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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

APTIX CORPORATION, a California corporation, META SYSTEMS, INC., a French corporation,

No. C 98-00762 WHA

Plaintiffs,

v.

QUICKTURN DESIGN SYSTEMS, INC., a Delaware corporation,

Defendant.

FINDINGS OF FACT AND CONCLUSIONS OF LAW AFTER EVIDENTIARY HEARING ON MOTION FOR TERMINATING SANCTIONS

AND RELATED CROSS-ACTIONS.

INTRODUCTION

On a motion for terminating sanctions in this patent-infringement action, the issue is whether the founder, chairman, chief executive officer and lead inventor of plaintiff Aptix Corporation tried to defraud the Court by fabricating an entire engineering notebook and altering numerous entries in a once-genuine notebook in order to establish a fraudulent date of invention some fourteen months before the presumed date of invention. After a two-day evidentiary hearing, at which the following evidence was presented, the Court makes the following findings of fact and conclusions of law.

FINDINGS OF FACT¹

A. Events Leading to the Commencement of this Action.

1. This lawsuit arises out of a worldwide contest over intellectual-property rights to hardware-logic-emulation technology. All of the parties do business in the hardware-logic-emulation field. QuickTurn Design Systems, Inc., is a San Jose-based corporation. Mentor Graphics Corporation is an Oregon-based corporation. Meta Systems, Inc., is a French corporation and a wholly-owned subsidiary of Mentor. Aptix Corporation is also a San Jose-based corporation. Dr. Amr Mohsen is Aptix’s founder, chairman and chief executive officer.

2. QuickTurn has successfully asserted its own hardware-logic-emulation patents against Mentor and Meta in the United States District Court for the District of Oregon and in the United States International Trade Commission. In these proceedings, QuickTurn obtained a series of injunctions prohibiting Mentor and Meta from selling infringing hardware-logic-emulation systems in the United States (Joint Status Report filed Sept. 7, 1999, at 5-6). QuickTurn also filed patent-infringement suits against Meta and Mentor in Europe. After the present suit was filed, Mentor filed an infringement suit against QuickTurn in the District of Delaware. In addition, Mentor attempted a hostile takeover of QuickTurn. *See Mentor Graphics Corp. v. QuickTurn Design Sys., Inc.*, 728 A.2d 25, 31 n.19, 32 (Del. Ch. 1998). In 1996, Aptix brought an antitrust suit against QuickTurn in this district. The suit was dismissed on summary judgment. *Aptix Corp. v. QuickTurn Design Sys., Inc.*, 96-20909-JF, Order Granting Summary Judgment of No Causal Antitrust Injury and Dismissing Case (N.D. Cal. Aug. 27, 1998).

3. The present suit arises out of a joint agreement among Mentor, Meta and Aptix, all against QuickTurn. Aptix owns United States Patent No. 5,544,069, which covers certain hardware-emulation technology. Amr Mohsen is the named inventor. Aptix licensed the ’069 Patent to Meta and Mentor, and granted Meta the right to sue to enforce it in San Jose (QuickTurn is located in San Jose). Mentor negotiated the license agreements on behalf of both Mentor and Meta (Zak Dep. 66-67). Mentor paid Aptix one million dollars up front (Zak Dep. 59; Ismail Dep. 53). Under

¹ The Court views all findings set forth herein as supported by the record. In some, but not all, instances, the Court has provided citations to the record for the convenience of the parties and to facilitate any appellate review.

1 the patent-licensing agreement, Mentor agreed to front all legal expenses for prosecuting the
2 infringement suit against QuickTurn (Zak Dep. 49-50). They would share in the net recovery, if any,
3 but Mentor would absorb all of the outlay to the extent recoveries would not cover them (May 23,
4 2000, York Tr. 110-11). Aptix and Mentor also negotiated a financing agreement and a marketing
5 agreement (Zak Dep. 34-35). Under the financing agreement, Mentor loaned Aptix three million
6 dollars (Zak Dep. 60; Ismail Dep. 53). Aptix and Meta sued QuickTurn for infringement of the '069
7 Patent on February 26, 1998. QuickTurn counter-sued both plaintiffs and added Mentor as a
8 counter-defendant.

9 **B. The July 31, 1988, Invention Date and the Questioned Notebooks.**

10 4. The application for the '069 Patent was a continuation of an application filed
11 September 20, 1989. September 20, 1989, was therefore the presumed date of invention, but
12 plaintiffs could prove an earlier date of invention if they could establish an earlier conception date (and
13 diligent reduction to practice).

14 5. The Civil Local Rules for the Northern District of California required Aptix
15 and Meta to disclose each claim asserted and the date of conception for each asserted claim.
16 Civ. L.R. 16-7(b)(3). The purpose of these rules is to establish the claimed date of invention for
17 purposes of prior-art analysis where the inventor/assignee intends to swear behind the presumed date
18 of invention, *i.e.*, the date of application.

19 6. Aptix and Meta made their disclosure on April 13, 1998, asserting claims four,
20 five, seven and eight of the '069 Patent (Exh. 1157 at 2). Under the column "Date of Conception,"
21 Aptix and Meta listed "To be provided" as to each asserted claim (*ibid.*). Aptix and Meta stated they
22 could not list any dates of conception because the inventor, Amr Mohsen, was out of the country
23 (*ibid.*):

24 The inventor of the '069 patent is presently out of the
25 United States and is due back the last week in April. Plaintiffs
26 are unable to provide conception dates at this time. Promptly
after the inventor's return, plaintiffs will provide the conception
dates.

27 7. As part of their initial disclosures, Aptix and Meta produced photocopies of
28 seventeen pages relating to the "research, design, and development of each claimed invention"

1 (hereinafter “Initial Production from the 1989 Notebook”). These seventeen pages appeared to be
2 photocopied from an engineering notebook started in 1989 by Amr Mohsen (Exh. 1169). This
3 notebook, despite its multiple versions, will be generally referred to herein as the “1989 Notebook.”
4 Amr Mohsen knew about and consented to counsel’s disclosures set forth above (Mohsen Dep. 684-
5 85) and, in fact, on March 29, 1998, had faxed to counsel the pages from which the production was
6 made (Exh. 229). Aptix and Meta did not produce the actual 1989 Notebook or a full photocopy at
7 that time. Significantly, no disclosures were made from any other engineering notebook; nor was any
8 reference made to the existence of any other engineering notebook.

9 8. On April 19, 1998, Amr Mohsen advised Aptix’s lawyers, Howrey &
10 Simon,² that he had found yet another engineering notebook, an earlier one, a volume allegedly started
11 in 1988. This engineering notebook supposedly documented the first conception of the ’069 invention
12 (Mohsen Dep. 690). This source will be referred to herein as the “1988 Notebook.” According to
13 Amr Mohsen, upon his return from abroad he found the 1988 Notebook in his garage, the same
14 source for the 1989 Notebook, although allegedly in a different file drawer (*id.* at 981). Amr Mohsen
15 was the only person ever to search Aptix’s records and his garage for documentation of research and
16 development efforts.

17 9. On May 4, 1998, plaintiffs’ lawyers then served a supplemental initial
18 disclosure (Exh. 1158). Aptix and Meta listed “July 31, 1988,” as the “Date of Conception” for all the
19 asserted claims (*ibid.*). This date was more than a year before the patent application date (September
20 20, 1989). As part of this supplemental disclosure, Aptix and Meta also produced a black-and-white
21 copy from the 1988 Notebook (Exh. 1104). They stated: “Pursuant to Local Rule 16-7(c), plaintiffs
22 produce additional documents relating to the research, design and development of each claimed
23 invention, Production Nos. AM000018 to AM000081” (Exh. 1158). The 1988 Notebook was the
24 only evidence corroborating a conception date of July 31, 1988 (Mohsen Dep. 686-88). Amr
25 Mohsen later identified Page 3 of the 1988 Notebook, dated July 31, 1988, as the earliest description
26 of his invention (*id.* at 690).

27 **C. Events Leading to the Evidentiary Hearing.**

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² Now Howrey, Simon, Arnold & White.

1 10. The 1988 Notebook became important herein because it was the basis for the
2 claimed date of invention of July 31, 1988. The 1989 Notebook became important primarily because
3 of the light it shed on the authenticity, or lack thereof, of the 1988 Notebook but also because it, too,
4 was represented as genuine proof of Amr Mohsen’s research and development leading to the ’069
5 Patent. Both became embroiled in a demand for forensic testing as follows.

6 11. On April 13, 1998, as stated, Aptix and Meta served the Initial Production
7 from the 1989 Notebook. On May 4, 1998, as stated, Aptix and Meta listed July 31, 1988, as the
8 conception date for all asserted claims and produced a black-and-white photocopy of the
9 1988 Notebook.

10 12. On May 28, 1998, the law firm that had, years earlier, been Amr Mohsen’s
11 patent counsel on the ’069 Patent — Skjerven, Morrill, MacPherson, Franklin & Friel — made a
12 voluminous third-party production of documents. Therein, QuickTurn found a photocopy of the 1989
13 Notebook *as it existed in August 1989* (“Skjerven Copy”). QuickTurn discovered that there were
14 large discrepancies between the corresponding pages of the Skjerven Copy and the Initial Production
15 from the 1989 Notebook. Significantly, the Skjerven firm produced *no* photocopy of the 1988
16 Notebook.

17 13. On June 4, 1998, QuickTurn’s counsel deposed Amr Mohsen, who brought
18 to the deposition the 1988 and 1989 Notebooks. QuickTurn’s counsel made black-and-white
19 photocopies of both. Amr Mohsen was questioned. The deposition was continued to August 1998.
20 Again, Amr Mohsen brought the actual 1988 and 1989 Notebooks. They were marked as exhibits
21 but Amr Mohsen insisted on retaining them. This time, QuickTurn’s counsel made a color copy of the
22 1989 Notebook, which will be referred to herein as the “Color Copy of the 1989 Notebook” (Exh.
23 1300).

24 14. QuickTurn then requested that the original 1988 and 1989 Notebooks be
25 subject to forensic testing. This request eventually degenerated into a dispute over the terms and
26 conditions for any testing. On November 24, 1998, QuickTurn moved to compel production of the
27 original notebooks for testing. Before the motion could be ruled on, however, Amr Mohsen reported
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1 that the original notebooks had been stolen from his car, allegedly on December 14, 1998, the details
2 of which event are set forth below.

3 15. On December 6, 1999, the Court agreed to set an evidentiary hearing to
4 determine the authenticity of, and the facts surrounding the creation of, the two notebooks and to rule
5 on cross-motions: (i) defendant's motion for terminating sanctions and (ii) plaintiffs' motion for a ruling
6 that a photocopy could be used at trial in lieu of the missing 1988 Notebook. The hearing was set for
7 February 29 and March 1, 2000. On the eve of the hearing, however, Aptix's counsel, Howrey &
8 Simon, announced that Amr Mohsen required separate counsel and that Howrey & Simon would be
9 terminated by Aptix. Thereafter, Aptix decided to retain Howrey & Simon after all. Amr Mohsen
10 retained O'Melveny & Myers. The evidentiary hearing was delayed until May 9 and 10. Six
11 witnesses testified live or on videotape. Nine testified by designated deposition transcripts. Numerous
12 exhibits were received. Oral argument was held on May 23. The Court requested supplemental
13 submissions on three occasions thereafter.

14 16. At the hearing, the Court assessed the credibility of the live witnesses, and the
15 credibility of Amr Mohsen from the portions of his videotaped deposition that were played. Amr
16 Mohsen took the stand and asserted his Fifth-Amendment privilege against self-incrimination as to all
17 questions asked. These findings of fact are informed by the Court's credibility determinations.

18 **D. Discrepancies between the Skjerven Copy**
19 **Of the 1989 Notebook and All Later Versions.**

20 17. As seen, what initially provoked the demand for forensic testing was the
21 discovery of the Skjerven Copy of the 1989 Notebook. It was and remains substantially more
22 abbreviated than any of the modern versions produced by plaintiffs. Comparing the Skjerven Copy
23 (Exh. 1102) against the Color Copy of the 1989 Notebook (Exh. 1300), for example, the major
24 differences are as follows. *First*, there are substantial text and diagram additions to the corresponding
25 pages of the Color Copy of the 1989 Notebook. The Skjerven Copy shows that in August 1989,
26 many pages, though in some cases dated and signed, were only partially filled with writing or
27 completely blank. For example, Page 39 of the Skjerven Copy, though not the last page written on in
28 that copy, is completely blank (Exh. 1102 at 39). By contrast, Page 39 of the Color Copy of the
1989 Notebook has a hand-drawn, labeled diagram that covers approximately the top third of the

1 page and a large X that covers approximately the bottom two-thirds of the page (Exh. 1300 at 39).
2 From the time the Skjerven Copy was made in August 1989 to the time the Color Copy of the 1989
3 Notebook was made in 1998, text and/or diagram additions were made to at least the following pages
4 of the 1989 Notebook: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 36, 37, 38, 39, 40 and 41. All of
5 these entries are dated before the date of application, September 20, 1989.

