campbell and/or QUBE

It would have been obvious to one of ordinary skill in the art at the time of the invention, to employ a two-way interactive communication system using vertical interval ("VI") transmission of teletext information, such as that taught by Campbell, to conduct a research project such as the SCOOP magazine, which was conducted with a one-way VI transmission of teletext information. As Flagg 1990 teaches, the one-way SCOOP project had many limitations. See Flagg, at 119. Incorporating the two-way system of Campbell, would alleviate these problems by allowing instantaneous measurement of students' interactions with the interactive content, such as response/opinion pulling, as taught in Flagg and Campbell. See, e.g., Flagg 1990, at 113–128; Campbell, 17:48–18:55. It would also allow the test units to be placed in students' homes. Id.

Flagg also teaches that the CTW used a networked system of 50 personal computers in its work. See, e.g., Flagg 1990, at 52. Following, to the degree that Lodsys contends it is not expressly taught, it is inherent, in Flagg 1990's teachings, for example, in the PEAC system, that a "communication element [] carries the interaction scripts and information that results from the interaction scripts between the units of the product and the value information server," and that the server is "accessible via a public communication network." To the degree that



Lodsys contends that these limitations are not expressly taught, or inherent, in Flagg 1990's teachings these limitations would have been obvious to one of ordinary skill in the art.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to perform these functions in a system, such as the PEAC system, because this would have allowed for efficient collection and analysis of data by researchers and/or television show producers. One would have been motivated to do so because such efficient analysis of information is desirable. This is further evidenced by the teachings of the QUBE television service.

Flagg 1990 further discloses several examples of a formative evaluation system's results being provided to vendors. For example, the results collected by the PEAC system were available to researchers and television producers, Flagg 1990, at 26, 211–13; the Massachusetts welfare office teletext study information was made available to researchers, id. at 173; the viewing data collected by the BARN project was available to vendors, who were able to "adjust[] new versions accordingly," id. at 177; and Flagg 1990 teaches that a good software program "records and stores information about a user's performance and makes available such information to appropriate people," id. at 167. To the degree that Lodsys contends that it is not expressly taught, or inherent, in Flagg 1990's teachings that a "communication element" — such as a cable line, phone line, fiber optic line, or paper — carries the interaction scripts and resulting information between "the value information server" and the vendor, or that the server is accessible via a public computer network by a vendor, it would have been obvious to one of ordinary skill in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to connect the system of Flagg in view of Campbell, with a vendor, for example, as the "remote computer" taught by Campbell via such a network. One would have been motivated to do so because a vendor—such as a researcher or television producer — would be interested in the interactive content and students responses to that content. See, e.g., Flagg 1990, at 113–128; Campbell, 17:48–18:55.

Further, in Campbell, the Central Data Control System has many components, including the programming control system ("PCS"). The PCS is taught to be a "sophisticated control computer" with numerous types of memory. See, e.g., Campbell, 7:18–59, Fig. 3. Campbell further teaches that the Central Data Control System receives and stores various types of interactive content, such as response/opinion polling and pay-per-view billing information. See, e.g., id. 17:48–18:5. To the degree that Lodsys contends that it is not expressly taught, or inherent, in Flagg 1990 and Campbell's teachings that such interaction scripts and the value information received from them are stored in the Central Data Control System, it would have been obvious to one of ordinary kill in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to store such information in the Central Data Control System because this would have allowed the operators of the system and/or vendors to analyze such information as the response/opinion data. See, e.g., Flagg 1990, at 113–128; Campbell, 17:48–18:55.

### Anticipates: '078 patent — claims 1–5, 7, 10–14, 16–17, 19–22, 25, 27–32, 37–38, 40–47, 50–53, 60–64, 66–67, 69, and 71–74
### Renders Obvious: '078 patent — claims 6, 15, 18, 24, 33–36, 39, 48–49, 65, 68, and 70

**Re claim 6**, it would have been obvious to a person of ordinary skill in the art for the units of the commodity to comprise telephone extension equipment and the central location to comprise a PBX or other central telephone network facility, as claim 6 requires. For example, Flagg 1990 discloses several examples of networked systems, such as the BARN project (id. at 177) and the CTW computer system (id. at 52). It would have been obvious to a person of ordinary skill in the art to implement computer networking via a modem (which would comprise telephone extension equipment). In such an implementation, it would be obvious to collect the results of the two-way local interactions at a PBX or other central telephone network facility, which a person of ordinary skill in the art would understand to be analogous to a server on a non-dialup network.

**Re claim 15**, it would have been obvious to a person of ordinary skill in the art to mediate the two-way interaction over a computerized information service. For example, a person of ordinary skill in the art would have understood that the networked systems disclosed in Flagg 1990, such as the BARN project (Flagg 1990 at p. 177), and the other networked systems comprising multiple computers (id. at 52, 178) could further include a computerized information service over that network connection.

**Re claim 24**, it would have been obvious to a person of ordinary skill in the art for the two-way local interactions to comprise a transaction for sale of a product or a service contract for the commodity. For example, as discussed above, Flagg 1990 discloses numerous examples of two-way local interactions, such as in the BARN project. See Flagg 1990 at p. 177. Given that the two-way local interactions in the BARN project described in Flagg 1990 allowed the users to select program content, which was delivered for free, it would have been obvious to a person of ordinary skill in the art to charge for content on such a system or a similar system. If the content were instead provided for a fee, the two-way local interaction would comprise a transaction for sale of that informational content, which is a product under the court's claim construction. Similarly, it would have been obvious to a person of ordinary skill in the art to charge for remedial lessons or tutorials, such as the instructional lesson in the historical simulator (Flagg 1990 at p. 233) that were triggered if the user's performance in the two-way local interaction required it.

