IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

| | |
|---|---|
| TV GUIDE ONLINE, INC. AND TV GUIDE ONLINE, LLC,<br><br>Plaintiffs,<br><br>v.<br><br>TRIBUNE MEDIA SERVICES, INC.<br><br>Defendant. | Civil Action No. 05-725 (KAJ)<br><br>**REDACTED - PUBLIC VERSION** |

**SUPPLEMENTAL EXPERT REPORT OF J. TIPTON COLE**
**CONCERNING INFRINGEMENT AND VALIDITY**

OF COUNSEL:

Robert C. Morgan
Christopher J. Harnett
Ching-Lee Fukuda
Stuart W. Yothers
Danielle C. Schillinger
FISH & NEAVE IP GROUP
ROPES & GRAY LLP
1251 Avenue of the Americas
New York, New York 10020
(212) 596-9000

Ronald E. Naves, Jr.
Sr. Vice President
Legal Affairs and Litigation
Gemstar-TV Guide International, Inc.
6922 Hollywood Boulevard
Hollywood, California 90028
(323) 817-4600

Frederick L. Cottrell, III (#2555)
Cottrell@rlf.com
Jeffrey L. Moyer (#3309)
Moyer@rlf.com
Steven J. Fineman (#4025)
Fineman@rlf.com
Richards, Layton & Finger PA
One Rodney Square
920 North King Street
Wilmington, Delaware 19801
(302) 651-7700

Attorneys for Plaintiffs
TV Guide Online, Inc. and
TV Guide Online, LLC

Dated: February 28, 2007

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

| | |
|---|---|
| TV GUIDE ONLINE, INC. AND TV GUIDE ONLINE, LLC,<br><br>Plaintiffs,<br><br>v.<br><br>TRIBUNE MEDIA SERVICES, INC.<br><br>Defendant. | Civil Action No. 05-725-***<br><br>**CONFIDENTIAL – SUBJECT TO PROTECTIVE ORDER** |

**SUPPLEMENTAL EXPERT REPORT OF J. TIPTON COLE**
**CONCERNING INFRINGEMENT AND VALIDITY**

**CONTENTS**

I. QUALIFICATIONS ..... 4

II. MATERIALS CONSIDERED ..... 5

III. OPINIONS TO BE EXPRESSED AND BASES FOR THOSE OPINIONS ..... 5

A. TMS's Revised Proposed Constructions Are Incorrect; But The Asserted Claims of the '078 Patent Are Infringed by TMS's Website, www zap2it.com, Even Under TMS's Revised Proposed Constructions ..... 5

1. Supplemental Opinions Regarding TMS's Revised Proposed Constructions ..... 6

2. Supplemental Opinions Regarding Infringement In Light of TMS's Revised Proposed Constructions ..... 22

B. The Asserted Claims of the Patent-In-Suit Are Not Indefinite ..... 23

IV. CONCLUSIONS ..... 25

VI. PREVIOUS TESTIMONY ..... 25

V. TRIAL EXHIBITS ..... 26

VI. COMPENSATION ..... 27

I, J. Tipton Cole, have been retained to testify as an expert on behalf of TV Guide Online, Inc. and TV Guide Online, LLC (collectively "TV Guide") in this action. In addition to the matters set forth in my December 15, 2006 and February 9, 2007 Expert Reports, I expect to testify at trial regarding the matters stated in this report, if asked by the Court or by the parties' attorneys. Specifically, in my December 15, 2006 Expert Report, I addressed only the proposed claim constructions available to me (i.e., the claim constructions exchanged by the parties on October 16, 2006), which Dr. Gary S. Tjaden, TMS's expert, acknowledges in his February 9, 2007 Rebuttal Expert Report Regarding Noninfringement ("Tjaden Rebuttal") at 32 ¶ 80. Since filing my December 15, 2006 Expert Report, TMS has supplemented its Proposed Constructions of Disputed Claim Terms. *See* TMS' Revised Proposed Constructions of Disputed Claim Terms, dated January 18, 2007.

While Dr. Tjaden stated that "[t]he revised claim constructions were included in [his] invalidity report dated December 15, 2006," no construction for **controller being programmed to perform** or **wide-area network** were, in fact, set forth in that earlier report. Moreover, Dr. Tjaden did not provide any detail of his asserted bases for any of the proposed constructions that appeared in his December 15, 2006 Expert Report, which he should have done in reaching his invalidity conclusions. Had he done so, I would have had an opportunity to respond in my Rebuttal Expert Report. Instead, Dr. Tjaden waited until his own Rebuttal Expert Report to attempt to explain his reasoning for agreeing with TMS's revised proposed constructions. Therefore, I am supplementing my December 15, 2006 Expert Report

Concerning Infringement in light of those new proposed constructions and Dr. Tjaden's explanations relating to those constructions.