6 18. *Second*, Amr Mohsen added and backdated at least some of his signatures in
7 the 1989 Notebook. The Skjerven Copy has some dated, filled-in pages without Amr Mohsen's
8 signature. The corresponding color-copy pages, however, bear Amr Mohsen's signatures *with dates*
9 matching the dates at the top of the pages. For example, Page 39 of the Color Copy of the
10 1989 Notebook bears Amr Mohsen's signature, dated August 6, 1989, in contrast to the blank page
11 in the Skjerven Copy (Exhs. 1300 and 1102). Amr Mohsen conceded he must have signed the page
12 after August 6 and backdated the signature (Mohsen Dep. 292-93). As another example, the
13 Skjerven Copy has an entry dated "Sunday July 9" that begins on Page 8 and continues through
14 Page 11 without any signatures (Exh. 1102). In the Color Copy of the 1989 Notebook, these pages
15 each bear Amr Mohsen's signature with the date July 9, 1989 (Exh. 1300).

16 19. As another example, Pages 10 and 11 of the Color Copy of the
17 1989 Notebook show Amr Mohsen's signature and a signature date, while the corresponding pages
18 of the Skjerven Copy do not (Exhs. 1300 and 1102). Amr Mohsen's signature and signature date, as
19 well as additional text and diagrams on Pages 10 and 11, were *added* to the 1989 Notebook *after*
20 the Skjerven Copy was made in August 1989. Manifestly, the dates of the signatures were false.
21 These false entries were all dated before September 20, 1989, the date of the patent application.

22 20. A comparison of the Skjerven Copy and the Color Copy of the
23 1989 Notebook reveal other backdated signatures on Pages 12, 13, 14, 15, 16, 17, 18, 19, 20, 40
24 and 41 (Exhs. 1300 and 1102). (The Skjerven Copy also differs dramatically from the Initial
25 Production from the 1989 Notebook in all of the ways noted above for the Color Copy of the
26 1989 Notebook.)

27 **E. Discrepancies Among Modern Copies of the 1989 Notebook.**

1 21. Although the Skjerven Copy differed from any and all of the later copies in a
2 wholesale manner, the later copies differed even among themselves in subtle but important ways. A
3 close examination of the Initial Production from the 1989 Notebook revealed that it was not quite the
4 same as the 1989 Notebook (Exhs. 1169 and 1300). Close inspection revealed that while
5 Amr Mohsen tried very hard to conform them, he betrayed slight differences in letter formation. The
6 subtle differences betray a forgery in progress.

7 22. For example, Page 11 of the Color Copy of the 1989 Notebook and of the
8 Initial Production from the 1989 Notebook *both* include the following notation to a diagram in the
9 upper right-hand corner: “ICs, electronic component, PLD or FPGAs” (Exhs. 1169 and 1300).³ The
10 notation is positioned identically in both versions. But, most notably, in the Initial Production from the
11 1989 Notebook, the “G” of “FPGAs” was slightly larger than in the Color Copy of the 1989
12 Notebook; the “or” was slightly larger than in the Color Copy of the 1989 Notebook and was
13 underlined in the Initial Production from the 1989 Notebook; and the “PLD” was slightly smaller and
14 slightly higher on the page than in the Color Copy of the 1989 Notebook (*ibid.*). This was not an
15 artifact of photocopy reproduction, but was an inadvertent imperfection in an attempt to make the two
16 look identical.

17 23. Amr Mohsen went so far as to manually copy *even the cross-outs in the*
18 *text*. Page 36 of both versions, for example, shows the words “second level hierarchical connection”
19 *crossed out (ibid.)*. Significantly, in both documents, Amr Mohsen had positioned the words in the
20 same place on the page, used strokes oriented at the same angles to cross the words out, and left the
21 same parts of letters untouched by the cross-out strokes (*ibid.*). Despite these conscious attempts at
22 duplication, however, small differences in the way the letters and strokes were formed demonstrate
23 that neither was a mechanical reproduction or photocopy of the other (*ibid.*). It is obvious that Amr
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28 ³ The Skjerven Copy of the same page did not have that notation in the upper right-hand corner,
although it contained the same diagram (Exh. 1102). Thus, the notation was added after the date on the page.

1 Mohsen (whose handwriting was unquestionably present) tried extremely hard to ink in additions to
2 both versions to conform one to the other — carrying over mistakes and all.⁴

3 **F. Amr Mohsen’s Explanation and the “Ink-On-Photocopy Version.”**

4 24. After the authenticity of the notebooks was at issue, Aptix’s counsel wrote a
5 letter dated September 25, 1998, advising QuickTurn that “Dr. [Amr] Mohsen has determined that the
6 [seventeen pages of the initial production] are not accurate copies of the corresponding pages of his
7 laboratory notebook” (Exh. 1137). No explanation was given. Amr Mohsen was offered up for
8 another deposition (*ibid.*).

9 25. This was followed eventually by another session of Amr Mohsen’s deposition
10 and to the production of what the parties refer to as the “Ink-On-Photocopy Version” of the
11 1989 Notebook. This was a photocopy of a version of the 1989 Notebook with fewer
12 enhancements, *i.e.*, an earlier version of the 1989 Notebook — with ink additions made by
13 Amr Mohsen (Exh. 1345). The *photocopy* portion was an intermediate version of the
14 1989 Notebook, more elaborate than the Skjerven Copy, but less elaborate than the color copy made
15 in 1998. The *ink* additions conformed the text to the Color Copy of the 1989 Notebook. The Ink-
16 On-Photocopy Version was the source for the Initial Production from the 1989 Notebook.

17 26. We can no longer compare the Ink-On-Photocopy Version (Exh. 1345) with
18 the 1989 Notebook because the 1989 Notebook has been destroyed (save for a few scraps). We
19 can, however, compare it to the Color Copy of the 1989 Notebook, a snapshot of the
20 1989 Notebook as it existed in August 1998 (Exh. 1300). That comparison shows the same studied
21 but imperfect attempt at hand-copying as set forth above. That is to say, the ink portions and their
22 counterparts in the 1989 Notebook appear identical at first glance. As before, however, closer

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25 ⁴ The Initial Production from the 1989 Notebook also contained a few examples of writing *not* present in
26 *either* the Skjerven Copy *or* the Color Copy of the 1989 Notebook. For example, on Page 11, about two thirds of
27 the way down the page on the far right, the Initial Production from the 1989 Notebook includes arrows drawn
28 from the writing “(PIS)” to two “P”s in a diagram to the left (Exh. 1169). Those arrows do not appear in the
Skjerven Copy or the Color Copy of the 1989 Notebook, although the “(PIS)” and the diagram appeared in the
Color Copy and the “(PIS)” and part of the diagram appeared in the Skjerven Copy (Exhs. 1102 and 1300).
Another example of material that appeared only in the Initial Production from the 1989 Notebook was on Page 15
(an addition to a diagram labeled “IC & Component” about three quarters of the way down the page) (Exh. 1169).

1 inspection reveals lettering with very slightly different formation. *Plainly, one document was hand-*
2 *copied from the other.*

3 27. Amr Mohsen testified as follows in his deposition. *First*, he generally
4 addressed the wholesale additions made to the Skjerven Copy. He admitted what had become
5 undeniable — that he had added material to his 1989 Notebook after the dates written thereon
6 (Mohsen Dep. 279-81, 292-94, 985-92). He admitted that he had made additions after he had
7 signed and dated the pages (*id.* at 280). Amr Mohsen testified, however, that he did not add material
8 to the 1989 Notebook entries after the first witness had signed and dated them (*id.* at 279-82). Amr
9 Mohsen testified that “the first witness is a very important date, in my mind, as the finalization of the
10 disclosure in this” and that “once [a page] is witnessed, my approach is not to add anything to the
11 original material” (*id.* at 281). He further testified that additions made after his signature were not
12 “inventive” material and were made only for “clarification” (*id.* at 280, 987). According to Amr
13 Mohsen, the 1989 Notebook was an “interactive developmental notebook” (*id.* at 1002-03).

14 28. Amr Mohsen’s testimony that he did not add to the original material on a page
15 after the page had been signed by the first witness has proven untrue. The Ink-On-Photocopy
16 Version of the 1989 Notebook shows that, contrary to his testimony, Amr Mohsen added material to
17 pages of the 1989 Notebook *after* the first witness (Robert Ossan) had signed and dated them. This
18 is because the photocopy portion of that version bore the signatures of both Robert Ossan and Ralph
19 Whitten *before* Amr Mohsen made the ink additions to it. The material added in ink was added *after*
20 both witnesses had signed and dated the pages. In other words, contrary to his explanation,
21 Amr Mohsen added material to the 1989 Notebook after the first witness signed it.

22 29. *Second*, Amr Mohsen addressed the Initial Production from the
23 1989 Notebook. Amr Mohsen testified that in March 1998, before he left on a trip to Saudi Arabia
24 and Egypt, he looked through his garage for material relating to the research and development of the
25 ’069 Patent (Mohsen Dep. 955-56). In a folder, he found the 1989 Notebook, along with several
26 copies of pages from the 1989 Notebook (*id.* at 956-57). He testified that he did not find the 1988
27 Notebook at that time (*id.* at 981). On his flight to Saudi Arabia in March 1998, Amr Mohsen
28 claimed he took with him a copy of the 1989 Notebook that he had found in his garage and a

1 computer-scanned copy of the 1989 Notebook that reflected the 1989 Notebook at that time (*id.*
2 957-59; Exhs. 138 and 1345). He intended to go through the documents to get a “temporary copy”
3 of the 1989 Notebook to fax to Howrey & Simon for the initial disclosure (Mohsen Dep. 957-59).
4 He did not explain why he did not simply photocopy the pages from the original and send them on (or
5 provide the original to counsel).

6 30. On the first leg of his flight, he said he realized that the scanned copy of the
7 1989 Notebook (Exh. 138) was of poor quality (Mohsen Dep. 957-59). He then turned to the
8 photocopy of the 1989 Notebook, but it allegedly did not have all the new material contained in the
9 actual 1989 Notebook at that time (*ibid.*). He decided to add “through ink some of the differences in
10 order to make them similar to the original notebook with plans to point out to Howrey & Simon that
11 those were added” (*ibid.*). He planned, he said, to give Howrey & Simon the actual 1989 Notebook
12 when he returned (*ibid.*). After he finished making the ink additions to the photocopy, he wasn’t
13 happy with them and allegedly decided that he would fax the scanned copy of the 1989 Notebook to
14 Howrey & Simon rather than the Ink-On-Photocopy Version (*ibid.*). But during his stop-over in New
15 York, he claimed, he inadvertently faxed Howrey & Simon the Ink-On-Photocopy Version (*ibid.*). In
16 turn, Howrey & Simon bates labeled a photocopy of the fax (with the fax header redacted) as
17 AM000001-AM000017 and produced it to QuickTurn as the Initial Production from the 1989
18 Notebook (Exh. 1169). The cover sheet of Amr Mohsen’s fax made no reference to any of these
19 complications (Exh. 229).

20 31. Amr Mohsen claimed he then left the alleged scanned copy and the
21 Ink-On-Photocopy Version at his apartment in Cairo (Mohsen Dep. 964). Amr Mohsen testified that
22 he left them because “I had several folders that were just, you know, too much to carry at the time and
23 didn’t need to take them back with me to the United States” (*id.* at 965). The copies were
24 approximately a quarter of an inch thick (*ibid.*). In September 1998, however, after the authenticity
25 issue arose, he allegedly retrieved the copies and informed Howrey & Simon of their existence (*id.* at
26 963). Howrey & Simon then wrote the September 25, 1998, letter notifying QuickTurn’s counsel that
27 the Initial Production from the 1989 Notebook was not, in fact, an accurate representation of the 1989
28 Notebook (Exh. 1137; Mohsen Dep. 963).

1 32. This explanation is not credible. *First*, Amr Mohsen’s deposition testimony
2 that the 1989 Notebook was an “interactive” document to which he only added “non-inventive”
3 clarifications to the 1989 Notebook after he signed and dated it is unpersuasive. The obvious central
4 purpose of signing and dating the pages in the first place is to construct an accurate chronology of the
5 inventor’s work. Once the Skjerven Copy came to light from his former patent firm, Amr Mohsen
6 was caught red-handed and had to admit the obvious — he had altered the 1989 Notebook in a
7 wholesale manner. Even his follow-on statement about not altering the notebook after the witness
8 signed has been shown to be false.

9 33. *Second*, Amr Mohsen clearly made a studied effort to make the new material
10 in the Ink-On-Photocopy Version and the new material in the 1989 Notebook (as seen in the
11 Color Copy of the 1989 Notebook) look identical. He even went so far as to duplicate the
12 cross-outs. There was no purpose other than trying to fool the reader.

13 34. *Third*, the forensic evidence shows that Amr Mohsen made the
14 Ink-On-Photocopy Version *before* he added the same material to the 1989 Notebook. Contrary to
15 his testimony, he made the ink additions to the Ink-On-Photocopy Version *first* and then *later* hand-
16 copied those additions into the 1989 Notebook. This conclusion is supported by Expert Speckin’s
17 inspection with the help of an Electro Static Detection Apparatus (ESDA) showing that the
18 corresponding entry on Page 36 of the 1989 Notebook actually pressed through the page and made
19 an impression near the bottom of the Ink-On-Photocopy Version (Speckin Tr. 105-10).⁵ This shows
20 that the Ink-On-Photocopy Version Page 36 had been inserted underneath the corresponding page in
21 the 1989 Notebook so that the key ink passage was protruding out (like a bookmark) and visible to
22 Amr Mohsen during the copying process. The bottom of the dry-run page (the ink-on-photocopy)
23 happened to be under the part of the notebook page being altered, so that it received and retained the
24 impressions as Amr Mohsen labored over the fabrication. The Ink-On-Photocopy Version was a dry
25 run. Once he got the dry run adjusted as he liked, Amr Mohsen hand-copied the new material into the
26 original.