**Re claims 48 and 49**, it would have been obvious to a person of ordinary skill in the art to for the two-way local interaction include the suggestions of a user, or other users, to solve the problem. For example, a person of ordinary skill in the art would understand that the user's request for help or support in claim 46 and information concerning a problem relating to the use of the commodity in claim 47 may include the user's suggestions to solve the problem. A person of ordinary skill in the art would also understand that those suggestions from one could be applied to other users as well, a claim 49 requires. Flagg 1990 also offers numerous examples of user feedback on how to solve problems that were collected via traditional means being incorporated into subsequent revisions or versions of the products or content. These include, but are not limited to: the user's selection and alteration of the various flexible parameters in the Jolliffe consumer case study videodiscs (id. at 166–67), which are examples of the user suggestions to solve problems relating to the presentation rate of material, number of examples provided, and timing of tests. Similarly in the training videodiscs, the user's choice of an alternative business direction after an initial business decision had been made (id. at 19–20) is an example of the user's suggestion that the consequences of the choice were problematically unavailable beforehand, and adding the availability of the skip-back, review, and branching features of the training videodiscs also reflects input users to solve various problems. The addition of the word list tool and feature control of Puppet Theater (id. at 20–23) also reflected two-way



interactions reflecting prior user feedback regarding how to solve a problem with the use of the commodity. Moreover, it is also understood that the help facilities and user assistance provided by the BARN project (id. at 177) could include suggestions from other users to solve problems. A person of ordinary skill in the art would further understand the help facilities and user assistance provided by the BARN project, and the accompanying surveys, to be able to have included user suggestions on how to solve problems with the units of the commodity used in the system of the BARN project. Given the numerous examples in Flagg 1990 of two way local interactions already including users' suggestions on how to solve a problem, and collection of user data via the user interfaces, it would have been obvious to a person of ordinary skill in the art to collect those suggestions using the system of claim 47 and to distribute those suggestions to other users as part of the help functionality provided in claim 47, as claims 48 and 49 require.

**Re claim 39**, it would have been obvious to a person of ordinary skill in the art, in view of Flagg 1990, to have the component that manages the interactions of the users to send the probes to each of the units of the commodity. For example, because the system of the BARN project operated over a network, and stored probes that elicited user information (Flagg 1990 at p. 177), it would have been obvious to a person of ordinary skill in the art, to have the central network server that managed the delivery of content and collection of results further send the probes to the computer terminals on which users provided input, if the system of the BARN project did not already operate in such a manner.

**Re claims 18 and 65**, although Flagg 1990 does not explicitly disclose hypertext, it would be obvious to a person of ordinary skill in the art to combine the menus and text displays described in systems disclosed in Flagg 1990 with well-understood hypertext concepts to produce a hypertext interface and display information in a hypertext style. One example of such a hypertext interface is given in the article "KMS: A Distributed Hypermedia System for Managing Knowledge in Organizations," by Robert M. Akscyn, Donald L. McCracken, and Elise A. Yoder. Claims 18 and 65 are therefore obvious over Flagg 1990, either by itself, when combined with the knowledge of a person of ordinary skill in the art, and/or when combined with other prior art references, such as the Akscyn article.

**Re claims 33, 68, and 70**, It would have been obvious to a person of ordinary skill in the art to provide access to the collection of the results to the users of the commodity. For example, the collection of results in the PEAC system (Flagg 1990 at 26, 211–13) and in the realtime monitoring of computer programs (id. at 173) were already made available to "super users" in nearby rooms and were displayed on computer or television screens. It would have been obvious to place those screens or that information in the same room as the users evaluating the product or service, whether on a separate screen or as part of the display of the material being evaluated, which would make that collection available to the users as well. With the collection of the results being provided to a particular subset of users or "super users", it would be obvious to a person of ordinary skill in the art to make the collection of results available to other sets of users.

**Re claim 34**, it would have been further obvious to a person of ordinary skill in the art to provide access to distribute the results based on when the interactions occurred. For example, periodic distributions of the results, such as those collected every hour, every day, every week, or every month, would have been obvious to a person of ordinary skill in the art, and inherently distribute the results as a function of when the interactions occurred. Such distributions would have been particularly obvious for ongoing data collections or collections that track the user's performance over a period of time, such as the real time

data collection of the PEAC system (Flagg 1990 at 26, 211–13) and the real-time computer program monitoring (id. at 173) disclosed in Flagg 1990.

**Re claim 35**, it would have been further obvious to a person of ordinary skill in the art for the component to further manage collection of information for each interaction about usefulness of the interaction to other users. For example, once results have been made available to the users, as in claim 33, and given that the AMP 108 Online Assessment System already managed collection of information for each interaction about the usefulness of the interaction for each user, as was done in, for example, the BARN project (Flagg 1990 at 177), it would be simple straightforward to extend that information sharing to other users. Accordingly, in view of Flagg 1990, it would have been obvious to a person of ordinary skill in the art to manage collection about the usefulness of the interaction to other users as well.

**Re claim 36**, it would have been further obvious to a person of ordinary skill in the art to have the component of claim 33 further configured to allow each user to filter information in the collection of the results according to a user's own needs, or desires. Once the collection of results has been made available to users, as in claim 33, it would have been obvious and straightforward to allow the users to filter information, as filtering mechanisms for electronic information have long been known in the art. For example (and as disclosed for claim 34), users could filter information according to their needs or desires to look at results provided during a particular time period. Numerous other types of sorting or filtering mechanisms have long been known in the art, such as topical, numerical, temporal, alphabetical, and looking at various numerical subsets of results, such as filtering the dataset to only include certain responses to questions asking for a response on a numerical scale (e.g., only looking at answers indicating a response of 7 or higher or 3 or lower on a 1-to-10 scale).

Motivation to combine the elements of the prior art can be found in the reference. For example: "To answer these questions, Butler needed to try out her pilot television program with kids. She needed a formative evaluation. Formative evaluation helps the designer of a product, during the early development stages, to increase the likelihood that the final product will achieve the stated goals." Flagg. at 1. "The PEAC is powerful in a formative evaluation environment because it provides almost immediate computerized numerical and graphical feedback. Data memories from each response unit are automatically transferred into a personal computer. The evaluation responses of the sample or subsamples are printed across time on line graphs that can be related to program events." Id. at 213.