Moreover, in his Rebuttal, Dr. Tjaden introduced entirely new assertions -- for example, alleged invalidity of claims 1-7 on the grounds that the term "wide-area network" is indefinite. Therefore, I am also supplementing my February 9, 2007 Expert Report Concerning Validity to address that new contention.

I understand that discovery in this action is ongoing. Accordingly, I expressly reserve the right to amend or further supplement my reports after receiving and reviewing any additional discovery.

If TMS's experts are permitted to supplement their expert reports and/or to express additional opinions concerning claim construction, infringement, and/or validity, I expressly reserve the right to amend or further supplement my reports as appropriate.

## I. QUALIFICATIONS

1. I hereby incorporate by reference the statement of my qualifications, as set forth in my December 15, 2006, Expert Report.

2. A copy of my curriculum vitae is attached as Exhibit A. It includes a list of industry associations in which I am, or have been active; and a list of companies to whom I have provided consulting services (on a non-confidential basis).

3. The CV sets forth details of my engagements as a designated expert, listing the style of the cases and the dates on which I testified by deposition or at trial.

## II. MATERIALS CONSIDERED

4. I base the opinions that I express in this Report on my education and nearly 30 years of experience in the field of software development and commercial database application design. I also base my opinions on a review of the materials provided by the parties during discovery in this case, including a review of United States Patent Number 5,988,078 ("the patent-in-suit" or "the '078 patent"), the prosecution histories of the applications that led to the '078 patent, and the prior art.

5. The list of materials I reviewed in formulating my opinions, in addition to the materials I identified in Exhibit E to my December 15, 2006 Expert Report and Exhibit A to my February 9, 2007 Expert Report, is set forth in Exhibit B to this Report.

## III. OPINIONS TO BE EXPRESSED AND BASES FOR THOSE OPINIONS

6. I incorporate by reference herein the opinions of my December 15, 2006 and February 9, 2007 Expert Reports.

### A. TMS's Revised Proposed Constructions Are Incorrect; But The Asserted Claims of the '078 Patent Are Infringed by TMS's Website, www.zap2it.com, Even Under TMS's Revised Proposed Constructions

7. Since the time I submitted my December 15, 2006 Expert Report Concerning Infringement, I was presented with TMS' Revised Proposed Constructions of Disputed Claim Terms, dated January 18, 2007. Also, since submitting my February 9, 2007 Rebuttal Expert Report Concerning Validity, Dr. Tjaden has offered entirely new or modified bases for agreeing with TMS's Revised Proposed Constructions of Disputed Claim Terms. Dr. Tjaden claims to have relied upon these

constructions in his December 15, 2006 Expert Report even though he did not provide any explanation for that reliance until he submitted his Rebuttal. *See* Tjaden Rebuttal. Having considered TMS's revised constructions, I remain of the view that TMS infringes the asserted claims of the '078 patent in connection with its web site, www.zap2it.com, and that the asserted claims of the '078 patent are valid.

8. I understand that before performing the infringement analysis the meaning of claim terms, including disputed claim terms, must be determined. I have reviewed TMS's revised proposed claim term constructions as provided in Exhibit C. I first set forth below my opinions of TMS's revised proposed claim constructions. Following my opinions on TMS's revised proposed constructions, I perform my supplemental infringement analysis in light of TMS's revised proposed constructions as appropriate.

### 1. Supplemental Opinions Regarding TMS's Revised Proposed Constructions

#### a. Television viewing location/particular viewing location

9. I understand that TMS has changed its proposed construction for the phrase **television viewing location/particular viewing location** from "***the physical spot*** where a television set is positioned and watched by a user" to "***the specific room within a building*** where a television set is positioned and watched by a user" (emphasis added).

10. It is my opinion that TMS's revised proposed construction is inconsistent with how a person of ordinary skill in the art would understand the language of the Claims of the '078 patent.

11. Dr. Tjaden makes several arguments in support of his claim construction position that do not make sense. First, Dr. Tjaden acknowledges an embodiment of the '078 patent in which "the cassette recorder 14 is located *a large distance from the personal computer* 18, such as *in another room* of the house. In this system the remote I/R transmitter 26 is replaced by a radio transmitter 60." Tjaden Rebuttal at 41 ¶ 103 (citing '078 at 6:13-17, emphasis by Tjaden). Dr. Tjaden offers no basis for his opinion when he dismisses this embodiment by stating "such embodiments are obviously excluded by the '078 Patent's claim limitations and prosecution history, which require the computer to be at the television viewing location, not in a different room." Tjaden Rebuttal at 41 ¶ 103. I cannot find any support for his opinion at the page (TG002253) of the prosecution history which he cites in expressing this opinion.