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28 ⁵ When a person writes on a page, a corresponding impression will be made on the page underneath
(Speckin Tr. 105). The ESDA renders these impressions visible, even when they cannot be detected by the
naked eye (*id.* at 106).

1 **G. The 1988 Notebook.**

2 35. The 1988 Notebook surfaced for the first time in 1998. Prior thereto, no one
3 had ever seen it or heard of it except for, allegedly, Amr Mohsen and his brother Aly Mohsen, who
4 lived in Springfield, Missouri. The 1988 Notebook was the sole evidence cited by Aptix and Meta in
5 support of their alleged date of conception of July 31, 1988.

6 36. After it was requested for forensic testing, the 1988 Notebook was destroyed,
7 save for scraps recovered by Amr Mohsen in time for the evidentiary hearing. It is no longer possible
8 to describe the evidence based on direct observation. The following description of the 1988
9 Notebook is based partially on those scraps (Exh. 121) and primarily on a 1998 color copy of the
10 1988 Notebook made prior to its disappearance (Exh. 120).

11 37. The 1988 Notebook started out as an ordinary engineer’s notebook. The
12 cover was labeled “Personnel [sic] Engineering Notes” with the name and then address of
13 Amr Mohsen (all hand-written) (Exh. 120).⁶ Inside, each page was numbered in the upper outside
14 corner; the back side of Page 1 was Page 2 and so on; each page was pale green with a light blue grid
15 (Exhs. 121 and 120). The pages were apparently glued or sewn in, *i.e.*, they were not removable as
16 in a loose-leaf notebook (*ibid.*).

17 38. The first entry bore a date of July 30, 1988, although the first “8” in “1988”
18 was overwritten from a prior number that seems to the lay observer to have been a “9” or possibly a
19 “7.” The last entry bore a date of June 25, 1989. The book contained, evidently, 152 pages, but
20 fewer than 63 contained any writing, or at least those were the only ones in the color copy. Several
21 pages, including the first page and others interspersed among the first 63 pages, had no text at all, only
22 a large, hand-drawn X (Exh. 120).

23 39. In the 1988 Notebook, Amr Mohsen had recurring difficulty in writing the
24 correct date, repeatedly making the same mistake. On at least five pages, he wrote “1998,” it would
25 appear, and then overwrote the first “8” to make it look like “1988,” one example of which appears in
26 the very first entry, the July 30 entry, as discussed (*ibid.*). Expert Speckin convincingly determined
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28 ⁶ The address was an earlier address than the one to which the scraps were returned in 2000. The lower
third of the label was torn off before the 1998 color copy was made.

1 (without contradiction) that the change was from 1998 to 1988 in all five cases (Speckin Tr. 124-25).
2 These overwrites appeared on Pages 2, 4, 6, 14 and 26 (Exh. 120). The dates that included the
3 overwrites were: “July 30, 1988,” “August 7, 1988,” “August 14, 1988,” “9/30/88,” and “7/31/88”
4 (*ibid.*). These dates were all written by Amr Mohsen. Taken together with other evidence, this is a
5 strong indication that these entries were made in 1998, not 1988.

6 40. Page 1 was blank, with a large X. The first entry was on Page 2, the back
7 side of Page 1. It was dated July 30, 1988, and appeared to document Amr Mohsen’s observations
8 concerning the benefits of “programmability,” a central feature of the patent-in-suit.

9 41. The second entry (Page 3), dated July 31, 1988, described the “fundamental
10 architecture” of programmability and its promotion of efficient expandability, maximum speed and
11 lowest cost. It contained a diagram of a multi-board arrangement with the phrase “one or more
12 substrates,” explaining graphically that the substrates could be separate boards. The phrase “at least
13 one substrate” was used in the ’069 claims. Early on in this litigation, an issue arose whether “one or
14 more substrates” could cover a multi-board arrangement. This page bore the signature of Amr
15 Mohsen with a date of “7/31/88” and the phrase “Read & understood” above his brother Aly
16 Mohsen’s signature with a date of August 14, 1988.

17 42. The third entry (Page 4) is on the back of Page 3 and is dated August 7,
18 1988. That text all seems to be in the same color ink but one sentence seems to be written somewhat
19 more tightly and lightly in order to squeeze it into the space available. It says “A programmable system
20 such as the one using hierarchical interconnect architecture described last week on 7/31/88.” The
21 sentence appears in the middle of the page, with other text above it and below it. It is now undisputed
22 that this sentence was written in an ink different from the ink used to write the rest of the page.

23 43. Every page in the 1988 Notebook signed by Amr Mohsen was also witnessed
24 by his brother, Aly Mohsen, under the phrase “Read & understood” and alongside a witness date.
25 Aly Mohsen’s signature appeared on a total of 54 pages: six dated “8/14/88,” seven dated “9/5/88,”
26 ten dated “11/5/88,” seven dated “12/30/88,” twelve dated “3/26/89,” nine dated “6/30/89,” and
27 three undated (Exh. 120). At all relevant times, Aly Mohsen was a physician, not an engineer.
28

1 44. Aly Mohsen not only witnessed pages with text and/or diagrams but also
2 witnessed a number of blank pages, *i.e.*, pages with no text or diagrams — pages with nothing on
3 them but a large X. To be specific, most of the 1988 Notebook pages contained writing and/or
4 diagrams (Exh. 120). Twelve pages of 63 pages, however, were blank but for a large X covering the
5 page as of the time the photocopy was made (*ibid.*). Amr Mohsen and Aly Mohsen signed and dated
6 four of the blank pages that now bear an X (pages 31, 48, 55 and 61). On these blank pages, Aly
7 Mohsen wrote “Read & understood.” There was, however, nothing on the pages to read or to
8 understand. Inconsistently, there were eight blank pages with large Xs with no signatures (pages 1,
9 19, 21, 23, 25, 29, 35 and 39) (Exh. 120). In contrast, no pages in the 1989 Notebook were signed
10 or witnessed that had only an X. (There were two blank pages with an X, but neither had any
11 signature at all.)

12 45. As shall be explained, scraps from the 1988 Notebook were recovered.
13 Based on these scraps, it is undisputed that all of the surviving witness signatures (a total of six) by
14 Aly Mohsen, purportedly made on two dates separated by almost a month, were in the same ink all
15 sharing the same stray contaminant. All of the returned Xs were made in yet another single ink (Lyter
16 Tr. 298-99, 347).

17 46. The 1988 Notebook entries avoided any reference by name to any of the
18 many “customers” and “experts” the notebook claimed were consulted. The first entry dated July 30,
19 1988, for example, stated “I have visited during the last few weeks several customers using or planning
20 to use Actel FPGA” and listed the “benefits of programmability” revealed by them (Exh. 120 at 2).
21 None of the customers were referenced by name. So too with the entries on Pages 4, 10 and 44.
22 The entry for January 8, 1989, stated that during the prior three weeks, “I spent a lot of time talking to
23 many experts about attachment techniques . . .” (*id.* at 42). Their input was reduced to six generalized
24 sentences. None of the experts were identified. Numerous entries purported to summarize “papers”
25 and articles read by Amr Mohsen without ever identifying any of the papers or articles and simply
26 itemizing general considerations (*id.* at 6, 16, 20, 22, 24 and 30).

27 **H. The Covert Origin of the 1988 Notebook.**
28

1 47. It is clear that no one — other than the two Mohsen brothers — knew of the
2 1988 Notebook until 1998. It emerged only when plaintiffs were overdue in disclosing their date of
3 conception pursuant to this district’s disclosure rules. The list of those who did not know about the
4 1988 Notebook is remarkable:

5 48. *First*, the Skjerven firm did not know of the 1988 Notebook even though the
6 Skjerven firm was Amr Mohsen’s counsel in applying for what became the ’069 Patent. The
7 application was filed September 20, 1989. Amr Mohsen gave the lawyers the 1989 Notebook (or at
8 least the version then extant). He did not give them any version of the 1988 Notebook, even though it
9 purports to set forth the invention (or else a photocopy would have been produced with the documents
10 from the Skjerven firm). This lapse is all the more striking in light of a Daytimer entry for December
11 26, 1988, offered by Amr Mohsen to verify that he really did go to see his brother to obtain witness
12 signatures. That entry states that he was taking an “Eng. Patent Notebook” to his brother (Exh. 123).
13 Although the authenticity of that entry is itself questioned, if the 1988 Notebook were in fact a *patent*
14 notebook and really *then* existed, one would have expected him to show it to his *then patent* lawyer,
15 especially since it purportedly laid out the conception of the invention. He did not.

16 49. *Second*, Amr Mohsen did not show the 1988 Notebook to Robert Osann, a
17 member of the founding team of Aptix, who reviewed the 1989 Notebook in mid-1990, and who
18 “wanted to know what’s [Aptix] and what is its technology” (Osann Dep. 40-43). Aptix was
19 supposedly founded to pursue the very type of technology set forth in the 1988 Notebook. There was
20 carry-over in the subject matter, and the 1989 Notebook was started less than two weeks after the
21 date of the last entry of the 1988 Notebook (Mohsen Dep. 996-97; Exh. 1103 at 1; Exh. 1104 at
22 63).

23 50. *Third*, Amr Mohsen did not show the 1988 Notebook to Ralph Whitten, the
24 other witness to the 1989 Notebook. Nor did Amr Mohsen show the notebook to any other Aptix
25 employee.

26 51. *Fourth*, in the present litigation, Amr Mohsen did not give the Aptix or Meta
27 lawyers the 1988 Notebook, or a copy thereof, until after the initial disclosure deadline (Mohsen Dep.
28 993-94). Instead, he faxed only seventeen pages from the 1989 Notebook without making any

1 reference to the existence of an earlier notebook (Exh. 229). Nor did he show it to Meta in the
2 negotiations that led up to their collaborative suit against QuickTurn.

3 52. *Fifth*, during the time period covered by the dates in the 1988 Notebook (July
4 30, 1988, to June 25, 1989), Amr Mohsen had been the chief executive officer of Actel Corporation,
5 which he had founded. Mohsen never told Actel about any inventions he was working on or about
6 any engineering notebook (Mohsen Dep. 994). The first time Amr Mohsen told Actel about the 1988
7 Notebook was when he contacted Actel to negotiate a release of the material therein on April 23,
8 1998, a few days after he returned from abroad (*id.* at 563-64, 994). In order to obtain that release,
9 Aptix signed a covenant not to sue Actel for infringement of the '069 Patent (Mohsen Dep. 564; Exh.
10 1146 (Apr. 29, 1998, letter to J. East from A. Mohsen with attachment); Exh. 1147 (June 3, 1998,
11 fax to A. Mohsen from R. Taylor with attachments); Exh. 1148 (Aug. 18, 1998, Covenant Not to Sue
12 and Release of Rights)).

13 53. *Sixth*, the 1989 Notebook, while it cross-references within itself, makes no
14 cross-reference to the 1988 Notebook even though the subject matter is the same and the 1989
15 Notebook starts just two weeks after the 1988 Notebook allegedly ends. Moreover, Aly Mohsen did
16 not witness any entry in the 1989 Notebook, contrary to what one might expect given his alleged
17 interest in his brother's inventions and the witnessing pattern he and Amr allegedly established with the
18 1988 Notebook.

19 54. The Court finds it most dubious that the Mohsen brothers would have kept
20 any genuine 1988 Notebook so secret for so long. It is all the more suspect in light of the fact that
21 Amr Mohsen did disclose the 1989 Notebook to a number of parties. These circumstances are
22 powerful evidence that the 1988 Notebook is a recent fabrication.

23 **I. The Disappearance of the Original Notebooks.**

24 55. As the motion practice over the proposed forensic testing neared a ruling in
25 December 1998, Amr Mohsen announced that the original notebooks had been stolen from his car.

26 56. Before the notebooks disappeared, Amr Mohsen knew that Aptix's lawyers
27 had obtained a questioned-document expert (Mohsen Dep. 338-39). He knew that QuickTurn's
28 motion to compel had been filed (*id.* at 333-34). He knew that the abuse-of-process counterclaim

1 asked for punitive damages in the amount of at least ten million dollars. He was the principal contact
2 with Aptix’s lawyers concerning this case (*id.* at 332-33). He had been advised by Aptix’s lawyer to
3 keep the notebooks, which by this time had been marked with original deposition exhibit tags, in a safe
4 place (*id.* at 331-32). Aptix’s counsel had stressed the need for “the safekeeping of the notebooks”
5 and insisted that they “not leave the possession of Aptix or its attorneys at any time” (Exh. 1136).
6 Amr Mohsen, however, refused to let his lawyers keep them.

7 57. On December 11, 1998, a Friday, Amr Mohsen received a faxed copy of
8 QuickTurn’s counterclaims from Howrey & Simon (Mohsen Dep. 355). Howrey & Simon wanted
9 him to review the counterclaims and give feedback for Aptix’s response (*ibid.*). At his deposition,
10 Amr Mohsen testified that as he looked through the counterclaims, he noticed references to the
11 notebooks (*id.* at 355-56). He testified that he intended to bring the counterclaims home with him
12 over the weekend so that he could check the references against the notebooks, which he testified were
13 in a safe at his home (*ibid.*). He forgot, however, to bring the counterclaims home from work, he said,
14 so he decided to take the notebooks to work with him on Monday morning (*ibid.*). He kept the
15 originals together with his copies of the notebooks in a folder (*id.* at 372). Rather than simply bring a
16 copy, which would adequately have served his purpose, he testified that he brought the originals and
17 the rest of the folder with him in his brown briefcase when he left for work on Monday, December 14,
18 1998 (*id.* at 373).