### Anticipates: '565 patent — claims 1–2, 4–6, 8, 10, 14–15, 17–19, 22, and 26–29
### Renders Obvious: '565 patent — claims 3, 13, 16, and 25

**Re claim 3**, submitting a purchase order using the input of the unit of claim 1 would have been obvious to a person of ordinary skill in the art in view of Flagg 1990. As discussed above, Flagg 1990 discloses numerous examples of accepting user input, such as in the BARN project. See Flagg 1990 at p. 177. Given that the user inputs in the BARN project described in Flagg 1990 allowed the users to select program content, which was delivered for free, it would have been obvious to a person of ordinary skill in the art to charge for content on such a system or a similar system. If the content were instead provided for a fee, the input would reflect a submission of a purchase order for that content.
**Re claim 16**, it would have been obvious to associate a priority code with the user's inputs. During the prosecution of the '565 patent, the examiner rejected what was then claim 6118



as being obvious over McKenna in view of official notice. '565 patent file history, non-final rejection (dated Dec. 19, 2008), at 7–8. In Flagg 1990, it would have been obvious that some inputs would have higher priority than others and would need to be processed more quickly. For example, the terminals of the BARN project described in Flagg 1990 solicited various types of input from the users. See Flagg 1990 at p. 177. An input indicating that the user is requesting help or assistance to be processed quickly — before processing information or soliciting input about the user's usage habits — so that the user continues to use the terminal to view content rather than abandoning it out of frustration or an inability to use it as desired. Information about the user's general use or content selection habits—such as the amount of time spent on each topic — is used primarily for market research or subsequent refinement of content and can be processed at a later time. It would be obvious to a person of ordinary skill in the art that the user assistance inputs should be assigned a higher priority, and forwarded more quickly, than the market-research or product development inputs.

**Re claims 13 and 25**, to the extent that these claims are not invalid for lack of enablement and/or written description, cellular telephones are essentially computing devices with smaller form factors, work according to the same principles, and operate in the same ways as computers that are not cellular telephones.

Motivation to combine the elements of the prior art can be found in the reference. For example: "To answer these questions, Butler needed to try out her pilot television program with kids. She needed a formative evaluation. Formative evaluation helps the designer of a product, during the early development stages, to increase the likelihood that the final product will achieve the stated goals." Flagg. at 1. "The PEAC is powerful in a formative evaluation environment because it provides almost immediate computerized numerical and graphical feedback. Data memories from each response unit are automatically transferred into a personal computer. The evaluation responses of the sample or subsamples are printed across time on line graphs that can be related to program events." Id. at 213.

## DR. BARBARA N. FLAGG AND DANIEL H. ABELOW, AMP 108 REPORTS AND MATERIALS, HARVARD BUSINESS SCHOOL, SPRING 1991 ("AMP REPORTS")

The AMP 108 Reports comprise eight reports delivered to Harvard Business School in Spring 1991 that reflect the implementation of the AMP 108 Online Assessment System and its use to evaluate electronic business school cases for the AMP 108 Course at Harvard Business School in Spring 1991. These include:

- "Online Assessment System – AMP 108: Online Assessment of the Use of Technology" ("Abelow 1");
- "Detailed Findings Report – AMP 108: Online Assessment of the Use of Technology" ("Abelow 2");
- "Baldridge Online Assessment – AMP 108: Online Assessment of the Use of Technology" ("Abelow 3");
- "Citibank AVC Case – Online Assessment of the Use of Technology, AMP 108" ("Abelow 4");

- “Pilot Test/Questions – Online Assessment of the Use of Technology AMP 108”;
- “Summative Questionnaire; Online Assessment of the Use of Technology: AMP 108”;
- “Executive Summary Report; AMP 108: Online Assessment of the Use of Technology”;
- “Online Assessment of the Use of Technology: AMP 108”;
- “Disclosure Document Receipt Notice”, No. 290592, received Sept. 5, 1991 (“Abelow DDS”);
- “Declaration of Prior Inventorship in the United States or in a NAFTA or WTO Member Country to Overcome Cited Patent or Publication (37 C.F.R. § 1.131)” by Daniel H. Abelow in the ’565 Reexamination (“’565 patent 131 Decl.”);
- “Declaration of Prior Inventorship in the United States or in a NAFTA or WTO Member Country to Overcome Cited Patent or Publication (37 C.F.R. § 1.131)” by Daniel H. Abelow in the ’078 Reexamination (“’078 patent 131 Decl.”);
- Source code used by the AMP 108 Online Assessment system for evaluating the Citibank Electronic Case (“CVS Code”);
- March 22, 2012, Replies to the U.S. Patent Office’s Requirement For Information Under 37 C.F.R. § 1.105 (“RFI”) in the ’078 and ’565 patent reexaminations.

## Anticipates: ‘908 Patent — claim 37

It would have been obvious to one of the ordinary skill in the art at the time of the invention to perform these functions in the AMP 108 system because this would have allowed for efficient collection and analysis of data by researchers.

## Anticipates: ‘078 patent — claims 1–5, 7, 10–14, 16–17, 19, 22, 25, 27–29, 30–32, 37–38, 40–49, 51–53, 60–64, 66–67, 69, and 71–74

## Renders Obvious: ‘078 patent — claims 6, 15, 18, 24, 33–36, 39, 50, 65, 68, and 70

**Re claim 6**, it would have been obvious to a person of ordinary skill in the art for the units of the commodity to comprise telephone extension equipment and the central location to comprise a PBX or other central telephone network facility. For example the AMP 108 Online Assessment System, as described in the AMP 108 Reports, operated over a network. It would have been obvious to a person of ordinary skill in the art to implement computer networking via a modem (which would comprise telephone extension equipment). In such an implementation, it would be obvious to collect the results of the two-way local interactions at a PBX or other central telephone network facility, which a person of ordinary skill in the art would understand to be analogous to a server on a non-dialup network. Moreover, given that the business school students evaluating the electronic cases using the AMP 108 Online Assessment System were not full-time students, but rather, had other employers, a person of ordinary skill in would understand that Harvard Business School could set up remote network access via modem for those students to access the electronic cases and the electronic



case assessments from remote computers. In such a situation, the units of the commodity would also comprise telephone extension equipment and Harvard Business School’s central location of gathering the results of the two-way local interactions would need to comprise a PBX or other central network facility to gather the responses from students using the electronic cases remotely.

