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 APPLE INC.

9 UNITED STATES DISTRICT COURT
 10 NORTHERN DISTRICT OF CALIFORNIA
 11 OAKLAND DIVISION

13 THE APPLE IPOD iTUNES ANTITRUST
 14 LITIGATION

Lead Case No. C 05-00037 YGR
 [CLASS ACTION]

15 _____
 16 This Document Relates To:
 17 ALL ACTIONS

**DEFENDANT'S NOTICE OF MOTION
 AND MOTION FOR SUMMARY
 JUDGMENT AND TO EXCLUDE
 EXPERT TESTIMONY OF ROGER G.
 NOLL**

Date: February 18, 2014
 Time: 2:00 PM
 Courtroom: 5

[Public Version - Redacted]

28

TABLE OF CONTENTS

	<u>Page</u>
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
NOTICE OF MOTION AND MOTION	1
RELIEF SOUGHT	1
MEMORANDUM OF POINTS AND AUTHORITIES	1
INTRODUCTION	1
BACKGROUND	2
A. Launch of the iTunes Store	2
B. Plaintiffs’ Original Theory	4
C. The Amended Consolidated Complaint	4
1. iTunes 4.7	4
2. The Keybag Verification Code in iTunes 7.0	5
D. Plaintiffs’ Theory of Impact	6
ARGUMENT	7
I. LEGAL STANDARD	7
A. Summary Judgment	7
B. Exclusion of Expert Testimony	8
II. SUMMARY JUDGMENT SHOULD BE GRANTED BECAUSE PLAINTIFFS CANNOT SHOW ANY GENUINE FACTUAL ISSUE REGARDING IMPACT OR DAMAGES.	8
III. DR. NOLL’S REGRESSION MODEL IS INADMISSIBLE AND DOES NOT RAISE A GENUINE FACTUAL ISSUE REGARDING IMPACT OR DAMAGES.	12
A. Dr. Noll’s Regression Is Inadmissible Because It Does Not “Fit” The Facts Of The Case Or The Economics Of Plaintiffs’ Own Theory	12
B. The Regression Does Not Properly Account For the Relevant Factors	14
1. The regression does not properly account for the lawful effect of iTunes 4.7 and thus uses the wrong “but-for” world.	14
2. The regression does not account for the impact of the unchallenged aspects of the [REDACTED]	16

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

3. The regression does not account for major product characteristics and other factors relevant to price..... 18

C. The Regression Does Not Provide Statistically Significant Results 20

IV. DR. NOLL’S RELEVANT MARKET OPINIONS SHOULD BE EXCLUDED AND SUMMARY JUDGMENT GRANTED FOR FAILURE OF PROOF ON THAT ISSUE..... 21

CONCLUSION 25

TABLE OF AUTHORITIES

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

Page(s)

Cases

<i>A&M Records, Inc. v. Napster, Inc.</i> , 114 F. Supp. 2d 896 (N.D. Cal. 2000), <i>aff'd</i> 239 F.3d 1004 (9th Cir. 2001).....	3
<i>American Booksellers Ass'n, Inc. v. Barnes & Noble, Inc.</i> , 135 F. Supp. 2d 1031 (N.D. Cal. 2001)	13
<i>Argus Inc. v. Eastman Kodak Co.</i> , 801 F.2d 38 (2d Cir. 1986).....	8
<i>Bazemore v. Friday</i> , 478 U.S. 385 (1986).....	20
<i>Blomkest Fertilizer, Inc. v. Potash Corp. of Saskatchewan</i> , 203 F.3d 1028 (8th Cir. 2000).....	18
<i>Brown Shoe Co. v. United States</i> , 370 U.S. 294 (1962).....	22
<i>City of Vernon v. S. Cal. Edison Co.</i> , 955 F.2d 1361 (9th Cir. 1992).....	17
<i>Concord Boat Corp. v. Brunswick Corp.</i> , 207 F.3d 1039 (8th Cir. 2000).....	7, 12, 17
<i>Daubert v. Merrell Dow Pharms.</i> , 43 F.3d 1311 (9th Cir. 1995).....	8
<i>Daubert v. Merrell Dow Pharms., Inc.</i> , 509 U.S. 579 (1993).....	8, 12, 13
<i>El Aguila Food Prods., Inc. v. Gruma Corp.</i> , 301 F. Supp. 2d 612 (S.D. Tex. 2003) <i>aff'd</i> , 131 F. App'x 450 (5th Cir. 2005)	14
<i>Freeland v. AT&T Corp.</i> , 238 F.R.D. 130 (S.D.N.Y. 2006)	19, 20
<i>General Elec. Co. v. Joiner</i> , 522 U.S. 136 (1997).....	8
<i>In re eBay Seller Antitrust Litig.</i> , 433 Fed. Appx. 504 (9th Cir. 2011).....	7
<i>In re Graphics Processing Units Antitrust Litig.</i> , 253 F.R.D. 478 (N.D. Cal. 2008).....	8, 18