19 58. Amr Mohsen testified that when he arrived at the Aptix parking lot, he
20 transferred the notebooks and copies from his brown briefcase, which had been in the passenger seat
21 of his car during the drive, to a black-cloth bag because his brown briefcase was too full to shut
22 (Mohsen Dep. 377-79, 389-90, 427). Alone, he claimed he then opened the passenger-side back
23 door of the car and put the black-cloth bag on the floor behind the passenger seat (*id.* at 391-93). He
24 supposedly left the bag with the notebooks in the car and went into the building. No plausible
25 explanation was offered for why, having removed the notebooks from his safe at home and having
26 taken them to Aptix specifically for review, Amr Mohsen then consciously left them unattended in the
27 parking lot rather than take them into his office. His explanation that he had too much to carry is
28 weak, especially in light of the fact that he returned to his car at midday and had another chance to

1 recover them. Although Amr Mohsen testified that he planned to retrieve the notebooks after he
2 spoke with Howrey & Simon that day (*id.* at 396), he did not speak with Howrey & Simon that day
3 (*ibid.*). Nor did he retrieve the notebooks, even after he returned to his car to go to a restaurant for
4 lunch (Exh. 1121; Mohsen Dep. 396, 399, 413-14, 418). He left the notebooks in his car during
5 lunch and did not take them into his office when he returned to Aptix (*ibid.*).

6 59. Amr Mohsen then attended a meeting that lasted until 8:00 p.m. (Mohsen
7 Dep. 414). Immediately after the meeting, he had a discussion with Aptix’s comptroller, Tom Huang
8 (*ibid.*). At about 9:45 p.m., Amr Mohsen walked alone to his car (*id.* at 421-23, 425). Tom Huang
9 had just gone to his car and was driving away (*id.* at 425; Huang Dep. 21-22). The only other
10 employee still at Aptix was Long Hong, who was inside the building when Amr Mohsen went to his
11 car (Mohsen Dep. 422; Hong Dep. 15, 17-18). Amr Mohsen testified that when he used his infrared
12 remote lock device to unlock his car from a short distance, the light went on in the car and he saw that
13 the rear passenger-side window had been broken (Mohsen Dep. 425). Amr Mohsen testified that
14 Tom Huang was just backing out of his parking space (*ibid.*). Amr Mohsen testified that he waved to
15 Mr. Huang with the intent of stopping him, but Mr. Huang didn’t see him (*ibid.*). Amr Mohsen
16 testified that he looked to the back-seat floor, but didn’t see the bag with the notebooks and copies;
17 he then checked the trunk of the car, but again did not see the bag (*id.* at 427).

18 60. At his deposition, Mr. Huang testified that he did not notice a broken window
19 on Amr Mohsen’s car at any time before he left Aptix for the day (Huang Dep. 14-15). His car was
20 parked thirty to forty meters from Amr Mohsen’s Mercedes (Exh. 1121; Huang Dep. 14). He and his
21 wife left Aptix in his wife’s car for dinner, and later returned (Huang Dep. 14). They parked her car a
22 little farther from the Mercedes than his car was from the Mercedes (Exh. 1121; Huang Dep. 16-18).
23 Close to 9:45 p.m., the Huangs left Aptix separately in their own cars — Mr. Huang’s wife first, and
24 then Mr. Huang (Huang Dep. 20-24). Mr. Huang saw Amr Mohsen in his rear-view mirror right after
25 Mr. Huang had pulled out of his space as Mohsen was approaching his car (*id.* at 23). He could see
26 the back of Amr Mohsen’s car and he could see Amr Mohsen approaching the car from the
27 passenger side (*id.* at 23-24). Although he did see Amr Mohsen, Mr. Huang did not see Amr
28 Mohsen wave at him as he left the parking lot (*id.* at 21-22).

1 61. Amr Mohsen paged Mr. Huang shortly after Mr. Huang left (*id.* at 25-27).
2 Mr. Huang had driven about five miles before he was paged (*id.* at 25). He estimated that the page
3 came less than ten minutes after he left the Aptix parking lot (*id.* at 25-26). After Mr. Huang left the
4 parking lot, Amr Mohsen was unobserved for about five to ten minutes (Hong Dep. 27; Huang Dep.
5 25-26). Mr. Huang returned to Aptix, and Amr Mohsen told him about the notebooks (Huang Dep.
6 33).

7 62. Amr Mohsen’s car was a Mercedes 600 SRL (Mohsen Dep. 384).
8 A broken window would not have set off the alarm (*id.* at 385). The alarm would have been triggered
9 only if someone had opened the door without a key (*ibid.*). Nobody at Aptix heard the car alarm go
10 off (Mohsen Dep. 404). If the alarm had gone off, only Amr Mohsen could have turned it off because
11 he was the only person with a key (*id.* at 405). There was no sign that the back door had been
12 opened (*ibid.*). The back windows of Amr Mohsen’s car were tinted so that a person would need a
13 flash light to see inside at night and would have a difficult time seeing inside during the daylight hours
14 (Mohsen Dep. 380).

15 63. Amr Mohsen was the principal contact with Aptix’s lawyers concerning this
16 case (Mohsen Dep. 332-33). No one other than Amr Mohsen had seen the notebooks or the
17 black-cloth bag in his car. No one had seen the notebooks in his safe at home, where he claimed he
18 usually kept them (*id.* at 452). No one other than Amr Mohsen looked in the trunk of his car the night
19 of the alleged disappearance (Mohsen Dep. 451).

20 **J. The Emergence of Purported Corroboration.**

21 64. After the original notebooks disappeared and were no longer available for
22 forensic testing, the Mohsen brothers began to produce documents corroborating their story and
23 vouching for the use of photocopies as evidence in lieu of the originals. *First*, Amr Mohsen found his
24 1989 Daytimer, already referenced. The 1989 Daytimer included various entries that referred to
25 taking a “patent” or “engineering” notebook to his brother. *Second*, Aly Mohsen allegedly found a
26 photocopy of part of the 1988 Notebook (Mohsen Dep. 473; Aly Mohsen Tr. 264-65). *Third*, Amr
27 Mohsen testified that he searched his garage yet again, alone again, and found loose notes with 1988
28 dates relating to the ’069 Patent (Mohsen Dep. 950; Exhs. 125 and 1170).

1 **K. The False Entries in the Daytimer.**

2 65. With respect to the 1989 Daytimer (which also included the last week of
3 1988), Amr Mohsen made the following entries of interest:

4 December 26, 1988: Drive to S. Lake Tahoe
5 Aly/Take
6 (Eng. Patent Notebo**K***)

7 (N.B.: The “**K**” was an overwrite and cross-out, and
8 will be explained below.)

9 March 26, 1989: Meet Aly
10 (PXX Eng. Notebook)

11 (N.B.: The “**PXX**” was another overwrite, and was
12 illegible.)

13 June 30, 1989: Fly to Springfield
14 (Take Eng. Notebook)

15 If these entries were genuine, they would indeed tend to corroborate the Mohsens’ story. On the face
16 of the Daytimer, however, two points stand out, before ever considering the forensic evidence.

17 66. *First*, out of more than 800 entries (a conservative estimate) in the Daytimer,
18 these three entries are the *only* entries in the entire Daytimer that explain with specificity a reason for
19 any trip or meeting or other entry. They are also three of only five entries in the Daytimer with *any*
20 parenthetical matter. In the other entries, all that Amr Mohsen ever typically wrote down was “staff
21 meeting” or “Paul C” or “Board Meeting” or an address or phone number. These three entries are
22 clearly out of character with the custom and usage otherwise set forth in the Daytimer.⁷

23 67. *Second*, the overwrite and cross-out in the December 1988 entry are
24 significant. The entry reads “Take/(Eng. Patent Notebo**K***)” where the **K** represents an overwrite
25 and the * represents a cross-out. The Court has examined the original (and invited the parties to do
26 so as well and to comment). Based on the Court’s own review, there is a very high probability (and
27 the Court so finds) that the original entry — before the alterations — was “Take/(Eng. Patent

28 ⁷ The Daytimer has approximately 855 entries, which were made in pencil and at least five inks
distinguishable to the casual observer. All three questioned entries uniformly are in black ink even though the
vast majority of the 800-plus other entries are in another color or in pencil.

1 Notebooks)” — *i.e., in the plural*. Of course, in December 1988, there was only supposed to be
2 *one* engineering notebook. These circumstances indicate that Amr Mohsen made the entry later when
3 *both* notebooks existed. After making the parenthetical entry in the plural, however, Amr Mohsen
4 realized the error. Ink having been used, he was forced to make a correcting overwrite and cross-out
5 to change it to the singular. By order dated May 30, 2000, the Court specifically invited Amr Mohsen
6 (and the parties) to clarify this point and Amr Mohsen declined on Fifth-Amendment grounds. The
7 Court finds his silence incriminating and that it confirms the Court’s view of the entry.

8 68. *Finally*, the forensic evidence is convincing that these three entries were made
9 with an ink, a Formulabs “926” ink, that was not manufactured until 1994, five years after the
10 supposed entries. Both sides’ experts testified that the test used was valid, a so-called
11 “TLC separation image,” although the experts disagreed on the conclusions to be drawn from the test.⁸
12 The test image was compared against several thousand library standard TLC separation images. At
13 the hearing, Expert Speckin showed the standard TLC image for the Formulabs “926” ink and the test
14 image. The Court compared them. They looked identical. Expert Speckin testified there was a
15 perfect match and that the ink used was the Formulabs “926” ink. Expert Speckin testified without
16 contradiction that the Formulabs “926” ink was not available until 1994.

17 69. Opposing Expert Lyter’s response was unconvincing. At his deposition, he
18 had rejected the Formulabs “926” standard image because, earlier, there had been, he said, an
19 additional spot of gray in the Formulabs “926” standard that was not in the images made from the ink
20 taken from the questioned entries. He had based the gray spot on a supposed review by him of the
21 TLC standards from Expert Speckin’s library. But Expert Speckin produced his library standard
22 sample both at trial and at the deposition. *The library sample in question (for Formulabs “926”)*
23 *had no spot of gray*. Expert Lyter admitted at his deposition that he could no longer see any spot of
24 gray on the library image in question. At the evidentiary hearing, Expert Lyter said it must have
25 disappeared due to deterioration. That is not credible. The library image was less than two years old

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27 ⁸ A TLC separation image is an image made on a glass plate, called a TLC plate. The image is made for
28 the purpose of identifying an ink. The questioned ink is dissolved in a vial and then spotted on a TLC plate
(Speckin Tr. 89-90). The plate is then put in a mobile-phase solvent, which separates the dyes in the spots on
the plate (*ibid.*). These separations then can be compared to standard separations of known inks for a match
(*ibid.*).

1 when Experts Speckin and Lyter examined it (Speckin Tr. 390). Expert Lyter examined the image
2 only a couple of months after Expert Speckin (*ibid.*). It is not believable that a gray spot would have
3 suddenly vanished in the brief period between Expert Lyter’s original observation and his deposition.
4 Accordingly, the Court finds convincing the conclusion by Expert Speckin that the questionable
5 Daytimer entries were made with Formulabs “926” ink, an ink not available until after 1994.

6 70. Using the same type of test, Expert Lyter concluded the ink was a BIC ink. In
7 doing so, however, he did not have Formulabs “926” ink in his library to compare against the
8 questioned entries (Lyter Tr. 334-36). Expert Lyter thus could not have correctly identified the
9 questioned ink as Formulabs “926.” Moreover, the Court has examined the TLC plates and finds that
10 whereas the Formulabs “926” sample is identical to the subject samples, the BIC ink is not.⁹

11 71. Expert Lyter also testified that, according to his relative-aging analysis, the
12 questioned entries in the Daytimer were more than a year old (Lyter Tr. 324-25). He tested the
13 entries in late 1999. He first identified the type of ink used in the questioned entries as a particular
14 BIC ink (*id.* at 324). Then, to make a relative-aging comparison point, he made a recent writing
15 sample with the type of ink he had identified by applying a stroke of that ink to an unused portion of
16 the Daytimer (*ibid.*). He then compared the extracting rates of the questioned entries with the newly-
17 prepared sample and with the other entries in the Daytimer presumed to be authentic (which he had
18 also identified as being written in the particular BIC ink) (*ibid.*). Under his relative-aging test,
19 extraction rates would differ significantly between writing samples that were written recently and
20 writing samples that were five or more years old. His test required that the writing samples be of the
21 same ink. He found consistency between the questioned and unquestioned Daytimer entries, both of
22 which he found differed from his recently-made BIC black writing sample (*id.* at 324-25). He
23 concluded that the entries from the Daytimer were completely dry (at least three-and-a-half to five-
24 years old) because they differed from his recently-made sample, which he knew to be still in the drying

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26 ⁹ The TLC separation image from the March 26, 1989, and July 4, 1989, entries shows a yellow band
27 beneath a close group of several distinct methyl violet bands. Both Expert Lyter’s sample image (Exh. 188) and
28 Expert Speckin’s sample image (Exh. 1301) showed this. The separation images for the BIC black ballpoint ink
do not show three closely-grouped methyl violet bands as set forth in the separation images of the questioned
entries from the Daytimer (Exh. 188, lane 13; Exh. 1307). The Formulabs “926” separation image is a match (Exh.
1303, lanes 11 and 12 from right to left).