**Re claim 15**, it would have been obvious to a person of ordinary skill in the art to mediate the two-way interaction over a computerized information service. For example, a person of ordinary skill in the art would have understood that the networked system implemented in the AMP 108 Online Assessment System, as described in the AMP 108 Reports, could further include a computerized information service over that network connection.

**Re claim 24**, in view of the AMP 108 Online Assessment System, it would have been obvious to a person of ordinary skill in the art for the two-way local interactions to comprise a transaction for sale of a product or a service contract for the commodity. As discussed above, the AMP 108 Online Assessment System discloses numerous examples of two-way local interactions relating to the electronic cases. Given that the two-way local interactions in the AMP 108 Online Assessment System allowed the users to select help or tutorial content, which was delivered for free, it would have been obvious to a person of ordinary skill in the art to charge for content on a such a system or a similar system, or allow the student to purchase tutoring or supplemental materials. If the content were instead provided for a fee, the two-way local interaction would comprise a transaction for the sale of that content, which is a product. The obviousness of claim 24 is further demonstrated by Abelow’s original Disclosure Document submission, Exhibit A to his Section 131 Declaration in the reexamination of the ’078 patent, in which Abelow discloses the interactions comprising a purchase order in the form of “a cable TV system with two-way products (such as ordering particular movies to be played at a particular time, for pay, so the customer can record it for later viewing.)” Based on the AMP 108 Online Assessment System, two-way local interactions comprising a purchase order clearly had occurred to Abelow no later than August 31, 1991.

**Re claim 50**, it would have been obvious to a person of ordinary skill in the art that the commodity could be a demonstration unit. For example, given that the AMP 108 Online Assessment System was being implemented, it would be obvious to a person of ordinary skill in the art to demonstrate or beta-test the commodity, or to create a system in which the commodity is a prototype. This is especially true for the AMP 108 Online Assessment System, in which the purpose of eliciting that information is to enable “the technology to be redesigned to eliminate their problems, as well as provide the built-in support that they need.” Accordingly, a situation in which the technology would be redesigned would include a situation where the commodity is a demonstration unit. See Right of Appeal Notice, Application 95/000,639 (June 12, 2013), at 35.

**Re claim 39**, it would have been obvious to a person of ordinary skill in the art, in view of the AMP 108 Online Assessment System, as described in the AMP 108 Reports, to have the component that manages the interactions of the users to send the probes to each of the units of the commodity. For example, because the AMP 108 Online Assessment System operated over a network, and stored probes that elicited user information, it would have been obvious to a person of ordinary skill in the art to have the central network server that managed the delivery of content and collection of results further send the probes to the computer terminals on which users provided.

**Re claims 18 and 65**, it would have been obvious to a person of ordinary skill in the art to present user information in a style comprising, including, or consisting of hypertext, as

Hypertext was a well-understood concept in the field of computer long before the filing of the '078 patent, and certainly as of Spring 1991. Although the AMP 108 Online Assessment System, as described in the AMP 108 Reports, does not explicitly disclose hypertext, it would be obvious to a person of ordinary skill in the art to combine the menus and text displays described in the AMP 108 Online Assessment System, as described in the AMP 108 Reports, with well-understood hypertext concepts to produce a hypertext interface. One example of such a hypertext interface is given in the article "KMS: A Distributed Hypermedia System for Managing Knowledge in Organizations," by Robert M. Akscyn, Donald L. McCracken, and Elise A. Yoder.

**Re claims 33, 68, and 70**, it would have been obvious to a person of ordinary skill in the art to provide access to the collection of the results to the users of the commodity. For example, the professors of the AMP 108 course were also understood to also be in some sense users or "super-users" of the AMP 108 Online Assessment System, which they used to "identif[y] specific problems for faculty who are just beginning to develop electronic cases" (Abelow 1 at 4). With the collection of the results being provided to a particular subset of users or "super users", it would be obvious to a person of ordinary skill in the art to make the collection of results available to other sets of users.

**Re claim 34**, it would have been further obvious to a person of ordinary skill in the art to provide access to distribute the results based on when the interactions occurred. For example, periodic distributions of the results, such as those collected every hour, every day, every week, or every month, would have been obvious to a person of ordinary skill in the art. Such distributions would have been particularly obvious for ongoing data collections or collections that track the user's performance over a period of time, which is disclosed by the user's use of multiple electronic cases in the AMP 108 Online Assessment System, as described in the AMP 108 Reports.

**Re claim 35**, it would have been further obvious to a person of ordinary skill in the art for the component to further manage collection of information for each interaction about usefulness of the interaction to other users. For example, once results have been made available to the users, as in claim 33, and given that the AMP 108 Online Assessment System already managed collection of information for each interaction about the usefulness of the interaction for each user, it would be simple straightforward to extend that information sharing to other users.

**Re claim 36**, it would have been further obvious to a person of ordinary skill in the art to have the component of claim 33 further configured to allow each user to filter information in the collection of the results according to a user's own needs, or desires. Once the collection of results has been made available to users, as in claim 33, it would have been obvious and straightforward to allow the users to filter information, as filtering mechanisms for electronic information have long been known in the art. For example (and as disclosed for claim 34), users could filter information according to their needs or desires to look at results provided during a particular time period. Numerous other types of sorting or filtering mechanisms have long been known in the art, such as topical, numerical, temporal, alphabetical, and looking at various numerical subsets of results, such as filtering the dataset to only include certain responses to questions asking for a response on a numerical scale (e.g., only looking at answers indicating a response of 7 or higher or 3 or lower on a 1-to-10 scale).

