

**Appendix A**  
**Specific Findings From *Cisco* Litigation to Which Collateral Estoppel Applies**

**Finding 1:** For purposes of 35 U.S.C. § 102(a), the conception date for the '260 patent is no earlier than November 1991. For the purposes of 35 U.S.C. § 102(b), the critical date is December 18, 1991. *Cisco*, 318 F. Supp. 2d at 502;

**Finding 2:** Chrimar did not produce a single witness to dispute the facts stated in declarations by Cisco's witnesses, nor did Chrimar depose any of Cisco's witnesses. *Id.* at 502-03;

**Finding 3:** Green Book was published on May 21, 1991, when representatives from SynOptics, AMD, Chipcom, DEC, and Motorola held a technology demonstration at DEC's facilities in Littleton, Massachusetts, which demonstration was widely reported in the press, and at which demonstration Green Book was made available and disseminated without restriction to anyone who wished to receive a copy. *Id.* at 503-05.

**Finding 4:** Green Book was freely available to anyone who requested copies from DEC and SynOptics, and copies actually were mailed to individuals who made such requests. *Id.* at 504.

**Finding 5:** Green Book also was published on June 18, 1991 when the Green Book's proponents made a presentation at a public X3T9.5 TP-PMD Committee Meeting in Minneapolis, Minnesota, that was attended by approximately 90 engineers. *Id.* at 505.

**Finding 6:** The voluminous evidence submitted by Cisco, which Chrimar did not dispute, conclusively demonstrated that the Green Book was publicly accessible. Green Book was reasonably available to the public interested in the art. Once the existence and availability of the Green Book were known, interested individuals had easy access to it. *Id.*

**Finding 7:** Numerous witnesses testified that the five companies freely distributed the Green Book to anyone who requested a copy, An interested individual certainly could have obtained a copy of Green Book with reasonable effort by either attending the May 21, 1991 demonstration in person, or by simply contacting anyone of the five companies and asking for it. *Id.* at 505-06.

**Finding 8:** The whole purpose of the five companies' collaborative effort on the Green Book, as well as the May 21, 1991 demonstration and June 18, 1991 presentation, was to create and agree on a common circuit design for FDDI-STP interoperability so that customers could use network equipment from multiple vendors interchangeably. All of Cisco's third-party witness declarations were consistent with this underlying purpose, and Chrimar did not present any evidence that any of the "Authoring Group" of Green Book did anything contrary to this purpose. *Id.* at 506.

**Finding 9:** As a whole, the uncontroverted declarations submitted by Cisco amount to clear and convincing evidence that interested persons of ordinary skill in the art, not just the "Authoring Group," could locate the Green Book prior to November 1991 after exercising reasonable diligence. As a matter of law, the Green Book is a "printed publication" under 35 U.S.C. § 102(a) & (b). *Id.*

**Finding 10:** The AMD Application Note was published in June 1991. The document itself has an issue date of June 1991 and "Publication # 15923" on its cover. *Id.* at 507.

**Finding 11:** A primary purpose of AMD Application Note was to assist customers with new technology. It was AMD's regular business practice to publicly distribute such application notes as early as possible before the application notes came out. An AMD representative prepared a

cover sheet and packet for use in responding to requests for information on FDDI-over-STP technology, which attached both the Green Book and the AMD Application Note. *Id.*

**Finding 12:** Copies of the AMD Application Note were actually provided to AMD's customers, sales force, and FAEs. Multiple copies of application notes were distributed to AMD field offices once a month so that customers could obtain copies by calling the AMD field offices. *Id.*

**Finding 13:** AMD's general policy was to use application notes as promotional tools. It sought to disseminate them as widely as possible to generate sales. The AMD Application Note was actually sent to customers, sales force, and FAEs. *Id.*

**Finding 14:** AMD published multiple application notes and made them all publicly available and indexed for retrieval. Although the AMD Application Note did not receive the level of media coverage given to Green Book, evidence of actual dissemination more than makes up for the lack of publicity an interested person of ordinary skill could locate the AMD Application Note with reasonable effort. *Id.*

**Finding 15:** As a matter of law, the AMD Application Note is a "printed publication" under 35 U.S.C. §§ 102(a) and (b). *Id.*

**Finding 17:** The AMD Application Note contains a more detailed disclosure than the "cable detect" circuit, which is similar to that of Green Book. Consequently, the AMD Application Note is at least as enabling as the Green Book. Everyone of the Court's conclusions concerning anticipation by Green Book applies equally to the AMD Application Note. *Cisco*, 318 F. Supp. 2d at 496 n.20.

**Finding 18:** Green Book discloses multiple current loops within the meaning of claim 1, each loop including pairs of copper data communication lines contained in the cable that connect individual computers to the FDDI network via the concentrators. *Id.* at 496-499.

**Finding 19:** It is unnecessary to enable an entire "network" to satisfy the "current loop means" element of claim 1. *Id.* at 496-97. However, even if enablement of a "network" were required to satisfy the "current loop means" element of claim 1, Green Book discloses how to create a traditional local area network (LAN) by connecting a workstation to a FDDI concentrator through STP cable in a star configuration. *Id.* at 496-97.

**Finding 20:** The only changes needed to implement the Green Book in a working FDDI-over-STP network were the use of STP cables instead of optical fiber and the replacement of the optical transceiver (PMD) in the FDDI NIC with an electrical transceiver (PMD). Green Book fully discloses all of the necessary elements to make a "network" within the meaning of claim 1. *Id.*

**Finding 21:** Green Book discloses "existing internal circuitry" within the meaning of claim 1 by virtue of its disclosure of centertapped isolation transformers. *Id.* at 498.