1 process. The Court rejects Expert Lyter’s conclusion based on this test because, as stated above,
2 Expert Lyter misidentified the ink used in the questioned entries as a BIC ink. His comparison
3 between the extraction rates of the questioned entries and the extraction rate of his recently-prepared
4 sample were between two different inks, and therefore could not form a proper basis for his
5 conclusion.

6 **L. The Return of the Notebook Fragments.**

7 72. More than a year after they were reported stolen, fragments from the
8 notebooks were reportedly returned. On or about January 5, 2000, according to Amr Mohsen, a
9 large priority-mail envelope arrived at his home bearing \$1.98 in postage (Exh. 121). It was hand-
10 addressed to Amr Mohsen at his home in Los Gatos with, as shall be important in a moment, the
11 correct zip code (95030). There was no legible return address on the envelope. The envelope was
12 postmarked in San Jose on January 3, 2000. Amr Mohsen testified that he did not open it until
13 January 20, whereupon he found an anonymous note from “FL” stating (in hand printing): “These
14 were discovered lately in our backyard. These look like important documents for you.” Also therein
15 he found, according to his deposition testimony, scraps from the 1988 and 1989 Notebooks, nine
16 from the 1988 Notebook and 23 from the 1989 Notebook (Mohsen Dep. 1029-39; Exh. 121).

17 73. He produced for inspection the envelope and its contents. These are now part
18 of the record (Exh. 121). (The red dust is fingerprint dust.) In some cases, the notebook scraps were
19 most of the page, torn away at the vertical edges. In other cases, the scraps were about a quarter of a
20 page. None of the totally blank pages were inside. None happened to have Amr Mohsen’s signature
21 (except one or two had a tiny portion of Amr Mohsen’s signature). The witness signature of his
22 brother occurred on six scraps from the 1988 Notebook. At this time, plaintiffs were seeking to use
23 the evidentiary hearing to prove up the foundation for using copies of the notebooks in lieu of the
24 originals at trial, a foundation that required plaintiffs to show that the proponent of the evidence had not
25 lost or destroyed the originals in bad faith (under Rule 1004 of the Federal Rules of Evidence).¹⁰

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28 ¹⁰ Plaintiffs later abandoned all reliance on any form of the notebooks, with the exception of the Skjerven Copy of the 1989 Notebook.

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74. The contents contained invoices with Amr Mohsen’s address, presumably the basis for “FL” to address the envelope. Significantly, however, those invoices had either the *wrong* zip code, 95032, or no zip code at all. *Nonetheless, “FL” had somehow placed the correct zip code on the envelope* (Exh. 121). In this manner, after missing for more than a year, the scraps miraculously re-appeared before the then-scheduled evidentiary hearing.

M. The Forensic Evidence and the 1988 Notebook.

75. Although certain of the techniques used by the forensic experts are not convincing, other tests and conclusions by them are convincing, as follows:

(a) *The Overwritten 1998s.*

76. Five dates by Amr Mohsen in the 1988 Notebook plainly were overwritten — all in the same basic way: the first eight in 1988 was superimposed over a prior number written by mistake. No expert is needed to see the overwrites nor to tell (in most cases) that the number previously written was either a 9 or a 7. Those dates are July 30, August 7, September 3, July 31 and August 14 (at Pages 2, 4, 6, 14 and 26).

77. Expert Speckin was able to go further, lifting the superimposed number to reveal the number originally written. In each case, the original year was 1998 (Exh. 1268(A)). Plaintiffs’ Expert Lyter did not contest these findings. The Court finds the methodology and findings by Expert Speckin persuasive on this point. The Court concludes, in light of this and all other evidence, that Amr Mohsen made the entries in 1998, thus accounting for the recurring mistake, and had to overwrite the mistake to make it resemble 1988.

1 (b) 1988 Notebook — Ink Identification.

2 78. Plaintiffs' Expert Lyter found that all of the extant signatures of Aly Mohsen
3 were in the same ink, probably a BIC ink, and even shared a common stray contaminant, indicating
4 that the same pen (or ink batch) had been used. This included six signatures from two dates: August
5 14, 1988, and September 5, 1988. Expert Lyter further found that all of the extant Xs were in a single
6 Uniball ink. He further found that all of the text sampled was in yet another ink, also a BIC ink, save
7 for the sentence on Page 4 beginning "A programmable system . . ." (This latter exception was
8 based on infrared testing and not on ink testing.) The Court accepts all of these findings.

9 (c) 1988 Notebook — Infrared Examination.

10 79. Infrared examination of questioned documents is used to determine if a
11 questioned document has entries made with different inks. Infrared examination can determine if
12 different inks are present even if they are the same color to the naked eye. Infrared examination of the
13 1988 Notebook Fragments demonstrated that Page 2 was altered by making additions to the
14 notebook in ink different from the rest of the page. The text added to Page 2 was: "Extending the
15 benefits of programmability to the system level will provide similar benefits for system level designs."

16 80. Infrared examination also demonstrated, as already stated, that Page 4 of the
17 1988 Notebook was altered by making additions to the notebook in an ink different from the rest of
18 the page, although both inks appear black (Speckin Tr. 64; Lyter Tr. 348-49). The text added to
19 Page 4 was: "A programmable system such as the one using hierarchical interconnect architecture
20 described last week on 7/31/88" (*ibid.*).

21 81. Infrared examination also demonstrated that Page 7 was altered by making
22 additions to the notebook in an ink different from the rest of the page (Speckin Tr. 66-67). The text
23 added to Page 7 includes the entire figure at the bottom of the page, the text associated with that
24 figure, the legend "Fig. 2(A)," and several other textual additions at the top of Page 7 (*ibid.*). This is
25 particularly significant in connection with the witnessing sequence on Pages 7 and 8 described under
26 the "obverse/reverse" section set forth below.

27

28

1 82. Infrared examination showed that Page 22 of the 1988 Notebook was altered
2 by making additions to the notebook in an ink different from the rest of the page. The text added to
3 Page 22 was the X at the bottom of the page.

4 83. Neither Expert Lyter nor plaintiffs offered any evidence to contradict the
5 conclusions Expert Speckin drew from his infrared testing of the questioned 1988 Notebook
6 Fragments. Expert Lyter affirmatively agreed that the sentence on Page 4 was in a different ink from
7 the rest of Page 4 (Lyter Tr. 348-49).

8 (d) *Obverse/Reverse Intersection Examination.*

9 84. An obverse/reverse-intersection-of-lines examination is performed
10 microscopically and can determine which side of a single piece of paper was written first. Writing on
11 side A of a paper creates a convexity on side B. Thereafter, any writing on side B that crosses that
12 convexity will break that convexity. Thus, observation of a broken convexity indicates that the
13 information on side A was written first. On the other hand, an unbroken convexity on side B indicates
14 that side B was written first (assuming the writings cross each other through the paper).

15 85. Page 4 was the backside of Page 3 in the 1988 Notebook (Exh. 121).
16 Examination of the 1988 Notebook Fragments demonstrated that substantially all of Page 4 of the
17 questioned 1988 Notebook, which bore the date of August 7, 1988, was written *prior to* Page 3 of
18 the same notebook, which bore the date of July 31, 1988 (Speckin Tr. 47-50). The sentence
19 beginning “A programmable system . . .” in the middle of Page 4, however, was added to Page 4 *after*
20 Page 3 was written (*ibid.*). Thus, the sequence was: Page 4, then Page 3, then the add-on sentence
21 on Page 4, a sequence inconsistent with the dates the pages bear.

22 86. Examination of the questioned 1988 Notebook Fragments (Exh. 121)
23 demonstrated that Aly Mohsen witnessed Page 8 of the 1988 Notebook *before* the additions
24 referenced above were made to Page 7 of the 1988 Notebook, *i.e.*, the “Figure 2(A)” set forth on the
25 bottom half of Page 7 (Speckin Tr. 58-59). The convexities from Page 7 (the “(A)”) in “Figure (2A)”
26 do not break through Aly Mohsen’s signature, meaning that Aly Mohsen’s signature was already
27 present on Page 8 before the drawing that was added to Page 7 (Speckin Tr. 57-62; Exh. 1258).

28

1 87. Expert Lyter did not conduct an obverse/reverse-intersection-of-lines test on
2 any documents in this case, but instead relied upon Expert Speckin’s photographs (Lyter Tr. 331).
3 The best way to conduct an obverse/reverse-intersection-of-lines test, however, is to inspect the
4 actual document under a microscope. The use of photographs is not a preferred way to conduct such
5 an examination (*ibid.*). Expert Speckin’s conclusions regarding his obverse/reverse-intersection-of-
6 lines test were based on his actual microscopic examination of the 1988 Notebook Fragments, which
7 he demonstrated during the evidentiary hearing (Speckin Tr. 228).

8 (e) *Relative-Ink-Date Testing.*

9 88. The Court will not place any reliance on the results of Expert Speckin’s
10 “relative-ink-date testing,” also known as “accelerated aging.” The Court recognizes that the
11 methodology is vouched for by both Experts Speckin and Brunelle, the latter especially preeminent in
12 the field. The problem is that the test tries to draw large conclusions from tiny differences in leach
13 rates and to do so after artificial “accelerated aging” (*i.e.*, heating in an oven) of part of the test sample
14 (so as to provide a “known” old sample for comparison). Each was tested at different durations of
15 leaching to detect differences in the leach rates. In all cases, most of the differences at various
16 durations were inconclusive and, at most, only a few were conclusive. The Court agrees that the tests
17 tend to show that the sentence on Page 4 “A programmable system . . .” was added recently and is
18 “still drying.” It is unnecessary, however, for the Court to rely on the test and the Court does not.

19 **N. The Other Corroboration.**

20 89. With respect to the loose notes found during Amr Mohsen’s third search of his
21 garage, there is no intrinsic proof of fraud other than the recurring problem of date overwrites (as
22 before, 1998 was overwritten to 1988) (Exh. 125).¹¹ With respect to Aly Mohsen’s photocopy, there

24 ¹¹ In his third search of his garage, Amr Mohsen found loose notes from 1988 in his various Actel
25 folders that he claimed corroborated his 1988 work on the ’069 invention. These were produced in January 2000.
26 The Court has reviewed them. At least two such notes have the same overwrite problem for 1988, clearly so, as
27 described above. None of the notes have any apparent relationship to the subject of the rest of the file. Expert
28 Speckin conducted a relative-ink-aging test, using “accelerated aging” on several notes from this production
and found strong differentials in the rates of extraction and percent extractions at various time intervals, leading
him to conclude that the notes were of recent origin. The Court views this as some evidence of fraud, though
weak. Given the vast array of more direct evidence of fraud, and given the overwrite problem that plagued Amr
Mohsen’s dating of his notes, the Court finds it unnecessary to rely on the relative-ink-aging test to find that
the notes are phony.

1 is no intrinsic proof of fraud. QuickTurn tried to demonstrate at the evidentiary hearing that the
2 photocopy could not have been made on a Sharp SF-7750 copier machine, as alleged by Aly
3 Mohsen. The Court finds this demonstration unconvincing, however, and places no weight on it.

4 90. The Court rejects both items of corroboration primarily for a more direct and
5 fundamental reason — the subject at issue, the 1988 Notebook — is so plainly a fraud that only the
6 most powerful corroboration could redeem it. The recently-produced photocopy could have easily
7 been of recent origin. Similarly, Amr Mohsen could easily have made up the 1988 notes, albeit
8 stumbling over the date in the process, and “found” them in his third garage search.

9 **O. Aly Mohsen.**

10 91. Plaintiffs’ counsel have argued, and the Court agrees, that it must find
11 Aly Mohsen’s testimony to be materially false, knowingly so, in order to conclude that the entire
12 1988 Notebook was a fraud. The Court so finds. The record shows with clarity that all of the 1988
13 Notebook, much of the 1989 Notebook, and all of the corroborating Daytimer entries were and are
14 counterfeit. While Aly Mohsen vouches for his brother, it would be all too easy to manufacture a story
15 in these circumstances. His testimony is not convincing in the face of the independent evidence of
16 fraud. There is, however, more that leads the Court to distrust Aly Mohsen, as follows:

17 92. *First*, time and again, Aly Mohsen’s signature appears along with the
18 statement “Read and understood” on blank pages with only an X. Yet there was nothing on the pages
19 to have “read” or to have “understood.” When asked to explain, Aly Mohsen testified that he rotely
20 signed wherever his brother signed (Aly Mohsen Tr. 279). This is not credible. A witness would have
21 no reason to claim to have “read and understood” a blank page or an X. (In the 1989 Notebook, by
22 contrast, there were two pages with only an X, but none of the witnesses (nor Amr Mohsen) signed
23 them.) It seems clear that Aly Mohsen wrote “Read and understood” and signed and dated
24 completely blank pages — before the Xs were added — so that material could be filled in later, it
25 being inconvenient for Amr Mohsen to travel to Springfield, Missouri (where Aly Mohsen lived) to
26 garner witness signatures as needed. The later-added material would then appear to have been
27 already written on the pages witnessed by Aly Mohsen.