Motivation to combine the elements of the prior art can be found in the reference. For example: "By providing assessment data at low cost when needed, online assessment can be used to compress the time and steps between setting objectives, creating effective electronic cases or AMP systems, and improving them iteratively" Abelow 1 at 3. "Helps each electronic case developer learn how to improve his or her cases and use of technology." Id. at 4.



## Anticipates: '565 patent — claims 1–2, 4–6, 8, 10, 14–15, 17–19, 22, and 26–29

## Renders Obvious: '565 patent — claims 3, 13, 16, and 25

**Re claim 3**, given that the user inputs in the AMP 108 Online Assessment System allowed the users to select help content, which was delivered for free, it would have been obvious to a person of ordinary skill in the art to charge for content on a such a system or a similar system, or allow the student to purchase tutoring or supplemental materials. If the help or tutorial content were instead provided for a fee, the input would reflect a submission of a purchase order for that content. The obviousness of claim 3 is further demonstrated by Abelow's original Disclosure Document submission, Exhibit A to his Section 131 Declaration in the reexamination of the '565 patent, in which Abelow discloses the input reflecting a purchase order in the form of "a cable TV system with two-way products (such as ordering particular movies to be played at a particular time, for pay, so the customer can record it for later viewing." Based on the AMP 108 Online Assessment System, inputs reflecting a purchases order clearly had occurred to Abelow no later than August 31, 1991.

**Re claim 16**, it would have been obvious to associate a priority code with the user's inputs. During the prosecution of the '565 patent, the examiner rejected what was then claim 61 as being obvious over McKenna in view of official notice. '565 patent file history, non-final rejection (dated Dec. 19, 2008), at 7–8. In Flagg 1990, it would have been obvious that some inputs would have higher priority than others and would need to be processed more quickly. As discussed above, various types of input were solicited from the Harvard Business School Students using the AMP 108 electronic cases using the AMP 108 Online Assessment System. An input indicating that the user is requesting help or assistance should be processed quickly — before processing information or soliciting input about the user's usage habits — so that the user continues to use AMP 108 Online Assessment System to evaluate that AMP 108 electronic cases rather than abandoning it in favor of hard copy cases out of frustration or an inability to use it as desired. Information about the user's general use or content selection habits — such as the amount of time spent on each topic, or the number of times switching between electronic cases — is used primarily for market research or subsequent refinement of content and can be processed at a later time. It would be obvious to a person of ordinary skill in the art that the user assistance inputs should be assigned a higher priority, and forwarded more quickly, than the market research or product development inputs.

**Re claims 13 and 25**, to the extent that these claims are not invalid for lack of enablement and/or written description, cellular telephones are essentially computing devices with smaller form factors, work according to the same principles, and operate in the same ways as computers that are not cellular telephones.

Motivation to combine the elements of the prior art can be found in the reference. For example: "By providing assessment data at low cost when needed, online assessment can be used to compress the time and steps between setting objectives, creating effective electronic cases or AMP systems, and improving them iteratively" Abelow 1 at 3. "Helps each electronic case developer learn how to improve his or her cases and use of technology." Id. at 4.

## MASTER MODULE WITH GAMELINE SERVICE SYSTEM ("MASTER MODULE")

Master Module was a device for accessing the GameLine service in public use in the United States around 1983. Master Module was device that was used in conjunction with the Atari 2600 gaming console to access the GameLine service. The Master Module inserted into the Atari 2600 game cartridge slot and connected to the telephone lines via a cord. The Atari 2600 connected to the television via a cable and included joysticks for manipulating the user interface on the television screen. The Master Module allowed players to access the GameLine service to, for example, purchase, download, and play video games, participate in contests, and upload high scores. Some examples of materials that describe the Master Module include:

- The GameLine Master Module Owner's Manual, 1983 ("Manual")
- Michael A. Banks, On the Way to the Web: The Secret History of the Internet and its Founders, October 2012 ("On the Way to the Web")
- Deborah Burns, "Dial-A-Game: GameLine module links WCS with game bank," Antic Vol. 2, No. 4 July 1983 ("Dial-A-Game")

### Anticipates: '078 patent — claims 1-7, 11-16, 19, 22, 24, 30, 32–34, 37, 38, 40, 41, 43-45, 50-53, & 69-73

### Anticipates: '565 patent — claims 1, 2–6, 8, 10, 14, 15, 17–19, 22, and 26–29

### Renders Obvious: '565 patent — claim 16

**Re claim 16,** as already explained, a player purchases a game by entering the selection number for the game. That input is transmitted to the Master Control Center. The player would be charged for the price of the game. Once a month, information about the games that had been purchased was forwarded to the credit card companies for billing. To the extent that the Master Control Center did not forward information about each individual game that was purchased it would have been obvious to do so. To the extent that the Master Module does not disclose that the inputs are forwarded "based on a priority code associated with the input," it would have been obvious to associate a priority code with the user's inputs. During the prosecution of the '565 patent, the examiner rejected what was then claim 6119 as being obvious over McKenna in view of official notice. '565 patent file history, non-final rejection (dated Dec. 19, 2008), at 7–8. It would have been obvious that some inputs would have higher priority than others and would need to be processed more quickly. The Master Module transmitted a variety of different inputs to the Master Control Center, including (1) selection codes for the purchase of games, and (2) the player's high scores. A person of ordinary skill in the art would understand that it would be advantageous to assign a higher priority code to the game purchase inputs than to the high scores. Therefore claim 16 is obvious over the Master Module.

## U.S. PATENT NO. 5,301,223 ("AMADON")

### Anticipates: '078 patent — claims 1–7, 10, 15–16, 19, 22, 24, 27–32, 37–40, 42, 43, 51-53, and 69-73



### Anticipates: '565 patent — claims 1–4, 8, 10, 13–15, 19, 22, and 25–26

### Renders Obvious: '565 patent — claim 16

**Re claims 6, 18, and 29**, it would be obvious to a person of ordinary skill in the art that a second counter would be employed by the Registration System to share billing and other types of data periodically, such as every night, to the Administration System. That is, once the period of time has expired on a clock or counter (i.e. after 24 hours), the information is sent to the Administration System, where it is used to print billing and credit drafts which are sent to customers' credit card providers.