1	<i>In re Live Concert Antitrust Litig.</i> ,	
2	863 F. Supp. 2d 966 (C.D. Cal. 2012)	18, 22, 24
3	<i>In re Methionine Antitrust Litig.</i> ,	
4	MDL No. 00-1311, 2003 U.S. Dist. LEXIS 14828 (N.D. Cal. Aug. 22, 2003).....	18
5	<i>In re REMEC Inc. Sec. Litig.</i> ,	
6	702 F. Supp. 2d 1202 (S.D. Cal. 2010).....	18
7	<i>In re Se. Milk Antitrust Litig.</i> ,	
8	No. 08-MD-1000, 2012 WL 1032797 (E.D. Tenn. Mar. 27, 2012).....	7, 17
9	<i>Kline v. Coldwell, Banker & Co.</i> ,	
10	508 F.2d 226 (9th Cir. 1974).....	8
11	<i>Ky. Speedway, LLC v. Nat’l. Assoc. of Stock Car Auto Racing, Inc.</i> ,	
12	588 F.3d 908 (6th Cir. 2009).....	23, 25
13	<i>McGlinchy v. Shell Chem. Co.</i> ,	
14	845 F.2d 802 (9th Cir. 1988).....	14
15	<i>McLaughlin Equip. Co., Inc. v. Servaas</i> ,	
16	2004 WL 1629603 (S.D. Ind. Feb. 18, 2004)	24
17	<i>Menasha Corp. v. News Am. Mktg. In-Store, Inc.</i> ,	
18	354 F.3d 661 (7th Cir. 2004).....	22
19	<i>Mukhtar v. Cal. State Univ., Hayward</i> ,	
20	299 F.3d 1053 (9th Cir. 2002) <i>amended</i> , 319 F.3d 1073 (9th Cir. 2003).....	8
21	<i>Oltz v. St. Peter’s Cmty. Hosp.</i> ,	
22	861 F.2d 1440 (9th Cir. 1988).....	21
23	<i>Rebel Oil Co. v. Atl. Richfield Co.</i> ,	
24	51 F.3d 1421 (9th Cir. 1995).....	8
25	<i>Reifert v. S. Cent. Wisc. MLS Corp.</i> ,	
26	450 F.3d 312 (7th Cir. 2006).....	22
27	<i>SMS Sys. Maint. Servs., Inc. v. Digital Equip. Corp.</i> ,	
28	188 F.3d 11 (1st Cir. 1999).....	24
	<i>So. P. Commc’ns Co. v. Am. Tel. & Tel. Co.</i> ,	
	556 F. Supp. 825 (D.D.C. 1982).....	13
	<i>Spectrum Sports, Inc. v. McQuillan</i> ,	
	506 U.S. 447 (1993).....	21
	<i>United Food Mart, Inc. v. Motiva Enters., LLC</i> ,	
	404 F. Supp. 2d 1344 (S.D. Fla. 2005)	24