28

1 93. *Second*, as stated above, Expert Speckin testified convincingly that Figure 2
2 (A) on Page 7 of the 1988 Notebook (which was returned in part as a scrap) was added *after*
3 Aly Mohsen’s signature on Page 8 (Speckin Tr. 58-59). Expert Speckin drew this conclusion from
4 his obverse/reverse examination described above. This evidence contradicts the Mohsen brothers’
5 representations that Amr Mohsen would write material into the 1988 Notebook and then Aly Mohsen
6 would sign the page, only in that order.

7 94. *Third*, the Daytimer entries that purportedly corroborated the witnessing trips
8 were patently fraudulent. To repeat only one reason, the questioned entries were written in an ink that
9 was not available until after June 1994.

10 95. *Fourth*, all of Aly Mohsen’s signatures on the 1988 Notebook Fragments
11 were written in the same ink containing the same stray contaminant. Plaintiffs’ Expert Lyter testified
12 that it was likely that these signatures were made with the same pen (or pens that were filled from the
13 same contaminated batch of ink). The tested signatures were purportedly from dates 22 days apart:
14 August 14 and September 5, 1988. Most people would have signed with whatever pen happened to
15 be readily available. It would have been unlikely that a witness would use the same pen on occasions
16 22 days apart. Plaintiffs offered no proof that Aly or Amr Mohsen had a custom of regularly using
17 only a single pen.¹² The most likely inference is that all of the signatures were made in a single sitting,
18 thus accounting for the same pen.

19 96. *Fifth*, Aly Mohsen testified that the Xs were already on the blank pages when
20 he witnessed them (Aly Mohsen Tr. 279). This was, however, undermined by the conclusion of
21 Expert Lyter that all of the Xs were made in the same ink (an ink different from that used to make
22 either the text or the signatures on the returned pages). This tends to show that all of the Xs were
23 actually made at the same time, thus accounting for the same ink. If so, they could not have been
24 added until after the last entry, supposedly well into 1989. In turn, the Xs could *not* have already
25 been on any of the X pages when witnessed (save only the very last one). Seen differently, if the Xs
26 were already there when Aly Mohsen signed from time-to-time over several months, it is very hard to
27

28 ¹² The Daytimer vividly shows that Amr Mohsen used many different pens and pencils to make entries
and had no single writing tool of choice in the 1988-89 time frame (Exh. 123).

1 understand why the text of the entries would have been one type of ink (BIC black) and the Xs ending
2 the entries yet another (Uniball) (Lyter Tr. 345-47). One would normally expect that the inventor
3 would have used the same pen for the text and any concluding X.¹³

4 97. Sixth, in December 1998, after the disappearance of the notebooks and
5 copies, but *before* Amr Mohsen requested by telephone that his brother look through his files, Aly
6 Mohsen came to San Jose to celebrate the beginning of Ramadan with his mother (Aly Mohsen Tr.
7 273). Aly Mohsen talked with Amr Mohsen at that time at a gathering, but Amr Mohsen did not even
8 tell him about the recent vandalism of his car or the disappearance of the notebooks (*ibid.*). Yet,
9 according to Aly Mohsen, when Amr Mohsen called him weeks *later*, he was noticeably upset about
10 the incident with the car (Aly Mohsen Tr. 264).¹⁴

11 **P. Amr Mohsen and the Fifth Amendment.**

12 98. At the outset of the evidentiary hearing, counsel for Amr Mohsen stated that
13 he intended to invoke his Fifth-Amendment privilege against self-incrimination rather than testify. At
14 the hearing, QuickTurn called him as a hostile witness, and he proceeded to invoke his privilege as to
15 each question asked. Well before the hearing and his decision to invoke his Fifth-Amendment
16 privilege, Amr Mohsen had given over one thousand pages of deposition testimony in this case. In
17 light of that record, the Court held that Amr Mohsen had waived his Fifth-Amendment privilege
18 against self-incrimination and ordered him to answer. (The order was stayed to allow a petition for
19 writ of mandamus).

20 99. When a party refuses to explain or to disclose information in its control, the
21 law permits the inference that the answer would be adverse. *See International Union v. National*
22 *Labor Relations Bd.*, 459 F.2d 1329, 1331 (D.C. Cir. 1972) (“[W]hen a party has evidence within
23 his control which he fails to produce, that failure gives rise to an inference that the evidence is

24
25 ¹³ The forensic ink evidence cited above pertains to all of the recovered scraps. The Court has
26 assumed that the same pattern found by Expert Lyter applies to the entire notebook. For example, not all of the
27 Xs were recovered. All that were recovered (a total of four) had the same ink. The Court finds it reasonable to
conclude that all other Xs were likewise in the same ink. (The Color Copy of the 1988 Notebook cannot confirm
the ink type but the color of the ink does appear similar.)

28 ¹⁴ Of course, Aly Mohsen has obvious family motives to want to help his brother. Moreover, Aly
Mohsen owns about fifteen thousand shares of Aptix.

1 unfavorable to him”). Even assuming a proper exercise of the Fifth Amendment, the Constitution
2 permits a trier of fact to draw such adverse inferences against a party in a civil suit. *Baxter v.*
3 *Palmigiano*, 425 U.S. 308, 318 (1976). “A non-party’s silence in a civil proceeding implicates Fifth
4 Amendment concerns to an even lesser degree.” *RAD Servs., Inc. v. Aetna Casualty & Sur. Co.*,
5 808 F.2d 271, 275 (3d Cir. 1986) (citing *Rosebud Sioux Tribe v. A & P Steel, Inc.*, 733 F.2d 509,
6 521 (8th Cir. 1984). When a witness invokes his or her Fifth-Amendment privilege against
7 self-incrimination in a civil case, the trier of fact can thus draw the inference that the answer would be
8 adverse to the witness.

9 100. In this case, Amr Mohsen has already given answers to many of the questions
10 he refused to answer at the evidentiary hearing. On the other hand, some new questions have been
11 raised and even the old questions deserve re-asking in light of the substantial evidence of forgery. For
12 example, Amr Mohsen has refused to clear up the Court’s question concerning the Daytimer entry of
13 December 26, 1988. For this reason, the Court has drawn adverse inferences from Amr Mohsen’s
14 silence where new questions were asked or where clarification of his prior testimony was sought.
15 These adverse inferences are not decisive, however, and the Court finds the evidence of notebook
16 forgery clear and convincing even without regard to any such inference.

1 **Q. The Assertion of the Fraudulent Evidence in this Lawsuit.**

2 101. Since the onset of this litigation, Aptix and Meta have advanced one or both of
3 the notebooks as evidence of a date of conception earlier than the earliest presumptive date of
4 September 20, 1989. In their April 13, 1998, initial disclosure of asserted claims, Aptix and Meta
5 produced seventeen pages from the 1989 Notebook (Exh. 1157). The dates on these pages predated
6 September 20, 1989. This was reasonably understood as purported documentation of a conception
7 date. Soon after the initial disclosure, Aptix and Meta produced as part of a supplemental disclosure a
8 black-and-white copy of the 1988 Notebook on May 4, 1998, and expressly stated that the
9 conception date of all asserted claims was July 31, 1988 (Exh. 1158). That date came from Page 3 of
10 the 1988 Notebook (Exh. 120).

11 102. Aptix and Meta continued to rely on the July 31, 1988, date from the
12 1988 Notebook in their responses to interrogatories. In interrogatory responses dated May 26, 1998,
13 Aptix, Meta and Mentor all asserted July 31, 1988, as the “Date of First Written Description” of all
14 asserted claims (Exh. 1315). Also on May 26, 1998, in a response to QuickTurn’s first set of
15 requests for production of documents, Aptix stated that documents relating to the conception date of
16 the asserted claims had been produced in the initial and supplemental disclosures (in other words, the
17 seventeen pages from the 1989 Notebook and the black-and-white copy of the 1988 Notebook).

18 103. In its opposition to QuickTurn’s motion to compel testing of the notebooks,
19 dated December 8, 1998, Aptix characterized the notebooks as “critical to its case” (Exh. 1134 at 2).
20 The opposition further stated (*id.* at 4):

21 These notebooks are important and irreplaceable business
22 records of Aptix and represent crucial evidence for Aptix
23 regarding the date of conception of Dr. Mohsen’s invention and
24 diligence in reducing the invention to practice. Dr. Mohsen’s
25 first notebook is likely to be particularly important to Aptix’s
26 prosecution of this case because the contents support Aptix’s
27 position that Dr. Mohsen conceived his invention before the date
28 of any of the alleged prior art offered by QuickTurn. Moreover,
should Aptix assert the ’069 patent against any other parties,
these notebooks will be vital in future litigation as well.

104. When this case was reassigned to the undersigned judge, a case-management
conference was held. At that point, Aptix and Meta still planned to rely on the notebooks as evidence
of a date of conception earlier than September 20, 1989. At that conference, on September 15,

1 1999, the Court asked counsel for Aptix what the consequences would be if the notebooks were held
2 inadmissible. Counsel for Aptix answered as follows (Exh. 1319, Wheeler Tr. 37):

3 It's going to be — Your Honor, I don't want to concede the
4 point. I haven't really thought it through carefully, quite frankly,
5 but I will certainly tell the Court that it would be a much more
6 difficult position for our client to be in. If that were the case,
7 we're going to have a hard row to hoe to avoid invalidating prior
8 art.

9 Again, in plaintiffs' prehearing memorandum dated February 22, 2000, after the Court issued a
10 tentative claims-construction ruling, Aptix, Meta and Mentor affirmed their intent to rely on the 1988
11 Notebook in this litigation. There they stated that they would offer testimony — at the evidentiary
12 hearing — to support the authenticity and admissibility of the Color Copy of the 1988 Notebook, the
13 1988 Notebook Fragments, and Aly Mohsen's copy of the 1988 Notebook (Exh. 1327 at 1-2). In
14 other words, at that stage, Aptix, Meta and Mentor were seeking to use the evidentiary hearing to
15 establish permission to use a copy in lieu of the lost 1988 Notebook. (Plaintiffs stated that they would
16 not rely on the 1989 Notebook for any of its dates (*id.* at 2).)

17 105. It was not until February 28, 2000, after the Court's tentative
18 claims-construction ruling and the same day as the Court's final claims-construction ruling, that Meta
19 and Mentor filed notice that they would not rely on either notebook. They excepted from their
20 statement, however, the Skjerven Copy of the 1989 Notebook on the ground that nobody contested
21 its authenticity.

22 **R. A Summary of the Court's Factual Findings.**

23 106. Based on the foregoing, the Court finds the evidence clear and convincing that
24 Amr Mohsen, the founder, chairman, chief executive officer and lead inventor of Aptix Corporation,
25 fabricated the entire 1988 Notebook, numerous entries in the 1989 Notebook, the three corroborative
26 entries in his Daytimer and the rest of the post-theft "corroboration" — all in an effort to defraud
27 defendant and this Court. In addition to the detailed findings made above, the Court will now
28 summarize its principal factual conclusions.

 107. Under our local rules, plaintiffs were required to state a date of conception and
to corroborate that date in order to "swear behind" the presumed date of invention of the '069 Patent,
September 20, 1989. To do so, Amr Mohsen chose to manufacture fictitious entries in seemingly

1 standard engineering laboratory notebooks. His first fraud was to augment genuine entries in a genuine
2 notebook, the 1989 Notebook. He embellished many entries, all dated prior to September 20, 1989,
3 the presumed date of invention. On March 29, 1998, he faxed seventeen pages of the new and
4 improved notebook to his counsel for production (Exh. 229).

5 108. In this endeavor, however, he miscalculated. He overlooked the possibility
6 that his former patent prosecution firm on the '069 Patent might still, after a decade, have a copy of
7 the true version of the 1989 Notebook and that his current opponent might stumble upon it.

8 109. Eventually, QuickTurn did obtain the original version of the 1989 Notebook
9 from the former patent firm. A page-by-page comparison revealed the alterations. Amr Mohsen was
10 then forced to admit under oath that he had, indeed, altered the 1989 Notebook. Caught red-handed,
11 he claimed that he had regarded the 1989 Notebook merely as an “interactive” volume, an ongoing
12 work that he was somehow free to augment. That explanation was unconvincing and was an after-
13 the-fact rationalization. In explaining himself, however, he further lied in his deposition in at least two
14 ways.

15 110. *First*, he claimed that he categorically did not add new material after the first
16 witness signed a page. This was patently false. The Ink-On-Photocopy Version of the 1989
17 Notebook showed that his ink changes were added to the pages already signed by the witnesses. For
18 example, on Page 36 of the Ink-On-Photocopy, some text, the date, Amr Mohsen’s signature, and the
19 witness’s signature all appear as part of the photocopy. On top of that photocopy, Amr Mohsen
20 inked new text.

21 111. *Second*, he claimed that he copied by hand changes already made in the 1989
22 Notebook to the Ink-On-Photocopy Version of the 1989 Notebook to make it conform to the
23 original. In fact, Amr Mohsen did the opposite. He inked in the changes first onto a photocopy of the
24 semi-embellished 1989 Notebook, as a dry run, and then, once he had worked in the new material, he
25 hand-copied those changes into the 1989 Notebook. This sequence was revealed by Expert
26 Speckin’s ESDA impression analysis.