12. Second, he contends that a statement in the Abstract of the '078 patent (i.e., "A personal computer is used to assist in the selection of television programs to be recorded at future times and to control a video tape recorder to implement the selected recordings") limits the meaning of **television viewing location/particular viewing location**. Tjaden Rebuttal at 41 ¶ 102. The statement that Dr. Tjaden references from the abstract identifies only one problem among many problems that various embodiments of the disclosure may seek to solve. That one problem, however, it is not related to the asserted Claims, which do not address the use of a video tape recorder. In my opinion, nothing about that statement provides a definition for the term **television viewing location/particular viewing location**.

13. Third, Dr. Tjaden argues that, because "there was virtually no residence or building in the United States at which a television signal could not have

been received" at the March 9, 1992 priority date of the '078 Patent, TV Guide's construction is "vacuous." Tjaden Rebuttal at 42 ¶ 104. In my opinion, the fact that television was ubiquitous actually argues against TMS's proposed construction. Such universal accessibility means that no room within any residence was precluded from being a **viewing location**. If anything, I would consider Dr. Tjaden's statement to be an acknowledgement that TMS's service infringes the '078 patent at virtually any residence or building in which it is provided.

14. Examined more closely, Dr. Tjaden's reasoning in support of TMS's construction of the **television viewing location** term is circular. He merely assumes that **television viewing location** excludes "a different room" in order to support his opinion that **television viewing location** cannot extend to "a different room."

15. Even if TMS's construction is adopted, as I explained in my December 15, 2006 and February 9, 2007 Expert Reports, REDACTED REDACTED. Thus, even if TMS's newly proposed construction is adopted, my infringement opinions remain unchanged.

**b. Operator input**

16. I understand that TMS has changed its proposed construction for the phrase **operator input** from "a keyboard or other device for entering data into a computer" to "a keyboard or other device for ***manually*** entering data into a computer" (emphasis added).

17. I maintain my opinion that the term **operator input** does not require any construction beyond its plain and ordinary meaning. In his Rebuttal, Dr. Tjaden

does not cite any support whatsoever in support of his claim that **operator input** should be limited to devices for "manually" entering data into a computer. In my opinion, this is a goal-oriented limitation that serves only to limit the claims unnecessarily.

18. Even so, if TMS's newly proposed construction is adopted, my infringement opinions remain unchanged. For example, TMS's zap2it.com website permits a user to manually enter data with a keyboard.

**c. Modem**

19. I understand that TMS has changed its proposed construction for the term **modem** from "a device that converts digital signals to analog signals (and vice versa) and allows a computer to exchange data over a standard dial-up telephone line" to "a ***data signal conversion*** device that converts digital signals to analog signals (and vice versa) and allows a computer to exchange data over a standard dial-up telephone line" (emphasis added).

20. As I stated in my December 15, 2006 Expert Report, TV Guide has construed **modem** to mean "data signal conversion device that connects data terminal equipment to a communication line," and, in my opinion, this construction is consistent with the meaning of the term to one of ordinary skill in the art.

21. Dr. Tjaden attempts to fault me for not citing each and every definition of **modem** provided by the IEEE Standard Dictionary of Electrical and Electronics Terms, 1993. Dr. Tjaden specifically cites:

> (3) (broadband local area networks). A modulator-demodulator device. The modulator encodes digital information onto an analog carrier signal by varying the amplitude, frequency, or phase of that carrier. The demodulator extracts digital information from a similarly modified carrier. A modem transforms digital signals into a form suitable for transmission over an analog medium.

This additional definition, however, only supports TV Guide's proposed construction of the term **modem** by including "broadband local area networks." By citing this definition, Dr. Tjaden acknowledges that **modems** were not limited to "exchang[ing] data over a standard dial-up telephone line" at the time of the priority date of the '078 patent.

22. Dr. Tjaden endorses TMS's construction of the term **modem**, i.e., "a data signal conversion device that converts digital signals to analog signals (and vice versa) and allows a computer to exchange data over a standard dial-up telephone line." Then, Dr. Tjaden asserts that a DSL modem "convert[s] digital baseband input signals to analog output signals and vice versa." Tjaden Rebuttal at 19 ¶ 45. Because DSL operates over the very same wires as a "standard dial-up telephone line," I do not understand Dr. Tjaden's attempt to distinguish between a DSL modem and TMS's definition of **modem**. It seems that he defines them identically. He appears to try to distinguish the two based on the wiring used to connect them to a personal computer (e.g., a telephone modem may connect to a personal computer via a serial cable while a DSL modem may connect to a personal computer via an Ethernet cable). Tjaden Rebuttal at 16 ¶ 40 and 19 ¶ 45. Again, I find this distinction to be lacking, particularly because it is not a limitation of Dr. Tjaden's proposed construction for **modem**. Further, both a telephone modem and a DSL modem can be attached to a personal computer using the same wiring (e.g., a USB cable) or without wiring (e.g., by means of a wireless access point). In my opinion, the differences between dial-up telephone modems and DSL modems are too insubstantial to justify eliminating DSL modems from the scope of the term **modem**.