1	<i>Va. Vermiculite Ltd. v. W.R. Grace & Co.-Conn.</i> ,	
2	98 F. Supp. 2d 729 (W.D. Va. 2000)	23, 24
3	<i>Va. Vermiculite, Ltd. v. W.R. Grace & Co.-Conn.</i> ,	
4	108 F. Supp. 2d 549 (W.D. Va 2000)	25
5		
	Rules	
6	Federal Rules of Civil Procedure	
7	Rule 56	1
8	Rule 56(c)(2)	7
9	Federal Rules of Evidence	
10	Rule 702	8
11		
	Treatises	
12	American Bar Association, <i>Proving Antitrust Damages: Legal and Economic Issues</i> (2d	
13	ed. 2010).....	18, 20, 21
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		

1 **NOTICE OF MOTION AND MOTION**

2 PLEASE TAKE NOTICE that on February 18, 2014 at 2:00 p.m. defendant Apple Inc.
3 will and hereby does move for summary judgment and to exclude the expert testimony of Roger
4 G. Noll.

5 **RELIEF SOUGHT**

6 Apple requests that summary judgment be entered in Apple's favor on all claims and that
7 the testimony of plaintiffs' expert, Roger G. Noll, be excluded.

8 **MEMORANDUM OF POINTS AND AUTHORITIES**

9 **INTRODUCTION**

10 This motion seeks to resolve the last remaining claim in this long-running antitrust
11 lawsuit. Plaintiffs' principal claims have already been rejected. The record, with fact and expert
12 discovery now complete, indisputably establishes that plaintiffs cannot prove their remaining,
13 implausible assertion that an Apple software update in 2006 increased iPod prices.

14 Plaintiffs' claim relies on an incoherent chain of purported events. Plaintiffs' theory is
15 that the 2006 update, which prevented digital music from one insignificant source of music
16 (RealNetworks music store (RMS)) from being played directly on iPods, forced RMS customers
17 to buy music from Apple instead of RMS to play on their iPods, and they bought so much music
18 from Apple that if and when they needed to replace their iPods, they were locked in to buying an
19 iPod rather than switching to a competing device as they supposedly would have done if only
20 they had continued to buy music from RMS. Plaintiffs theorize that this chain of events happened
21 so often that demand for iPods increased to such an extent that Apple was able to, and did, charge
22 higher prices for iPods than it otherwise would have.

23 Apart from the implausibility of this theoretical chain, plaintiffs have no proof of any part
24 of it. They have no evidence that anyone, much less a sizeable group of consumers, switched
25 from RMS to Apple's music store as a result of the update, or that if anyone did, the incremental
26 amount of music they bought from Apple forced them to buy a replacement iPod even though
27 they preferred a competing device. The named plaintiffs do not fit that description. They have
28 identified no one who does. And they have not offered any survey of consumers to support their

1 theory. Nor do they have any evidence that Apple’s pricing of iPods turned on this purported
2 chain of events.

3 Indeed, the record evidence refutes key parts of plaintiffs’ theory. As their expert
4 admitted, RealNetworks was a minor player, with minimal sales at the time of Apple’s software
5 update. [REDACTED]

6 [REDACTED]
7 [REDACTED] Thus, the non-expert evidence establishes that summary
8 judgment is warranted because plaintiffs cannot show any genuine dispute of material fact that
9 Apple raised its iPod prices due to the update.

10 Plaintiffs’ economist, Dr. Noll, and his regression model cannot salvage their claim. The
11 regression purports to tease out a supposed incremental price effect of the 2006 update from the
12 multitude of factors that determine iPod pricing. But the regression is riddled with fundamental
13 errors and inconsistencies that render it unreliable and unable to support any finding of impact.
14 As shown below, the model is based on unsupported assumptions and produces results that are
15 irreconcilable with indisputable real-world facts. And Dr. Noll miscalculates the standard errors
16 to contend that his results are statistically significant. When the standard errors are properly
17 calculated, they show that the regression results are not significantly different from zero—which
18 is the expected result given the lack of any evidence that the 2006 update had any impact on
19 demand for iPods or that Apple considered it in determining iPod prices.

20 For these reasons, summary judgment should be granted in favor of Apple, and Dr. Noll’s
21 report and testimony should be excluded. Summary judgment should also be granted because
22 Dr. Noll has not come close to conducting the required analysis to support his opinions regarding
23 the relevant antitrust markets and plaintiffs have no other evidence to support their market
24 definition. Defining a proper relevant market is required for a valid claim of monopolization.
25 But plaintiffs and Dr. Noll again rely on *ipse dixit*, unsupported by relevant analysis.