27 112. Before these discrepancies regarding the 1989 Notebook ever came to light,
28 however, Amr Mohsen decided on an even bolder fraud: to lay claim to a yet earlier invention date,

1 one well before any date in 1989. Reaching back in time yet another year, he fabricated the 1988
2 Notebook, a complete fraud from bark to core, a notebook without a single genuine entry. By an
3 entry dated July 31, 1988, he set out terms, concepts and drawings in controversy in the suit, using
4 such terms as “hierarchical architecture” and drawing multiple boards to illustrate the controverted
5 claim phrase “one or more substrates” (Exh. 120). In this way, he hoped to gain fourteen months on
6 the invention date.

7 113. Time was short. The deadline for naming an invention date had passed. A
8 total of 38 entries were placed in the book. Unable to keep straight the differences between the then-
9 current year (1998) and the fictitious year (1988), Amr Mohsen repeatedly misdated the false entries
10 in the 1988 Notebook and had to go back and overwrite 1998s to look like 1988s. This was true for
11 five entries in the 1988 Notebook (and, similarly, for two entries in the “corroborative” notes later
12 produced from his garage).

13 114. The 1988 Notebook was riddled with other discrepancies described by
14 Expert Speckin, as set forth above. On Page 4 of the 1988 Notebook, to recall only one example, it
15 is clear that the sentence in the middle of the page beginning “A programmable . . .” was added after
16 the fact and in a different ink than the text on the rest of the page. Page 3, moreover, was written
17 *after* Page 4 (except for the “A programmable . . .” sentence, which was added last of all). All of this
18 was shown by the obverse/reverse examination performed by Expert Speckin. This flatly contradicts
19 the dates on the pages.

20 115. Aptix and Meta argue that QuickTurn should be required to correlate the
21 entries to the specific prior-art reference(s) that Amr Mohsen sought to predate, *i.e.*, to reconstruct a
22 motive that would explain the precise date selected as the false date of invention, July 31, 1988. The
23 Court disagrees. In the early stages of patent litigation, before the landscape of the relevant prior art is
24 fully illuminated, a patent owner cannot usually predict the exact combinations of art that might later be
25 deemed to render a patent claim obvious or anticipated. Experience teaches, however, that *any*
26 provable date of invention prior to the presumed date of invention (the date of the patent application)
27 will ordinarily place the patent owner in a stronger position by rendering any intervening art immaterial.
28 Simply put, any earlier date of invention will ordinarily prove better than the presumed date. Thus,

1 while QuickTurn, in fact, has set forth various prior-art references Amr Mohsen was allegedly trying to
2 predate, the Court holds that it is unnecessary and unfair to require QuickTurn to do so or to prove
3 any motive beyond fraudulently trying to claim an earlier date. At the time of the attempted fraud, the
4 manufactured evidence was not only material but was held out by Aptix and Meta as material.

5 116. In forging the 1988 Notebook from whole cloth, Amr Mohsen faced a
6 practical problem. Engineers' notebooks are normally witnessed, *i.e.*, a completed entry is typically
7 read by a colleague who then writes "read and understood" beside the entry, along with his or her
8 signature and the date. This is to satisfy the corroboration requirements of the caselaw for proving up
9 invention dates. *See Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1577 (Fed. Cir. 1996). Mohsen
10 thus needed a subscribing witness. (He had not had that problem with the 1989 Notebook because,
11 for the most part, he had simply added bogus material to genuine entries that had already been
12 witnessed. The witnesses to those entries could no longer be expected, ten years later, to remember
13 the specific content of the entries.)

14 117. Amr Mohsen enlisted his brother to witness the false entries in the
15 1988 Notebook. His brother, Aly Mohsen, lived in Missouri. Amr Mohsen lived in California. It was
16 inconvenient to travel on multiple occasions. Amr Mohsen thus tried to get as many signatures as
17 possible in as few sessions as possible. Since time was short and since the 1988 Notebook was a
18 work in progress, Amr Mohsen left blank pages interspersed among the false entries, intending to fill
19 them in with inventive material as needed before producing the completed work, and asked his brother
20 to witness the blank pages. To the extent he later found it unnecessary to fill them in, Amr Mohsen
21 simply left them blank and placed an X across them to mitigate the absurdity of totally blank pages
22 bearing witness signatures with the legend "Read and understood." Thus, Amr Mohsen made all the
23 Xs at the same time using the same pen (a pen different from the one used to make the entries). Some
24 such pages were clearly filled in later by Amr Mohsen. A surviving fragment example is Page 7, where
25 Expert Speekin's obverse/reverse examination showed that Figure 2(A) was supplied *after* Aly
26 Mohsen had witnessed the page.

27 118. In this regard, the recovered fragments indicate that all of Aly Mohsen's six
28 surviving signatures were made in a *single* ink, a *single contaminated* ink, very likely even with the

1 same pen. Thus, while Aly Mohsen’s signatures were purportedly made on different occasions, this
2 was, in fact, unlikely. Using the same pen with the same contaminated ink, Aly Mohsen simply signed
3 the pages en masse, including blank pages, and wrote in different dates to simulate different occasions.

4
5 119. This explanation answers why no one (other than Aly Mohsen) had ever heard
6 of or even seen the 1988 Notebook during the ten years of its supposed existence. Not even Amr
7 Mohsen’s former patent counsel, who had made the application for the ’069 Patent in 1989 (and to
8 whom Amr Mohsen had given the original version of the 1989 Notebook), had seen it. Nor had
9 Howrey & Simon, to whom Amr Mohsen had earlier faxed the seventeen pages from the 1989
10 Notebook. Nor had many others listed above. The 1988 Notebook first surfaced in April 1998, well
11 after the Initial Production from the 1989 Notebook and after the deadline for disclosure.

12 120. Once QuickTurn’s lawyers began to discover the discrepancies, they
13 demanded forensic testing of the notebooks. Forensic experts were retained. The parties became
14 embroiled in motion practice regarding the testing conditions. Just as the motion practice reached
15 fruition and it seemed that testing was imminent, Amr Mohsen announced that the notebooks had been
16 stolen.

17 121. The circumstances of the “theft” strongly suggest that Amr Mohsen staged the
18 incident. The incident occurred just days before a ruling on the motion to require testing. According
19 to Amr Mohsen, he normally kept the notebooks in a safe at his home to ensure their protection,
20 refusing to turn them over even to counsel for safekeeping; yet he claims he left the notebooks in his
21 empty car all day in a parking lot, even after returning to his car at midday. Having insisted on
22 retaining the crown jewels for safety and having removed them from his safe specifically to take them
23 to his office for review, it is very hard to believe that Amr Mohsen would have simply left them
24 unattended in his car rather than take them into his office.

25 122. The back windows were tinted. A passing thief would not have been able to
26 see a black bag tucked behind the passenger seat, at least not without a flashlight. There was no
27 obvious reason to break into the car, much less the back side window, even less to steal a nondescript
28 bag. No door was opened, a violation that would have triggered the car alarm. No other cars were

1 violated. No cars had been previously broken into in the Aptix parking lot. Alone in the lot, Amr
2 Mohsen had ample opportunity to break the window himself.

3 123. QuickTurn protested that Amr Mohsen had faked the disappearance.
4 To alleviate suspicion, Amr Mohsen began to produce “corroborating” documents. The first was his
5 Daytimer from 1989, which also contained the last week of 1988. There were three entries that Amr
6 Mohsen hoped would persuade the Court that the 1988 Notebook actually existed in 1988. Had they
7 been authentic, they would certainly have strengthened Amr Mohsen’s story. But, in fact, Amr
8 Mohsen also fabricated the Daytimer entries. Clearly and convincingly, the evidence so demonstrates.
9 *First*, the entries were written in an ink that was not available until June 1994. *Second*, the questioned
10 entries were out of character from the other routine entries in the Daytimer, including, as they did,
11 highly unusual specificity of purpose not present for any of the other more than 800 entries. *Third*, the
12 December 26, 1988, entry contained a telltale overwrite. Amr Mohsen initially wrote that he was
13 taking his engineering notebooks — in the plural — to his brother for witnessing. But in December
14 1988, there should only have been one notebook. Correcting himself, he then crossed out the plural
15 form and made it singular.

16 124. Amr Mohsen also produced notes allegedly made in 1988 to corroborate the
17 1988 Notebook. It is the timing and alleged location of their discovery that is most probative. The
18 notes were allegedly found in the same garage in which Amr Mohsen had first found the 1989
19 Notebook and then later the 1988 Notebook. The notes, too, have date overwrites, the same mistake
20 as above. The notes were found, allegedly, in old Actel files with no apparent relationship to the
21 subject matter. Given Amr Mohsen’s proven, indeed, in the case of the 1989 Notebook, admitted,
22 willingness to falsify dates, the Court does not find these notes to be credible evidence of the
23 authenticity of the 1988 Notebook. So too with the photocopy found by Aly Mohsen.

24 125. Finally, more than a year after the “theft” and shortly before the scheduled date
25 of the evidentiary hearing on spoliation of the notebooks and the admissibility of copies of the 1988
26 Notebook, Amr Mohsen mailed to himself torn fragments of some of the pages of the notebooks.
27 Exactly why he did so need not be determined but the probable motive was to dissipate suspicion
28 regarding the notebooks’ complete disappearance, and/or to disprove bad faith in the loss of the

1 originals for purposes of Rule 1004 of the Federal Rules of Evidence. The fragments were returned in
2 a large envelope with some other papers and an anonymous note stating the documents had been
3 found in a back yard. Yet none of the documents bore any sign of weathering. The envelope bore
4 Amr Mohsen's *correct* zip code despite the fact that the only information among the returned papers
5 had the *wrong* zip code. Whoever addressed the envelope knew Amr Mohsen's *correct* zip code
6 and could only have learned the *wrong* zip code from the recovered materials. It seems plain that
7 Amr Mohsen addressed the envelope, or instructed someone else to address it, and simply slipped up
8 in using the correct zip code.

9 126. In summary, the evidence is clear and convincing that Amr Mohsen, acting on
10 behalf of Aptix, fabricated all of the 1988 Notebook, much of the 1989 Notebook, and three entries
11 in his Daytimer (and the rest of the post-theft corroboration) in a premeditated and prolonged effort to
12 deceive defendant and this Court.

13 ANALYSIS

14 As a result of Aptix's attempt to defraud the Court and to strengthen its patent through a
15 premeditated and sustained campaign of lies and forgery, the Court holds that the '069 Patent is
16 unenforceable. Neither Aptix nor any of its licensees, including Meta, may enforce the '069 Patent.
17 Where a patent holder in an infringement action consciously suppresses or falsifies evidence in an
18 attempt to obtain or strengthen a patent, the Supreme Court has long held that an order of
19 unenforceability and a dismissal of the action is a proper remedy. *Keystone Driller Co. v. General*
20 *Excavator Co.*, 290 U.S. 240 (1933). Because there is a close parallel in the facts, the *Keystone*
21 decision bears elaboration.

22 Keystone Driller Co. was the assignee of five patents relating to ditching machines. One of the
23 five, invented by Clutter, covered the basic machine. The remaining four, invented by Downie, were
24 improvements on the basic Clutter machine. Downie was the secretary and general manager of
25 Keystone. Prior to filing for one of his improvement patents, Downie learned of a possible prior use
26 by Clutter's brother, Bernard Clutter. After the patents had issued, and Keystone was contemplating
27 asserting them against the Byers Machine Company, Keystone was advised that Bernard Clutter's
28 prior use was sufficient to cast doubt on the validity of the first Downie patent. Downie then bribed

1 Bernard Clutter to sign an affidavit that his use of the device had been an abandoned experiment and
2 to agree to keep secret the details of his prior use. Keystone then initiated an infringement suit against
3 Byers, asserting the first three of its five patents. No evidence of Bernard Clutter’s prior use was
4 presented at the *Byers* trial, and the court held all three patents valid and infringed. *Id.* at 242-43.

5 Armed with its victory in *Byers*, Keystone immediately filed suit against General Excavator
6 Co. and another company, asserting the same three patents. Keystone applied for preliminary
7 injunctions to restrain further infringement pending trial. The applications were based in part on the
8 decision in the *Byers* case holding the patents valid. The court denied the applications on the ground
9 that the defendant was pressing defenses not addressed in the *Byers* case, thereby preventing the
10 application of the rule permitting a temporary injunction based on a prior adjudication of validity. The
11 court required, however, that General Excavator give a bond to cover the profits or damages that
12 might be decreed against them. Keystone later amended its complaint to add the remaining two
13 patents.

14 As discovery ensued, General Excavator took Bernard Clutter’s deposition. Bernard Clutter
15 did not at first disclose his arrangement with Downie, but General Excavator’s suspicions were
16 sufficiently aroused by his testimony that they deposed him again and were able to secure facts on
17 which they were able to compel Keystone to furnish the details of the transaction. General Excavator
18 put those details into evidence at trial. With all the evidence of Bernard Clutter’s alleged prior use
19 before it, the district court held the first Downie patent (the one to which the suppression of evidence
20 directly related) valid and infringed. *Ibid.*

21 The district court found Downie’s conduct “highly reprehensible.” The court nevertheless
22 declined to apply the unclean-hands doctrine for two reasons: (i) Keystone had not suppressed
23 evidence in the case before the court, and (ii) the matters pertaining to the preliminary-injunction
24 application had no bearing on the merits of the case. *Id.* at 244. The Sixth Circuit reversed, holding
25 all five patents unenforceable under the doctrine of unclean hands. The Supreme Court affirmed,
26 holding that Keystone’s reliance on the *Byers* judgment in its application for a temporary injunction
27 formed a sufficient nexus between the suppression of evidence in the *Byers* case and the relief sought
28 against General Excavator in the later case.