23. Dr. Tjaden claims that "[m]any, if not most, personal computers today are equipped to connect to data communications facilities in three ways. They will be equipped with a traditional telephone modem, an Ethernet adapter, and a wireless network adapter. . . ." Tjaden Rebuttal at 19 ¶ 47. Dr. Tjaden repeatedly asserts that **modem** should be construed to require exchanging data over a standard dial-up telephone line. Therefore, his qualification of "traditional telephone" in this instance is redundant in that his position is that all modems operate over a traditional telephone line.

24. Further, Dr. Tjaden writes that "[a]t the time of filing, modems were indeed used to connect to transmission media other than standard telephone lines. However, the '078 patent specification does not teach doing so, or even imply that such a thing could be done or was known to the patentee" Tjaden Rebuttal at 47 ¶ 115. The '078 patent, however, describes an alternative in which "the schedule information could be provided to the personal computer via cablecast or broadcast," which, by its very nature, cannot be limited to communication over a standard telephone line (3:65-67). Dr. Tjaden states that he understands "the terms 'cablecast or broadcast' to refer to one-way transmission of information, known generically to a skilled artisan as 'teletext'" Tjaden Rebuttal at 47 ¶ 115. As used in the patent, the "cablecast" and "broadcast" deliver information to the viewing location in response to the geographical location information transmitted earlier. For this reason, I do not agree that the terms "cablecast or broadcast" should be limited to unprompted one-way transmissions of information such as "teletext," which was a specific implementation of a specific type of communication.

25. In my opinion, Dr. Tjaden's efforts to limit the meaning of **modem** to "exchang[ing] data over a standard dial-up telephone line" are unsupported. I see no reason to limit the meaning of **modem** as Dr. Tjaden proposes. Nonetheless, even if TMS's construction is adopted, my infringement opinions remain unchanged. For example, TMS's website can indeed be accessed by users over standard dial-up telephone modems.

**d. [Receiving/receive] information specific to the type of programming available to the particular [viewing location/television receiver][1]**

26. I understand that TMS has changed its proposed construction for the phrase **receiving information specific to the type of programming available to the particular viewing location** from "having data transferred to a computer such that a user can ***manipulate the transferred data***" to "having data transferred to a computer such that a user can ***perform database-type manipulations on the transferred data without being connected to the original source of the data***" (emphasis added).

27. Dr. Tjaden relies on a statement from a different prosecution history of a patent application with different claims directed to storing a database of schedule information and using that stored database to program a VCR in his effort to read all of TMS's proposed additional limitations into what is otherwise already an understandable claim term. *See* Tjaden Rebuttal at 34 ¶¶ 85-86. That statement has no bearing on these claims.

[1] I note that TMS originally provided a proposed construction for the term "receive/receiving," but now proposes a construction for the term "[receiving/receive] information specific to the type of programming available to the particular [viewing location/television receiver]."

28. In his Rebuttal Report, Dr Tjaden asserts that "[t]he information that is returned to a user's Internet browser by Zap2it.com is not information that is, or can be, manipulated on the user's personal computer by a database program" (Tjaden Rebuttal at 35 ¶ 88). I disagree with this statement. Indeed, a user of Zap2it.com is able to copy the program schedule information that is returned by Zap2it.com and paste it into a database program such as Microsoft Excel or Microsoft Access. That information can then be manipulated by the user with relative ease. For example, a user may perform a "search" or a "sort" function on the information that was returned by Zap2it.com

29. For the reasons stated above and those explained in my December 15, 2006 and February 9, 2007 Expert Reports, even if TMS's newly proposed construction is adopted, my opinions concerning infringement of the Claims of the '078 patent are unchanged.

e. **Controller**

30. I understand that TMS has changed its proposed construction for the term **controller** from "a device ***that controls the transfer of data between a computer and a peripheral device such as a monitor***" to "***an electronic*** device ***for manipulating information including at least memory for storing and executing computer programs and I/O ports for connecting to peripheral devices, such peripheral devices including modems and display devices***" (emphasis added).

31. Dr. Tjaden tries to take TV Guide's proposed construction of **controller** out of the context of the '078 patent when he suggests that it could include "an automatic coffee maker or a furnace thermostat" Tjaden Rebuttal at 37 ¶ 93. Based

on the language of the claims themselves, no one would include such things as an automatic coffee maker or a furnace thermostat within TV Guide's proposed construction of **controller**. Moreover, I do not see any support for Dr. Tjaden's assertion that TV Guide's proposed construction is over-inclusive. Instead, Dr. Tjaden offers only semantic argument.