26 **BACKGROUND**

27 **A. Launch of the iTunes Store.**

28 Apple launched the iTunes Store (“iTS”) in April 2003. As the then-head of the

1 Department of Justice Antitrust Division observed in 2006, the iTS “solved a problem that some
2 observers . . . predicted might never be solved: how to create a consumer friendly, yet legal and
3 profitable, system for downloading music and other entertainment from the Internet.” Declara-
4 tion of Amir Amiri (“Amiri Decl.”) filed herewith, Ex. 1 at p. 6. In the years preceding the iTS’s
5 opening, music piracy had been rampant, with consumers using illegal peer-to-peer file sharing
6 sites like Napster to download music for free. The scale of this piracy was enormous, with as
7 many as 10,000 files being shared per second on Napster. *See generally A&M Records, Inc. v.*
8 *Napster, Inc.*, 114 F. Supp. 2d 896, 902 (N.D. Cal. 2000), *aff’d* 239 F.3d 1004 (9th Cir. 2001).

9 The iTS was developed as a legal alternative to these illegal file-sharing sites. To
10 succeed, Apple had to (1) make the store so attractive to consumers and so easy to use that it
11 could compete with free music services, and (2) satisfy the recording industry’s concerns that
12 licensed online distribution would lead to more piracy and theft and further erode the labels’
13 sales. ECF No. 538, ¶¶ 3-5; ECF No. 470, Ex. 3, 33:20-22.

14 Between November 2002 and April 2003, Apple and the major record labels (Sony, BMG,
15 EMI, Warner, and Universal) entered agreements that permitted Apple to distribute music
16 through the iTS. ECF No. 538, ¶ 5. [REDACTED]

17 [REDACTED]

18 [REDACTED]

19 [REDACTED]

20 [REDACTED]

21 As plaintiffs and their expert admit, the iTS was “procompetitive” and a “huge benefit”
22 with “enormous advantages” to consumers. ECF No. 176, Ex. 21 at 105:8-20; ECF No. 322,
23 ¶¶ 14-15, 40. Fortune Magazine named the iTS its 2003 “product of the year,” observing that
24 “[w]ith the success of its iTunes Music Store, Apple is almost single-handedly dragging the music
25 industry, kicking and screaming, toward a better future.” Amiri Decl, Ex. 2.

26 The labels continued to demand that all licensees of their music use DRM for several
27 years after the iTS was launched. The first major label to drop the requirement was EMI, which
28 permitted Apple to sell music without DRM beginning in early 2007. *See Id.*, Ex. 3 at Ex. 1. By

1 early 2008, all of the major labels permitted Amazon to sell their music without DRM. *Id.*
2 Finally, all the major labels dropped the DRM requirement for Apple in early 2009. In January
3 2009, Apple announced that about 8 million songs (or 80% of the music sold on the iTunes) would
4 be available DRM-free from the iTunes. *Id.* All songs on the iTunes were available DRM-free
5 beginning in March 2009. *Id.*

6 **B. Plaintiffs' Original Theory.**

7 Plaintiffs brought this suit in 2005—when the labels were still requiring Apple and others
8 to use DRM—alleging that Apple's use of FairPlay was an antitrust violation. They asserted that,
9 as a consequence of Apple's use of its own proprietary system, music purchased from the iTunes was
10 directly playable on iPods but not on music players made by other companies. (iTunes music could
11 be "indirectly" played on competing devices by burning the music to a CD and importing, or
12 "ripping," it to a computer.) They argued that Apple had thereby locked iTunes purchasers into
13 buying iPods rather than competing players in the sense that their "switching costs" to change to a
14 non-iPod device would be greater.

15 Rejecting that claim, this Court held that it was lawful for Apple to adopt its own DRM,
16 even if the effect was to make Apple's products incompatible with competitors' products. ECF
17 No. 303, pp. 2, 10; ECF No. 274, p. 10.