**Re claim 16**, to the extent that Amadon does not disclose that the inputs are forwarded "based on a priority code associated with the input," it would have been obvious to associate a priority code with the user's inputs. During the prosecution of the '565 patent, the examiner rejected what was then claim 61 as being obvious over McKenna in view of official notice. '565 patent file history, non-final rejection (dated Dec. 19, 2008), at 7–8. In Amadon, it would have been obvious that some inputs would have higher priority than others and would need to be processed more quickly. The customer provides a variety of inputs into the mobile telephone unit such as credit card information, phone numbers, or specific key combinations such as 1 and the SND key. A person of ordinary skill in the art would understand that some of these inputs would have a higher priority than others. For example, if a customer was dialing 9-1-1 for an emergency, this call would be assigned a higher priority than a credit card number being forwarded to the Registration System. Networks would ideally prioritize these calls to ensure that 9-1-1 offices can quickly respond to any calls.

## U.S. PATENT NO. 5,077,582 ("KRAVETTE")

### Anticipates: '078 patent — claims 1-6, 10, 15-17, 19, 22, 24, 25, 30-36, 38-45, 47–48, 51-53, 69, and 70

### Renders Obvious: '078 patent — claims 7, 18, 37, 39, 46, 49 and 60–68

**Re claim 7**, it would have been obvious to a person of ordinary skill in the art to forward the interactions from the central location to a remote server for analysis. For example, in order for the billing computer to be fully functional, it would need to interoperate with other financial systems, such as credit card clearing system, banking systems, and the like. A person of ordinary skill in the art would understand that the results of the interactions, include the information about transactions for parts and services, may be forwarded to these remote servers for processing and payment.

**Re claim 18**, it would have been obvious to a person of ordinary skill in the art that the information sent from the central station could be formatted as hypertext. At the time of the invention of Kravette, hypertext was a well-known style for formatting and transmitting computer data over a network. One example of a hypertext interface in a system for monitoring users' interactions is given in the article "KMS: A Distributed Hypermedia System for Managing Knowledge in Organizations," by Robert M. Akscyn, Donald L. McCracken, and Elise A. Yoder. Therefore, claim 18 would have been obvious over Kravette, either by itself, when combined with the knowledge of a person of ordinary skill in the art, or when combined with other prior art references, such as the Akscyn article.

**Re claim 37**, it would have been obvious to a person of ordinary skill in the art that it would be valuable to provide access to this information to third parties. For example, the repair information could be provided to manufacturers of the photocopiers in order to identify and fix any design flaws. In addition, the vendors would be motivated to provide this information to the manufacturers. By encouraging the manufacturers to improve the design of their photocopiers, the vendors reduce their repair costs and improve customer satisfaction, leading to higher profits for the vendors. The component also maintains information about the "consumable goods, such as but not limited to toney, developer and paper" used by each photocopier. Kravette, 7:17–27. This information is collected in order to allow the central station to "arrange for quick replenishing of low consumable good inventories, reducing copier down time and protecting good copy quality." Id. It would have been obvious to a person of ordinary skill in the art to provide access to this information to the manufacturers and vendors of the consumable goods. By so doing, the central station could more easily and accurate ensure that it maintained an adequate supply of the consumable goods.

**Re claim 45**, It would be obvious to a person of ordinary skill to use the information from the service personnel for marketing or product design.

**Re claim 49**, To the extent Kravette does not expressly disclose this limitation, it would be obvious for one service person to contact another service person in order to obtain assistance to advice.

**Re claim 60**, it would have been obvious to a person of ordinary skill in the art that it would be valuable to provide access to this information to third parties. For example, the repair information could be provided to manufacturers of the photocopiers in order to identify and fix any design flaws. In addition, the vendors would be motivated to provide this information to the manufacturers. By encouraging the manufacturers to improve the design of their photocopiers, the vendors reduce their repair costs and improve customer satisfaction, leading to higher profits for the vendors. The component also maintains information about the "consumable goods, such as but not limited to toney, developer and paper" used by each photocopier. Kravette, 7:17–27. This information is collected in order to allow the central station to "arrange for quick replenishing of low consumable good inventories, reducing copier down time and protecting good copy quality." Id. It would have been obvious to a person of ordinary skill in the art to provide access to this information to the manufacturers and vendors of the consumable goods. By so doing, the central station could more easily and accurate ensure that it maintained an adequate supply of the consumable goods.

**Re claim 61**, For the reasons given above when discussing claim 37, it would be obvious to a person of ordinary skill in the art to forward the results to a third party.

**Re claim 62**, For the reasons given above when discussing claim 7, it would be obvious to a person of ordinary skill in the art to forward the results to a remote server for analysis.
**Re claim 63**, For the reasons given above when discussing claim 32, it would be obvious to a person of ordinary skill in the art for the third party to be a vendor of the commodity.

**Re claim 64**, For the reasons given above when discussing claim 45, it would be obvious to provide access to the results to a designer of the commodity.

**Re claim 65**, For the reasons given above when discussing claim 18, it would be obvious to forward the results to the third party.



**Re claim 66**, For the reasons given above when discussing claim 2, Kravette discloses that the user interface is triggered based on user behaviors to generate two-way interactions with each of the users, each of the interactions relating to a corresponding specific one of the behaviors.

**Re claim 67**, For the reasons given above when discussing claim 3, the interactions are triggered based on repeated use of a feature.

**Re claim 68**, as explained when discussing claim 33, the system in Kravette is configured to provide access to the results to the users of the commodity

**Re claim 71**, as explained when discussing claim 37, it would have been obvious to enable third parties to access the received information.