32. Furthermore, Dr. Tjaden does not identify any reason to read all of TMS's proposed extraneous limitations into an otherwise understandable claim term.

33. In my opinion, TMS's revised proposed construction for **controller** is inconsistent with how a person of ordinary skill in the art would understand this term in the context of the '078 patent Claims.

34. Nonetheless, even if TMS's newly proposed construction is adopted, my infringement opinions remain unchanged. For example, TMS's website is often accessed by a personal computer. In my opinion, personal computers fall within the scope of TMS's proposed construction of the term **controller**.

**f. Controller being programmed to perform**

35. I understand that TMS first proposed a construction for the phrase **controller being programmed to perform** on January 18, 2007. I further understand that TMS proposes that that phrase be construed to mean "computer application programs are installed on the 'controller,' as defined above, prior to its use by a user to perform."

36. Dr. Tjaden makes the blanket assertion that "[a]t the priority date of the '078 patent, personal computer application programs were completely installed on the personal computer before they began executing." Tjaden Rebuttal at 38 ¶ 95. He

claims that "[t]he concept of downloading during the execution of the application program incremental functionality for it to perform was not used or commonly known to skilled artisans" until "a time subsequent to the '078 Patent's priority date" Tjaden Rebuttal at 38 ¶ 95. Dr. Tjaden does not identify the "subsequent time."

37. At the time of the '078 patent's priority date, examples of systems that downloaded or installed incremental functionality while the application program was being executed were common. *See, e.g.*, Goldszmidt, G., Yemini, Y., and Yemini, S. 1991. Network management by delegation: the MAD approach. In *Proceedings of the 1991 Conference of the Centre For Advanced Studies on Collaborative Research* (Toronto, Ontario, Canada, October 28 - 30, 1991) A. Gawam, J. K. Pachl, J. Slonim, and A. Stilman, Eds. IBM Centre for Advanced Studies Conference. IBM Press, 347-361 (Ex. D). *And see*, Korb, J. T. and Wills, C. E. 1986. Command execution in a heterogeneous environment. In *Proceedings of the ACM SIGCOMM Conference on Communications Architectures & Protocols* (Stowe, Vermont, United States, August 05 - 07, 1986) W. Kosinsky, J. J. Garcia-Luna, and F. F. Kuo, Eds. SIGCOMM '86. ACM Press, New York, NY, 68-74 (Ex. E). *Also see*, Bell, Gordon C., "Toward a History of (Personal) Workstations (Draft), ACM-0-89791-176-8-1/86-0001, 1986, pg. 16 (Ex. F).

38. In addition, each of TMS's zap2it.com web pages is installed on a user's computer "prior to its use by a user." For that reason, and for the reasons explained in my December 15, 2006 and February 9, 2007 Expert Reports, even if TMS's newly proposed construction is adopted, my opinions concerning infringement of the Claims of the '078 patent are unchanged.

**g. Available to a particular one of the viewing locations**

39. I understand that TMS first proposed a construction for the phrase **available to a particular one of the viewing locations** on January 18, 2007. I further understand that TMS proposes that that phrase be construed to mean "deliverable from a programming source to a specific 'television viewing location,' as defined above."

40. In my opinion, **available to a particular one of the viewing locations** does not require further construction. One of ordinary skill in the art would appreciate the plain and ordinary meaning of this term in which information is available to a given viewing location. This definition is supported by the disclosure of the '078 patent and would have been understood by one of ordinary skill in the art.

41. However, even if TMS's newly proposed construction is adopted, my opinions concerning infringement of the Claims of the '078 patent are unchanged. For example, in my opinion, "deliverable from a programming source to" is at least a subset of "available to." Thus, by providing its website, which provides information from its databases to a viewing location, the zap2it website still meets this element of the asserted claims of the '078 patent.

**h. Wide-area network**

42. I understand that TMS first proposed a construction for the phrase **wide-area network** on January 18, 2007. I further understand that TMS proposes that that phrase be construed to mean "a data communications network that is not a local area network."

43 It is my opinion that TMS's newly proposed construction for **wide-area network** is inconsistent with how a person of ordinary skill in the art would

understand this term in the context of the '078 patent Claims. A person of ordinary skill in the art would understand that wide-area networks can include more than one local area network. See, e.g., Bell, Gordon C., "Toward a History of (Personal) Workstations (Draft), ACM-0-89791-176-8-1/86-0001, 1986, pg. 16 (Ex F) ("all interconnected via the local area Network Interconnect, NI [i.e., Ethernet] in a single area, and the ability of interconnecting the Local Area Networks (LANs) to form Campus Area and Wide Area Networks").