18 **C. The Amended Consolidated Complaint.**

19 Plaintiffs responded by filing an amended complaint (ECF No. 322) with a new theory.
20 Having failed in challenging Apple's decision to use a proprietary DRM, they now challenged
21 later updates to Apple's software that they claim excluded competitors. ECF No. 322, ¶ 52.

22 **1. iTunes 4.7.**

23 The amended complaint focused on a feature in iTunes 4.7 issued in October 2004 to
24 enhance the FairPlay encryption system. The update fixed a vulnerability in FairPlay that had
25 been exploited by hacks that stripped DRM from iTunes music. [REDACTED]

26 [REDACTED]

27 [REDACTED]

28 [REDACTED] Apple did so by issuing iTunes 4.7, which changed the FairPlay

1 encryption method and disabled the hacks.

2 Plaintiffs alleged that iTunes 4.7 also unlawfully shut down RealNetworks’ “Harmony”
3 technology. As plaintiffs explained it, RealNetworks had “analyzed the firmware within the
4 iPod” and “discern[ed]” Apple’s “software code.” ECF No. 322, ¶ 53. By cracking FairPlay,
5 RealNetworks devised a way to make music purchased from its website mimic Apple’s then-
6 existing encryption scheme and make it falsely appear to the iPod that the RealNetworks-
7 protected music was actually iTunes music protected by FairPlay. ECF No. 538, ¶¶ 50-54.
8 RealNetworks released this “Harmony” technology in July 2004 and promoted it by selling
9 Harmony music at half-price (49 cents a song) for three weeks. When Apple released iTunes 4.7,
10 the update disabled Harmony as to the iPods with the update, because Harmony mimicked the
11 previous encryption method, not the updated one.

12 This Court (Ware, J.) granted summary judgment to Apple on plaintiffs’ challenge to
13 iTunes 4.7. ECF No. 627. The Court ruled that iTunes 4.7 was a valid product improvement
14 because—notwithstanding any effect it had on Harmony—it restored FairPlay’s integrity, █

15 █ *Id.* at 8.

16 **2. The Keybag Verification Code in iTunes 7.0**

17 Plaintiffs also challenged an aspect of the iTunes 7.0 update issued in September 2006.
18 That update included a number of enhancements. For example, it enabled the sale of movies for
19 the first time from the iTunes, supported video at four times higher resolution than the previous
20 version, and introduced Apple’s distinctive “Cover Flow” method to browse through content on
21 the iPod. *See Amiri Decl., Ex. 4 at Ex. 6.* iTunes 7.0 █

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[REDACTED]

[REDACTED]

[REDACTED] It also made the DRM more secure by eliminating one avenue of attack. *Id.*

As they did in challenging iTunes 4.7, plaintiffs alleged that the [REDACTED] was anticompetitive because it prevented music from other music stores from directly playing on certain iPods. In particular, plaintiffs argue that the updates again disabled RealNetworks' Harmony, which RealNetworks had re-launched in April 2005 after again cracking Apple's DRM software.

Judge Ware denied Apple's motion for summary judgment on this issue, finding that there were issues of fact regarding whether the [REDACTED] was truly a product improvement. ECF No. 627, pp. 11-12.² Apple did not seek summary judgment on lack of impact or competitive injury at the time because discovery was still ongoing. This Court's scheduling orders explicitly preserve Apple's right to seek summary judgment on that issue after the completion of discovery.

D. Plaintiffs' Theory of Impact.

Plaintiffs' theory of antitrust impact is that, by disabling Harmony, the [REDACTED] resulted in some consumers purchasing more music from iTS than they otherwise would have. They assert this increased the switching costs of those consumers to the point that they were locked in to buying an iPod when they next purchased a digital music player. According to plaintiffs, that increased demand for iPods led Apple to raise iPod prices. At the same time, they say, other customers were locked out of buying iPods after the [REDACTED] because they had large libraries of Harmony music that would no longer play on the iPods on which the [REDACTED] was implemented. According to plaintiffs, this lock-out led to higher prices because Apple no longer had the incentive to reduce prices to attract these customers. Amiri Decl., Ex. 8 at p. 7.