1 The Supreme Court rested its unenforceability holding on the maxim that “He who comes into
2 equity must come with clean hands.” *Id.* at 241. “It is one of the fundamental principles upon which
3 equity jurisprudence is founded, that before a complainant can have a standing in court he must first
4 show that not only has he a good and meritorious cause of action, but he must come into court with
5 clean hands. He must be frank and fair with the court, nothing about the case under consideration
6 should be guarded, but everything that tends to a full and fair determination of the matters in
7 controversy should be placed before the court.” *Id.* at 244 (quoting Story’s Equity Jurisprudence,
8 14th ed., § 98).

9 Though courts are “not bound by formula or restrained by any limitation that tends to trammel
10 the free and just exercise of discretion,” they apply the unclean-hands doctrine only where “some
11 unconscionable act of one coming for relief has immediate and necessary relation to the equity that he
12 seeks in respect of the matter in litigation.” *Id.* at 245-46. In *Keystone*, the Supreme Court affirmed
13 the Sixth Circuit’s dismissal of an infringement suit in light of the patent holder’s suppression of
14 evidence in a prior suit. The Supreme Court came to its decision despite the district court’s
15 unchallenged conclusion that the evidence suppressed in the prior suit did not invalidate the patent.

16 The Court further held that had the corruption been disclosed in the first case, the court would
17 have been warranted in dismissing that action as well:

18 Had the corruption of Clutter been disclosed at the trial of the
19 *Byers* case, the court undoubtedly would have been warranted
20 in holding it sufficient to require dismissal of the cause of action
21 there alleged for the infringement of the Downie patent.

22 *Id.* at 246.

23 The present case is remarkably similar to *Keystone*. Here, the position and acts of
24 Amr Mohsen parallel those of Downie. Amr Mohsen is the inventor of the patent-in-suit and the
25 founder and chief executive officer of plaintiff Aptix. He was the Aptix employee most involved in this
26 litigation. His actions are attributable to Aptix like Downie’s were to *Keystone*. *General Excavator*
27 *Co. v. Keystone Driller Co.*, 62 F.2d 48, 50 (6th Cir. 1932) (“This was the act of the plaintiff as
28 much as of Downie, its officer and moving spirit”). Moreover, his actions were as reprehensible as
those of Downie. Amr Mohsen made substantial additions to his 1989 Notebook after the dates
written on the pages and after he and the witnesses had signed the pages, and he completely fabricated

1 his 1988 Notebook. He then relied on these forged documents during the pretrial stage of this
2 litigation. These actions were done to strengthen the '069 Patent. Like Downie, he sought to avoid
3 prior art through illicit means during litigation. In addition, he sought to destroy the evidence of his
4 tampering by claiming theft of the original notebooks.

5 QuickTurn's timely investigation of Amr Mohsen's conduct does not work against application
6 of the unclean-hands doctrine. It does not matter that the crime was detected before fruition. As the
7 Supreme Court explained in *Keystone*, the *Byers* court could have dismissed that action if Downie's
8 fraud had been exposed before judgment. 290 U.S. 246. Here, Amr Mohsen's illicit acts were
9 uncovered before final judgment in this case, just as in the Supreme Court's hypothetical about the
10 revelation of Downie's acts during the *Byers* trial. Amr Mohsen and Aptix represented a false date of
11 conception in this lawsuit based on Amr Mohsen's fabricated 1988 Notebook. The hands of Amr
12 Mohsen and Aptix were not clean, regardless of their failure to gain from the deeds described herein.

13 Nor is it relevant that Aptix and Meta are willing to press forward with the application date as
14 the date of invention — that is, without the benefit of Amr Mohsen's fabrications. In *Keystone*, the
15 district court held the Downie patent valid, even in light of full disclosure regarding the alleged prior use
16 of Bernard Clutter. In other words, Downie's suppression of evidence was not a but-for cause of the
17 *Byers* court's holding of validity. Nevertheless, it was enough for the Supreme Court that Downie's
18 suppression of evidence had an "immediate and necessary relation to the equity that [*Keystone* sought]
19 in respect of the matter in litigation." *Id.* at 245. Here, Amr Mohsen's unconscionable acts had the
20 same immediate and necessary relation to the relief Aptix sought as did Downie's unconscionable acts
21 to the relief *Keystone* sought. Both Downie and Amr Mohsen tampered with evidence relating to the
22 priority of their inventions in order to strengthen their validity positions in infringement suits.

23 When a patent holder fraudulently seeks to strengthen a patent-in-suit through the manufacture
24 of counterfeit evidence and is caught red-handed, the wrongdoer has no right to simply abandon the
25 false evidence and to promise to be honest going forward. Not all frauds are detected. They are not
26 easy to detect. The penalty for such conduct, when discovered, should be severe and sufficient to
27 deter such fraud in the first place. While fines and monetary sanctions are also available under the
28 Court's inherent powers, the most effective deterrent and most just penalty in such circumstances will

1 often be total unenforceability of the patent. This parallels the rule under inequitable conduct that
2 unenforceability is appropriate even where the misrepresentation, while material, is not invalidating.
3 *Regents of Univ. of Cal. v. Eli Lilly & Co.*, 119 F.3d 1559, 1570 (Fed. Cir. 1997).

4 Meta and Mentor argue that the *Keystone* doctrine of unclean hands operates only to bar
5 equitable relief, not a suit for damages. Meta and Mentor rely on the Sixth Circuit’s opinion in
6 *Keystone* affirmed by the Supreme Court, which instructed the district court to dismiss the complaint
7 *without prejudice to the prosecution of suits at law* and without prejudice to subsequent actions in
8 equity on the other four patents. *General Excavator Co. v. Keystone Driller Co.*, 62 F.2d at 51.
9 The Supreme Court, however, did not explicitly bless this aspect of the Sixth Circuit’s opinion. The
10 only issues analyzed by the Supreme Court were whether the unclean-hands doctrine could apply even
11 though no evidence had been withheld in that case, and whether the other four patents could be held
12 unenforceable with the one to which the bad acts directly related.

13 More importantly, subsequent cases citing *Keystone* have made clear that the unclean-hands
14 doctrine applies to all claims for relief in patent-infringement suits including damages, at least in the
15 inequitable-conduct context. In *Hazel-Atlas Glass Co. v. Hartford-Empire Co.*, the Supreme Court
16 held that fraud in the procurement rendered the patent unenforceable in a suit for damages. 322 U.S.
17 238, 250-51 (1944) (citing *Keystone*). There, the Supreme Court reasoned that “[t]he public welfare
18 demands that the agencies of public justice be not so impotent that they must always be mute and
19 helpless victims of deception and fraud.” *Id.* at 246. In *W.R. Grace & Co. v. Western U.S. Ind.*, the
20 Ninth Circuit followed *Hazel-Atlas Glass Co.*, and held that a patent procured by fraud could not be
21 enforced, even in a suit for damages, under the unclean-hands doctrine articulated in *Keystone*. 608
22 F.2d 1214 (1979). The court stated: “That fraud on the Patent Office is also a defense to an action
23 for damages caused by patent infringement is indicated by *Hazel-Atlas Glass Co.*” *Id.* at 1217.

24 Under *Hazel-Atlas Glass Co.*, if Amr Mohsen’s conduct had occurred before the PTO,
25 neither the assignee nor the exclusive licensee of the ’069 Patent could assert it in any judicial
26 proceeding, for either damages or equitable relief. *See also Kingsdown Med. Consultants v.*
27 *Hollister, Inc.*, 863 F.2d 867, 877 (Fed. Cir. 1988) (*en banc*) (“When a court has finally determined
28 that inequitable conduct occurred in relation to one or more claims during prosecution of the patent

1 application, the entire patent is rendered unenforceable”). If Amr Mohsen had submitted his
2 fabrications to the PTO to swear behind a reference, and the patent had then issued, there is no
3 question but that a court would deem such conduct inequitable and find the patent unenforceable.
4 Likewise, if Amr Mohsen had submitted his fabrications to swear behind a reference, and the examiner
5 learned of this deceit before the patent issued, there is no question but that the PTO would have the
6 authority to reject the application. 37 C.F.R. 1.56.

7 Should inequitable conduct before the PTO and the same inequitable conduct before a court
8 be treated differently in this regard? The Court holds that there should be no such difference, at least
9 not on so egregious a record as the present one. *See Rixon, Inc., v. Racal-Milgo, Inc.*, 551 F. Supp.
10 163, 183 (D. Del. 1982) (holding patent unenforceable based on patentee’s intentional concealment of
11 documents during litigation that tended to show patent was invalid). In relevant ways, patent litigation
12 mirrors the prosecution of a patent. The validity of a patent is perhaps even more strenuously and
13 more finally examined during litigation than during prosecution. A patent adjudicated valid is much
14 stronger than an untested patent. Thus, as in the *Keystone* case, a patent holder could deceive one
15 court about the facts relating to the patent’s validity, and then use that court’s judgment in future
16 judicial proceedings or in license negotiations. This is analogous to a patent applicant’s deceiving the
17 PTO to obtain a patent, and then asserting the patent in judicial proceedings or license negotiations. In
18 either case, the public welfare would suffer were the “agencies of public justice” the “helpless victims
19 of deception and fraud.” *Hazel-Atlas Glass Co.*, 322 U.S. at 246.

20 Meta and Mentor also argue that even if the Court were to hold the ’069 Patent unenforceable
21 by Aptix, it could not extend the holding to Meta because Meta had no *mens rea*. While it is true that
22 the Court has made no findings as to whether Meta acted in bad faith in this action, the Court
23 disagrees that Meta could therefore enforce the ’069 Patent against QuickTurn despite Amr Mohsen’s
24 fabrications. Under the law of inequitable conduct, a patentee (or exclusive licensee) may not assert
25 an unenforceable patent, even if that patentee (or exclusive licensee) had played no part in and had no
26 knowledge of the dishonest conduct. The reason for this is obvious. If only the culpable party were
27 barred from asserting the patent, that party could sell its rights to another (before or after the fraud),
28 and still profit. Indeed, that would be the case here. Aptix has already profited on its patent by one

1 million dollars, the lump sum paid to Aptix by its licensees, Meta and Mentor. If Meta were to then
2 recover from QuickTurn, Aptix would successfully end-run the holding of unenforceability. If Meta
3 were to obtain an injunction, Aptix as well would benefit from the injunction. Meta may be a victim,
4 but Meta must consider its own possible remedies against Aptix for its conduct in ruining the patent.

5 Accordingly, the Court holds that the '069 Patent is unenforceable. Neither Aptix nor Meta
6 may seek to enforce it, either for injunctive relief or for damages.

7 * * *

8 In light of the foregoing, it is unnecessary to reach all of the alternative arguments made under
9 *Chambers v. NASCO, Inc.*, 501 U.S. 32 (1991), holding that federal courts have the inherent power
10 to manage their own proceedings and to impose (separately from FRCP 11 and 28 U.S.C. 1927) a
11 range of sanctions for bad-faith conduct. Nonetheless, the Court finds the evidence is clear and
12 convincing that Aptix — through its founder, chairman, chief executive officer and lead inventor — has
13 acted in utter bad faith and that terminating sanctions are appropriate. Having been caught in the
14 middle of a fraud on the Court, Aptix should not merely be fined or reprimanded and allowed to go
15 forward with a pledge not to do it again. Such deceptions are not easy to detect and the penalty
16 should be sufficient to deter them, especially in such massive litigation, part of a worldwide struggle,
17 wherein fines and reprimands pale by comparison to the industrial stakes. Although the Court finds
18 Aptix liable under *Chambers* for attorneys' fees and costs, that sanction alone would not match the
19 wrong attempted here. It is unnecessary to reach the question whether, in the absence of a terminating
20 sanction, further sanctions would also be appropriate. As to Meta, it is also unnecessary to decide
21 under *Chambers* whether Meta has acted in bad faith or what sanction would be applied to it. Under
22 the *Keystone* line of cases, the patent is simply unenforceable.

23 **CONCLUSIONS OF LAW**

- 24 1. United States Patent No. 5,544,069 is unenforceable. Neither Aptix
25 nor any licensee, including Meta, may seek to enforce it in any manner.
26 2. The complaint is therefore dismissed in its entirety.

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3. All pending hearing dates and motions are hereby vacated. The counterclaim, having already been dismissed in part, is moot as to the balance. The entire action is now completed except as follows.

4. The Court finds this to be an exceptional case under 35 U.S.C. 285 warranting imposition of a fee and cost award. In addition, under *Chambers v. NASCO, Inc.*, 501 U.S. 32 (1991), the Court finds Aptix has acted fraudulently and in bad faith before the Court. Aptix is, therefore, ordered to pay all of QuickTurn's reasonable attorneys' fees and costs incurred in this litigation. QuickTurn shall make a detailed submission of its fees and costs on or before June 30, 2000. Thereafter, Aptix and QuickTurn shall meet-and-confer and attempt to resolve the amount. Failing agreement, any objection to the submission by QuickTurn must be made by July 20, 2000.

IT IS SO ORDERED.

Dated: June 14, 2000.

WILLIAM ALSUP
UNITED STATES DISTRICT JUDGE