44. In my opinion, **wide-area network** does not require further construction. One of ordinary skill in the art would appreciate the plain and ordinary meaning of this term, i.e., a network that covers a wide area. This definition is supported by the disclosure of the '078 patent and would have been understood by one of ordinary skill in the art. For example, Mr. Levine describes communicating over the nation's telephone lines, which is a **wide-area network**. Furthermore, Claim 1 of the '078 patent describes "geographically dispersed television viewing locations," and the specification describes an alternative in which "the schedule information could be provided to the personal computer via cablecast or broadcast" (3:65-67).

45. Dr. Tjaden claims that the term **wide-area network** "was not in common use among data communications engineers in 1992." Tjaden Rebuttal at 15 ¶ 36. He goes on to assert that "[i]t would not have had a clear and precise meaning to a skilled artisan in this time-frame, in my opinion. About all a skilled artisan could have concluded without an expanded description is that a wide-area network was not a local area network, the only other kind of 'area network' commonly known at the time " Tjaden Rebuttal at 15 ¶ 36.

46. Dr. Tjaden further asserts that "[f]rom the specification we know only that data communication between the personal computer and the service provider occurs over standard telephone lines." Tjaden Rebuttal at 43 ¶ 108. However, the '078 patent describes an alternative in which "the schedule information could be provided to the personal computer via cablecast or broadcast," which, by its very nature, cannot be limited to communication over a standard telephone line (3:65-67).

47. While the Internet is a modern day example of a wide-area network, the concept of wide-area networks was known across the computer industry in the late 1980s and early 1990s. For example, the Microsoft Press Computer Dictionary (1991) defines **wide-area network** as "[a] communications network that connects geographically separated areas" (page 367) (Ex. G) [2] Additionally, a search of the Association for Computing Machinery (ACM) Digital Library using the term **wide area network** yields 30 results with publication dates prior to 1992.[3] Furthermore, a search of the USPTO web site using the terms **wide area network** and "computer" yields 137 patents with application dates prior to 1992.

48. Therefore, in my opinion, the term **wide-area network** does not require any further construction.

49. However, even if TMS's newly proposed construction is adopted, my opinions concerning infringement of the Claims of the '078 patent are unchanged. For example, even if TMS's website is accessed by a computer that is connected to a local area network, most of those computers will have to also access the Internet, a wide-area network, in order to access the zap2it website.

[2] An entry for the acronym WAN (p. 366) refers the reader to this definition as well.

[3] A similar search of the IEEE Xplore facility yields 151 results with publication dates prior to 1992.

**i. Information regarding the geographical location of a particular viewing location**

50. I understand that TMS first proposed a construction for the phrase **information regarding the geographical location of a particular viewing location** on January 18, 2007. I further understand that TMS proposes that that phrase be construed to mean "any information, irrespective of how the information is encoded, that expressly indicates in geographic language (e.g., name of a continent, country, province, state, city, town region, street address, zip code, area code, etc.) the approximate portion of the planet in which a particular 'television viewing location,' as defined above, is located."

51. It remains my opinion that TMS's proposed construction for **information regarding the geographical location of a particular viewing location** is overly broad and inconsistent with how a person of ordinary skill in the art would understand this term in the context of the '078 patent Claims. Dr. Tjaden provides no additional support for this construction in his Rebuttal.

52. Because TMS's proposed construction is at least broad enough to include TV Guide's proposed construction, even if TMS's newly proposed construction is adopted, my infringement opinions remain unchanged.

**j. Schedule of the television programming**

53. I understand that TMS first proposed a construction for the phrase **schedule of the television programming** on January 18, 2007. I further understand that TMS proposes that that phrase be construed to mean "a list, not necessarily ordered in any way, containing at least one item of television programming."

54. For the reasons given in my Rebuttal Report on Validity, it remains my opinion that TMS's proposed construction for **schedule of the television programming** is inconsistent with how a person of ordinary skill in the art would understand this term in the context of the '078 patent Claims.

55. Nonetheless, even if TMS's newly proposed construction is adopted, my infringement opinions remain unchanged. Ordered lists transmitted from zap2it.com to the users' computers such as those shown in my Infringement Report fall within the proposed construction offered by TMS.

**k. Memory for storing the information**

56. I understand that TMS first proposed a construction for the phrase **memory for storing the information** on January 18, 2007. I further understand that TMS proposes that that phrase be construed to mean "a device that can retain computerized information for retrieval later."

57. In my opinion the phrase **memory for storing the information** does not require further construction. The construction proposed by TMS is tautological. I do not know of any reason to "retain computerized information" other than "for retrieval later."

**l. Receive Information Through the Operator Input**

58. I understand that TMS first proposed a construction for the phrase **receive information through the operator input** on January 18, 2007. I further understand that TMS proposes that that phrase be construed to mean "signals produced by the operator input in response to user actions and transferred to the controller in the electronic terminal unit."