As shown below, plaintiffs offer no documentary evidence or testimony from percipient witnesses to establish any of the facts necessary to support this theory or to refute the record

² In addition to iTunes 7.0, plaintiffs' experts also describe iTunes 7.4, an update released in September 2007, as preventing Harmony from working on iPods. But they do not present a separate impact or damages analysis related to that update. Instead, their position is that, because the [REDACTED] had already disabled Harmony as of September 2006, iTunes 7.4 had no additional adverse effect on iPod prices.

1 evidence contradicting it. Instead, they rely solely on a regression model proffered by their
2 economist, Roger Noll. The regression purports to perform a before and after analysis, compar-
3 ing iPod prices before the [REDACTED] with those after and, after supposedly controlling for other factors
4 that influence iPod prices, finding the amount of iPod prices that plaintiffs say is attributable to
5 the [REDACTED]

6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]

14 **ARGUMENT**

15 **I. LEGAL STANDARD.**

16 **A. Summary Judgment.**

17 Summary judgment is proper when “there is no genuine issue as to any material fact and
18 . . . the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(c)(2). Courts
19 frequently grant summary judgment in antitrust cases when the plaintiff lacks admissible
20 evidence that the challenged conduct caused antitrust injury—including where, as here, the
21 plaintiff seeks to prove injury though expert economic evidence that the court finds inadmissible.³

22
23
24 ³ See e.g., *In re Se. Milk Antitrust Litig.*, No. 08-MD-1000, 2012 WL 1032797, at *4–6
25 (E.D. Tenn. Mar. 27, 2012) (granting summary judgment where the expert’s model could not
26 identify price changes caused by alleged anti-competitive conduct); *In re eBay Seller Antitrust*
27 *Litig.*, 433 Fed. Appx. 504, 506 (9th Cir. 2011) (affirming summary judgment where expert’s
28 econometric analysis was inadequate to support claim of antitrust injury); *Concord Boat Corp. v.*
Brunswick Corp., 207 F.3d 1039, 1054-58, 1063 (8th Cir. 2000) (finding that expert’s opinions on
injury should have been excluded and remanding for entry of judgment).

1 **B. Exclusion of Expert Testimony.**

2 Rule 702 permits expert testimony that “will help the trier of fact to understand the
3 evidence or to determine a fact in issue” if the testimony is “based on sufficient facts or data,” “is
4 the product of reliable principles and methods,” and “the expert has reliably applied the principles
5 and methods to the facts of the case.” Fed. R. Evid. 702. As “gatekeeper,” the Court must ensure
6 that expert testimony “rests on a reliable foundation and is relevant to the task at hand.” *Daubert*
7 *v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 597 (1993). “Maintaining *Daubert*’s standards is
8 particularly important considering the aura of authority experts often exude, which can lead juries
9 to give more weight to their testimony.” *Mukhtar v. Cal. State Univ., Hayward*, 299 F.3d 1053,
10 1063-64 (9th Cir. 2002) *amended*, 319 F.3d 1073 (9th Cir. 2003). Litigants should not be
11 permitted to get to trial simply by attempting to “dazzle the courtroom with graphs and tables.”
12 *In re Graphics Processing Units Antitrust Litig.*, 253 F.R.D. 478, 491-92 (N.D. Cal. 2008).

13 Reliable expert testimony is grounded “in the methods and procedures of science,” not
14 “subjective belief or unsupported speculation.” *Daubert*, 509 U.S. at 590. While the focus is on
15 the expert’s underlying methodology, “conclusions and methodology are not entirely distinct
16 from one another,” and “[a] court may conclude that there is simply too great an analytical gap
17 between the data and the opinion proffered.” *GE v. Joiner*, 522 U.S. 136, 146 (1997). Relevant
18 expert testimony “fit[s]” the facts of the case and “logically advances a material aspect of the
19 proposing party’s case.” *Daubert v. Merrell Dow Pharms.*, 43 F.3d 1311, 1315 (9th Cir. 1995).