**Finding 22:** Green Book discloses the use of "respective pairs of data communication lines [that] are associated with different ones of the associated pieces of equipment" within the meaning of claim 1. Green Book's FDDI-over-STP implementation is a physical star configuration with logical ring flow. *Id.* at 498-99.

**Finding 23:** How the data flows in the network is irrelevant; claim 1 only requires that a physical data communication pair associated with one particular piece of equipment. *Id.* at 498.

**Finding 24:** In the "cable detect" circuit, the upper and lower pairs of wires extend from the M-port of the concentrator to the Sport of one particular piece of equipment. Further, data flows directly between the equipment and the concentrator in a FDDIover-STP network just as it does between equipment and the hub in the '260 patent; hence, there is at least a one-to-one correspondence between the data communication lines connecting the concentrator and the equipment from the logical perspective as well. *Id.*

**Finding 25:** The Green Book contains an enabling disclosure of "current loop means" because it discloses a current loop over a pair of data communication lines that connect a piece of electronic equipment to a network through existing internal circuitry. Enablement of the associated network is not required. The Green Book discloses pairs of data communication lines (STP cable) physically connected to one particular piece of equipment. *Id.* at 499.

**Finding 26:** The Green Book uses a 5 volt DC power supply to inject a low DC current onto the data communication lines, which power supply corresponds to input terminal 25 and isolation power supply 26 in the '260 patent. Hence, there is a source means in Green Book. *Id.*

**Finding 27:** The 650 ohm resistor in Green Book is a "detector means" because it is in the same circuit position as resistor R2 in the '260 patent and different voltages are applied across it depending on whether current is flowing in the loop. Here, the 650 ohm resistor is capable of providing an indication of a change of current flow from 2.5 V to 0 V, which represents disconnection of a computer. That is all that is necessary to meet the "detector means" limitation of claim 1. *Id.* at 501, 502.

**Finding 28:** In Green Book, the circuitry downstream of the 650 ohm resistor that measures the V L1 voltage signal is irrelevant to whether the 650 ohm resistor is a detector means. Like

the '260 patent, circuitry downstream of a resistor determines how to respond to a change in current signal. However, that circuitry is not part of the corresponding "detector means" in the '260 patent. *Id.* at 501.

**Finding 29:** The "cable detect" circuit checks the V L1 voltage signal to determine if a computer is disconnected - it is 2.5 V when connected and 0 V when disconnected. Chrimar's own demonstration to the Court at the hearing on Chrimar's objections to the Special Master's R&R confirmed that the Green Book works for this purpose because an alarm sounded when the computer was disconnected from the cable. *Id.*

**Finding 30:** The fact that later circuitry can also detect the operation of a wrap-back connector (through a 4.3 V signal) does not mean the 650 ohm resistor is not a "detector means." The 650 ohm resistor is still capable of providing an indication of a change in current flow from 2.5 V to 0 V, which represents disconnection of a computer. When wrap-back connectors are not used, there are only two possible V L1 voltage levels. In that case, the 650 ohm resistor would operate exactly the same as the resistor R2 if the alarm circuitry of the '260 patent preferred embodiment were added downstream. *Id.* at 501-02.

**Finding 31:** Green Book does not say that the use of wrap-back connectors is essential; it merely says it is "likely" that a cable with wrap-back connectors will be used. Chrimar produced no testimony from anyone knowledgeable with the creation of Green Book who claimed the sole embodiment of the Green Book used wrap-back connectors. *Id.* at 502.

**Finding 32:** Reducing the Green Book to practice and then substituting it for part of the '260 patent preferred embodiment to see if that circuit still "works" is not an appropriate mode of

analysis for anticipation. *Id.* Anticipation must be determined by comparing the anticipatory reference to the language of the claim as interpreted by the Court. *Id.*

**Finding 33:** The Green Book contains an enabling disclosure of "detector means" because the disclosed "cable detect" circuit is capable of providing an indication of a change in current flow which represents disconnection of a piece of electronic equipment from the network. The additional capabilities of detecting the operation of a wrap-back connector does not mean that the Green Book does not anticipate the claimed invention. *Id.*

**Finding 34:** The May 21, 1991 demonstration of the Green Book circuit constituted prior use. Numerous witnesses said that the demonstration was public. It is clear that the demonstrators did not specifically limit attendance to members of the five companies. The demonstration and announcement were advertised in the May 20, 1991 issue of *Communications Week*. *Cisco*, 318 F. Supp. 2d at 507-08.

**Finding 35:** At the May 21, 1991 technology demonstration, DEC, Chipcom, and SynOptics each provided concentrators, and all five companies provided computer workstations. As demonstrated on May 21, 1991, each concentrator used multiple DC current loops originating at the M-ports of concentrators and extending over copper wires to the associated S-ports of individual computers which implemented the cable detect function of Green Book. There, each concentrator used was connected to multiple computers forming a LAN. Thus, Chrimar admitted that the demonstration "implemented" the Green Book's "cable detect" circuit, which itself anticipates claim 1. *Id.* at 508.

**Finding 36:** Numerous witnesses confirmed that the demonstration worked to implement the solution set forth in the Green Book, including the "cable detect" circuit. Hence, the May 21,

1991 demonstration constituted public use of a circuit with one or more electronic components capable of providing an indication of a change in current flow which represents disconnection of a piece of electronic equipment from the network. *Id.*

**Finding 37:** Regarding the knowledge component of 35 U.S.C. § 102(a), because the Green Book and the AMD Application Note were publicly accessible as "printed publications," they were also sufficiently available as public knowledge. The May 21, 1991 demonstration shows the state of public knowledge at the time. *Id.*

**Finding 38:** Public use and knowledge under 35 U.S.C. § 102(a) constitute additional grounds for invalidating claim 1 of the '260 patent. *Id.*