59. It remains my opinion that this proposed construction is inconsistent with how a person of ordinary skill in the art would understand this phrase in the context of the '078 patent. In my opinion, this term requires no further construction. Anyone of ordinary skill in the art at the time of the priority date of the '078 patent would have understood what was meant by **receive information through the operator input**. The parties have already proposed meanings for **operator input**. Therefore, I do not believe that the term **receive information through the operator input** requires even further construction, and I find TMS's proposed construction to be less understandable than the term itself and unnecessarily limiting.

60. Nonetheless, even if TMS's newly proposed construction is adopted, my infringement opinions remain unchanged. For example, when accessing TMS's website, a user may enter information on a keyboard. During that process, signals from the keyboard will be transferred to the computer's central processing unit. Thus, even under TMS's proposed construction, the zap2it website would still meet this element of the claims.

61. I note that on October 16, 2006, TMS originally proposed meanings for **download**, **electronic terminal unit**, and **electronic television interface**. These three terms were excluded from TMS's Revised Proposed Constructions of Disputed Claim Terms, dated January 18, 2007. Because TMS and Dr. Tjaden changed every other claim term's construction originally proposed on October 16, 2006, I presume TMS and Dr. Tjaden intend these three terms to maintain the meaning originally proposed by TMS on October 16, 2006.

### 2. Supplemental Opinions Regarding Infringement In Light of TMS's Revised Proposed Constructions

62. Dr. Tjaden attempts to use TMS's revised constructions for **modem** and **wide-area network** to distinguish Ethernet, wireless, DSL, and cable users. He claims that Internet access in these cases can "be accomplished by a personal computer having an Ethernet or 802.11 wireless adapter, which is in turn connected to a device or local area network which connects ***in some way*** to the Zap2it.com web site." Tjaden Rebuttal at 48 ¶ 117 (emphasis added).

63. Given that zap2it.com is an Internet domain, I do not know of any common "way" of accessing zap2it.com other than through the Internet, a wide-area network. The majority of users of zap2it.com who connect to the service from computers at their viewing locations do so by means of cable modem, telephone modem, or DSL modem. The users' computers may connect to the various modems in multiple ways, such as by Ethernet cable, wireless station or serial cable (including USB connections). In almost all circumstances, though, the user must connect to the Internet through a modem.

64. In my opinion, even if TMS's revised proposed construction of **modem** is entered by the Court, DSL modems, cable modems, T1 connections, and T3 connections should all be held to be equivalents of that construction of the term **modem**, because they all perform substantially the same function in substantially the same way to achieve substantially the same result.

65. For the reasons stated above, even if TMS's newly proposed constructions are adopted, my opinions concerning infringement of the Claims of the '078 patent are unchanged.

**B. The Asserted Claims of the Patent-In-Suit Are Not Indefinite**

66. I have been advised that a patent claim can be indefinite only if the claim is so ambiguous that even a narrowing construction cannot be properly applied to avoid indefiniteness.

67. In his Rebuttal Report, Dr. Tjaden asserted "that the term 'wide-area network' as used in the '078 Patent's claims is indefinite, and therefore claims 1-7 are invalid due to indefiniteness" Tjaden Rebuttal at 44 ¶ 109. Specifically, Dr. Tjaden stated:

> This term, wide-area network, was not in common use among data communications engineers in 1992. It would not have had a clear and precise meaning to a skilled artisan in this time-frame, in my opinion. About all a skilled artisan could have concluded without an expanded description is that a wide-area network was not a local area network, the only other kind of 'area network' commonly known at the time

Tjaden Rebuttal at 15 ¶ 36.

68. I disagree with Dr. Tjaden's assertions regarding the term "wide-area network."

69. The term "wide-area network," as it is used, for example, in the context of Claims 1-7 of the '078 patent, is clear and would be readily understood by a person of ordinary skill in the art. In that context, the term "wide-area network" would have its plain and ordinary meaning, i.e., a network that covers a large area (e.g., "a communications network that connects geographically separated areas" Microsoft Press Computer Dictionary (1991) (Ex. G)), and could include more than one local area network. See, e.g., Bell, Gordon C., "Toward a History of (Personal) Workstations (Draft), ACM-0-89791-176-8-1/86-0001, 1986, pg. 16 (Ex. F).

70. Contrary to Dr. Tjaden's assertions, the concept of **wide-area networks** was well-known in the computer industry in the late 1980s and early 1990s. A search of the USPTO web site results in 137 hits for patents containing the terms **wide area network** and "computer" with an application date prior to 1992. In addition, a search of the ACM Digital Library using the term **wide area network** yields 30 citations showing publication dates prior to 1992.[4] The first edition of the Microsoft Press Computer Dictionary (1991) defines the term **wide area network** as "A communications network that connects geographically separated areas" (Ex. G). In my opinion, the term **wide area network** was known to one of ordinary skill in the art at the time of the priority date of the '078 patent.