**Re claim 72**, as discussed already, it would have been obvious to provide the results to vendors or designers.

**Re claim 73**, it would be obvious to one of skill in the art to use the information to make a design change or for marketing.

Motivation to combine the elements of the prior art can be found in the reference. For example: "It is desirable to provide a system for monitoring a copying machine which overcomes the shortcomings of the prior art systems described above." Kravette at 2:45-47; 1:20-2:7.

## Anticipates: '565 patent — claims 1, 2–6, 8, 10, 14–15, 17–19, 22, and 26–29

## Renders Obvious: '565 patent — claim 16

**Re claim 16**, Kravette discloses forwarding the input. Kravette discloses that the users' inputs are forwarded. As discussed above, the inputs are transmitted from the photocopier monitoring system to the billing computer. The billing computer uses the inputs, including the information about the work performed by the service person, to prepare a bill that is send to the customer leasing the photocopier. Kravette, 6:62–7:7:16 ("This data base may now be used to prepare a billing report for each customer."). Thus the inputs are forwarded from the billing computer to the customer in the form of a billing report. Alternatively, among the inputs provided by the service person is information about the parts that still need to be replaced. Kravette, 9:52–55. It would be obvious to a person of ordinary skill in the art that these inputs would be forwarded to a manufacturer or retailer of the required parts in the form of a purchase order. 1140. To the extent that Kravette does not disclose that the inputs are forwarded "based on a priority code associated with the input," it would have been obvious to associate a priority code with the user's inputs. During the prosecution of the '565 patent, the examiner rejected what was then claim 61 as being obvious over McKenna in view of official notice. '565 patent file history, non-final rejection (dated Dec. 19, 2008), at 7–8. In Kravette, it would have been obvious that some inputs would have higher priority than others and would need to be processed more quickly. The service person working on the photocopier provides a variety of different inputs, including "his time of arrival at the job site, the work completed, parts replaced and needed, and then the time of the completion of the job." Id., 9:52–55. A person of ordinary skill in the art

would understand that some of these inputs would have a higher priority than others. For example, the list of the parts that need to be replaced would be assigned a high priority code, because it will often be critical that the parts be purchased and installed as quickly as possible. Any delay in forwarding the parts list may leave the customer without a functioning photocopier.

Motivation to combine the elements of the prior art can be found in the reference. For example: "It is desirable to provide a system for monitoring a copying machine which overcomes the shortcomings of the prior art systems described above." Kravette at 2:45-47; 1:20-2:7.

## U.S. PATENT NO. 4,973,952 ("MALEC")
## Anticipates: '565 patent — claims 1, 4–6, 8, 10, 14, 15, 17–19, 22, and 26–29

### Renders Obvious: '565 patent — claims 2, 3, and 16

**Re claim 2**, although not expressly disclosed in Malec, it would have been obvious to allow a shopper to submit a request to schedule maintenance through the Shopping Cart Display. During the prosecution of the '565 patent, the examiner rejected what was then claim 50 as being obvious over McKenna in view of official notice. '565 patent file history, non-final rejection (dated Dec. 19, 2008), at 7–8. The examiner's argument applies with equal force to Malec.

**Re claim 3**, although not expressly disclosed in Malec, it would have been obvious to allow a shopper to submit a purchase order through the Shopping Cart Display. For example, shoppers traditionally had to take a number and wait in line before placing an order in the deli department of a grocery store. This wait could easily be eliminated by allowing the shopper to place his order on the Shopping Cart Display. The shopper could continue shopping and would automatically be notified when his order had been filled. Electronic preorder systems were well known in the art, as exemplified by U.S. Patent No. 4,959,686 ("Spallone"), titled "Automated Shopping Order Entry System," issued to John J. Spallone, William E. Doyle, and Peter Cawley. It would have been obvious to a person of ordinary skill in the art to add such an ordering system to the Shopping Cart Display. Furthermore, during the prosecution of the '565 patent, the examiner rejected what was then claim 51 as being obvious over McKenna and official notice in view of U.S. Patent No. 4,876,592 ("Von Kohorn"). '565 patent file history, non-final rejection (dated Dec. 19, 2008). The examiner's argument applies with even greater force to Malec. Therefore, claim 3 is obvious over Malec, either by itself or in combination with other references such as Spallone or Von Kohorn.

**Re claim 16**, to the extent that Malec does not disclose that the inputs are forwarded "based ona priority code associated with the input," it would have been obvious to associate a priority code with the user's inputs. During the prosecution of the '565 patent, the examiner rejected what was then claim 61 as being obvious over McKenna in view of official notice. '565 patent file history, non-final rejection (dated Dec. 19, 2008), at 7–8. It would be obvious to a person of ordinary skill in the art that the coupon-redeeming input should be assigned a higher priority, and forwarded more quickly, than the market-research inputs. Therefore, Malec renders claim 16 obvious.



## U.S. PATENT NO. 5,003,384 ("DURDEN")
## Anticipates: '565 patent — claims 1, 2–6, 8, 10, 14–15, 17–19, 22, and 26–29

### Renders Obvious: '565 patent — claim 16

Each of the asserted claims of the '565 patent requires a "user interface" that is displayed if a counter exceeds a threshold. Even if the scrambled picture is not a "display of a user interface," it would have been obvious to a person of ordinary skill in the art to display an interface at the expiration of the preview time or the free time. See Action Closing Prosecution, Application 95/000,638, mail date May 22, 2013, at 10–11.

**Re claim 2**, although not expressly disclosed in Durden, it would have been obvious to allow the user to submit a request to schedule maintenance through the STT. During the prosecution of the '565 patent, the examiner rejected what was then claim 50 as being obvious over McKenna in view of official notice. '565 patent file history, non-final rejection (dated Dec. 19, 2008), at 7–8. It would have been obvious to one of ordinary skill in the art to allow the users to report problems with the STT or IPPV module and to schedule maintenance to fix the problems. For example, Durden discloses that one potential problem with the IPPV module is that the "event purchase table" may be filled. Durden, 5:53–65. When that happens, the user is unable to purchase any more IPPV events. In addition, the STT automatically tunes to a special "barker channel" that will notify the user of the problem. Durden, 5:53–65. It would have been obvious to give the user the option of reporting this problem to the cable company by, for example, using the IPPV module to initiate a call to the IPPV phone processor, so that the cable company could fix the problem.

**Re claim 16**, as already explained, the inputs, including the access codes for the IPPV programs the customer wishes to watch, are transmitted to the IPPV phone processor. Durden, 9:31–45. These inputs are forwarded from the IPPV phone processor to the system manager. Durden, 9:46–50 ("Periodically, the phone processor 18 attempts to upload to the system manager 8 with a buffer packet message. The buffer packet message contains the stored event information and/or several status information fields."). The inputs are then forwarded from the system manager to the billing computer. Durden, 5:21–23 ("System manager 8 will upload the transaction data to billing computer 5 in response to an Initialize IPPV Upload command."). To the extent that Durden does not disclose that the inputs are forwarded "based on a priority code associated with the input," it would have been obvious to associate a priority code with the user's inputs. During the prosecution of the '565 patent, the examiner rejected what was then claim 6111 as being obvious over McKenna in view of official notice. '565 patent file history, non-final rejection (dated Dec. 19, 2008), at 7–8. In Durden, it would have been obvious that some inputs would have higher priority than others and would need to be processed more quickly. The IPPV module transmits at least two types of inputs to the IPPV phone processor: the IPPV events watched by the user and the viewer statistics stored in the table of channel entries. Durden, 9:31–45, 13:40–58. A person of ordinary skill in the art would understand that the IPPV event transactions have a higher priority than the viewer statistics. The transaction data must be forwarded from the IPPV phone processor to system manager to the billing computer in order for the user to be charged for watching the IPPV event.

Motivation to combine the elements of the prior art can be found in the reference. For example: "The system suffers from the requirement of using the telephone and a human operator. This increases the cost of handling PPV requests, and effectively eliminates

IPPV as a viable service since only a limited number of people are able to call in during the last minutes before a program begins." Durden at 1:24-30. Another system uses credits downloaded to the terminal, and then makes deductions against the credits when a program is viewed. ... This system suffers from excessive delay in reporting programs watched, a limited number of programs which can be viewed (due to the limited number of characters a subscriber can be expected to write down), and the possibility of unrecoverable errors in transcription." Id. at 1:49-60.

## U.S. PATENT NO. 5,083,271 ("THACHER")

**Anticipates: '565 patent — claims 1, 2, 3, 5, 6, 10, 14, 15, 17, 18, 22, and 26–29**

### Renders Obvious: '565 patent—claim 16

**Re claim 16**, to the extent that Thacher does not disclose that the input is forwarded based on a priority code, it would have been obvious to do so. It would have been obvious to associate a priority code with the user's inputs. During the prosecution of the '565 patent, the examiner rejected what was then claim 61 as being obvious over McKenna in view of official notice. '565 patent file history, non-final rejection (dated Dec. 19, 2008), at 7–8. Therefore, claim 16 is obvious over Thacher, by itself or in combination with other references, such as Meyer, that disclose assigning priority codes.

Motivation to combine the elements of the prior art can be found in the reference. For example: "Due to the above and other problems, it has not been possible until now to provide large scale tournament playing with very diverse player locations." Thacher at 1:44-49.

## U.S. PATENT NO. 5,347,449 TO MEYER ("MEYER")

**Anticipates: '565 patent — claims 1–2, 4–6, 8, 14–15, 17–19, and 26–29**

### Renders Obvious: '565 patent — claim 16

**Re claim 6**, it would have been obvious to a person of ordinary skill in the art that a usage counter would be transmitted to another area such as a credit card company for billing purposes.

## JAPANESE PATENT PUBLICATION NO. 2-65556 ("KITA")

**Anticipates: '565 patent — claims 1, 3, 5-6, 10, 14, 15, 17, 18, 22, and 25-29**

### Renders Obvious: '565 patent — claims 13 and 25

Re claims 13, although Kita does not expressly state that the telephone is a cellular telephone, it would have been obvious to a person of ordinary skill in the art that the telephone could be either a land line or a cellular telephone.



## JAPANESE PATENT PUBLICATION NO. 60-200366 ("TANAKA")

**Anticipates: '565 patent — claims 1, 3-5, 8, 10, 14-15, 17, 19, 22, and 26- 28**

### Renders Obvious: '565 patent — claims 6, 18, and 29

**Re claims 6, 18, and 29**, it would have been obvious to a person of ordinary skill in the art that the second counter (i.e. the number of times the magnetic card has been used) could be transmitted to the center along with the information about the transaction. It is common in the art to transmit a unique identifier with every credit transaction. Such an identifier aids in maintaining accurate records of the credit transactions. For example, if the identifier includes the number of times the magnetic card has been used, the customer and the credit agency can verify that the same transaction has not inadvertently been charged to the customer's account more than once. In addition, the customer and the credit agency can verify that all of the customer's charges have been processed by ensuring that no transaction numbers have been skipped. In this respect, the transaction counter serves the same function as the serial number on a bank check. In the alternative, the second counter can be taken to be the counter that records the current "guidance number." embodiment described in Tanaka, the transaction processing device displays one particular prompt or "induction information" to the user. The level of detail of that prompt is determined by the value of P, as discussed above, but the prompt itself is determined by a "guidance" number. See Tanaka, Tables 1-3. At several steps in the user interface, a particular set of keyboard events will cause the device to proceed to the next step. See, e.g., Tanaka, at 10 ("If an execution key is input, there is a move to step 112… As a result of the execution key being operated, when there is a progression to step 112 due to step 109, in step 112, the guidance '4' is displayed in the display 1…"). As explained in the previous section, keyboard events are "trigger events." Therefore, Tanaka discloses that the transaction processing device increments a second counter (the current guidance displayed) upon detection of the occurrence of a second trigger event (certain keyboard events).

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