71. Further, as stated above, the concept of a **wide-area network** was disclosed by Mr. Levine in the '078 patent. For example, Mr. Levine describes communicating over the nation's telephone lines, a wide-area network. Furthermore, Claim 1 of the '078 patent describes "geographically dispersed television viewing locations," and the specification describes an alternative in which "the schedule information could be provided to the personal computer via cablecast or broadcast" (3:65-67).

72. In his Rebuttal, Dr. Tjaden states that "...the term 'wide area network' was not a common term of art as of the priority date. The IEEE Standard Dictionary published in 1993 does not define this term." Tjaden Rebuttal at 43 ¶ 108 While the 1992 IEEE Standard Dictionary does not have a definition of **wide area**

[4] A similar search using the IEEE Xplore facility yielded 151 results

**network**, it does acknowledge the term in its list of Acronyms and Abbreviations[5] at page 1618 (Ex. H). There, the abbreviation **WAN** is described as "wide area network."[6]

73. In my opinion, it is clear that a person of ordinary skill in the art would understand the term **wide-area network** as used in Claims 1-7 of the '078 patent and would also clearly understand what is claimed by Claims 1-7 of the '078 patent.

## IV. CONCLUSIONS

74. In my opinion, Dr. Tjaden's reasons for supporting TMS's revised proposed claim constructions are without merit. Further, even under TMS's revised proposed constructions, the zap2it website still infringes the asserted claims of the '078 patent.

## VI. PREVIOUS TESTIMONY

75. I have previously testified at trial in the following cases:

*BCE Emergis Corporation v. Community Health Solutions of America, et al* United States District Court, Western District of Texas, Austin Division, Case No. A-02-CA-741-JN, February, 2004.

*Kermit Aguayo and Khan N. Tran v. Universal Instruments Corporation* United States District Court, Southern District of Texas, Houston Division C A. NO. H-02-1747, August, 2004.

76. I have previously testified by deposition in the following cases:

*BCE Emergis Corporation v. Community Health Solutions of America, et al.* United States District Court, Western District of Texas, Austin Division, Case No. A-02-CA-741-JN, January, 2004.

---

[5] "The Acronyms and Abbreviations Section was added to this dictionary to help the user to identify some of the acronyms and abbreviations that have become part of the engineering vocabulary" (page 1595, emphasis added).

[6] The same Acronyms and Abbreviations list includes descriptions for **LAN** (local area network) and **MAN** (metropolitan area network) and **SNA** (systems network architecture) as well. SNA was an IBM proprietary network architecture, first developed in 1974, that defined the interconnections among "sub-area networks."

*Kermit Aguayo and Khan N. Tran v. Universal Instruments Corporation* United States District Court, Southern District of Texas, Houston Division C.A. NO. H-02-1747, April, 2004.

*The Chamberlain Group, Inc. and Johnson Controls Interiors, LLC v. Lear Corporation and Ford Motor Company* United States District Court, Northern District of Illinois, Eastern Division, Civil Action No. 1:05-CV-3449, January, 2006.

*b-50 com, LLC v. Xformity, Inc.* United States District Court, Northern District of Texas, Dallas Division, Civil Action No. 3:04-CV-0542-B, March, 2006.

*Hyperion Solutions Corporation v. OutlookSoft Corporation* United States District Court, Eastern District of Texas, Marshall Division, Case No. 2:04-CV-436 (TJW), June, 2006.

*Spreadsheet Automation Corporation v. Microsoft Corporation,* United States District Court, Eastern District of Texas, Marshall Division, Civil Action No. 2-05-CV-000127-TJW, February, 2007.

## V. TRIAL EXHIBITS

77. I may rely on visual aids and demonstrative exhibits that demonstrate the bases of my opinions and that may assist me in explaining the technical subject matter that I expect to testify about. Examples of these visual aids and demonstrative exhibits may include, for example, claim charts, patent drawings, excerpts from patent specifications, file histories, interrogatory responses, deposition testimony and deposition exhibits, as well as charts, diagrams, videos, models, test samples and specimens, and animated or computer-generated video presentations describing the technology relevant to the asserted claims and the accused products and processes.

78. I have not yet prepared any exhibits for use at trial as a summary, or in support, of the opinions expressed in this report, but I expect to do so in accordance with the Court's scheduling orders.

## VI. COMPENSATION

79. Since July 2006, I have been retained by Ropes & Gray LLP as an expert consultant to TV Guide in connection with this action. Under the terms of my agreement with Ropes & Gray LLP, I am to be paid an hourly rate of $475, plus necessary and reasonable disbursements for my work. I receive no other compensation for my work on this action.

February 28, 2007

J. Tipton Cole