20 **II. SUMMARY JUDGMENT SHOULD BE GRANTED BECAUSE PLAINTIFFS**
21 **CANNOT SHOW ANY GENUINE FACTUAL ISSUE REGARDING IMPACT OR**
22 **DAMAGES.**

23 “[P]roof of injury is an essential substantive element” of an antitrust claim. *Kline v.*
24 *Coldwell, Banker & Co.*, 508 F.2d 226, 233 (9th Cir. 1974); *Rebel Oil Co. v. Atl. Richfield Co.*,
25 51 F.3d 1421, 1433 (9th Cir. 1995) (“causal antitrust injury[] is an element of all antitrust suits”).
26 Lack of evidence of injury caused by the challenged conduct is “fatal to the merits of any antitrust
27 claim.” *Argus Inc. v. Eastman Kodak Co.*, 801 F.2d 38, 41 (2d Cir. 1986). That is the situation
28 here. Plaintiffs’ claim of impact is unsupported by any record facts.

1 For the alleged impact to have occurred, RealNetworks must have been selling Harmony
2 music to iPod owners (or potential iPod purchasers) in sufficient quantities in September 2006
3 that a drop in those sales would have affected iPod demand so much that Apple would raise iPod
4 prices. That, in turn, requires that there were consumers who, because of the update, became
5 either (1) locked in by their increased iTS purchases and thus forced to buy an iPod when they
6 otherwise would have bought a competing player, or (2) locked out by their Harmony purchases
7 and thus prevented from purchasing any iPod with █████ on it. And the claim requires that Apple
8 became aware of these customers (and how many there were) and took them into account in
9 setting its prices *before* it sold any iPods with the █████ on it and *before* it could possibly know
10 whether █████ would impact demand. Not only do the undisputed facts fail to support any of the
11 links in this tortured chain of proof, but the record is fundamentally at odds with it.

12 *First*, Harmony was insignificant in 2006. Its share of music sales was less than 3% when
13 Apple released iTunes 7.0. *Id.*, Ex. 4, ¶ 27, n.40. █████
14 █████

15 █████ But the proof
16 plaintiffs must adduce is what Harmony sales were *in 2006*. Earlier in the case, Dr. Noll admitted
17 that he would not expect many consumers to be using Harmony in 2005 or 2006 because it had
18 already been lawfully disabled by iTunes 4.7 and many consumers likely permanently abandoned
19 it at that point. *Id.*, Ex. 9 at 147:20-148:5. And the best Dr. Noll can say now is that Harmony’s
20 share of the market in 2006 was less than 5%—“I don’t remember the exact number. I know that
21 it was small, yes.” *Id.*, Ex. 10 at 80:22-81:5. The suggestion that Harmony could set off the
22 chain of events outlined by plaintiffs is not simply implausible, but unsupported by the record.

23 *Second*, plaintiffs have no evidence regarding what portion of RealNetworks’ small sales
24 was to iPod owners or potential iPod purchasers. As a threshold matter, to the extent RealNet-
25 works sold to consumers who did not own an iPod or had no intention of buying an iPod, those
26 sales could not create any relevant lock-in or lock-out. As Dr. Noll admitted, in determining
27 whether the █████ had any impact, the relevant sales are to the “fraction of people who used
28 Harmony to play stuff on an iPod.” *Id.*, Ex. 10 at 81:6-12. But plaintiffs have no proof that any

1 iPod users or potential users were buying Harmony music, let alone enough of them to affect iPod
2 demand. As Dr. Noll admitted: “Q: Do you have any information or any estimate on how many
3 iPod users bought music from RealNetworks? . . . A: No.” *Id.* at 116:18-23.

4 **Third**, plaintiffs have no proof of the number of people who became locked in or locked
5 out as a result of the [REDACTED]. It is not enough merely that a Harmony purchaser owned an iPod or
6 was a potential iPod purchaser. Under Dr. Noll’s lock-in theory, if that purchaser already owned
7 a large iTunes music library that he or she wanted to continue to play on a portable device, the
8 purchaser would already be locked in by that library to buying iPods regardless of any new
9 Harmony purchases. Similarly, any lock-in from increased iTunes purchases would be irrelevant for
10 customers who would have bought an iPod regardless, simply because of its design, ease of use
11 and revolutionary features. As Dr. Noll admitted, plaintiffs’ theory requires that there have been
12 consumers whose decision about whether to purchase an iPod was changed as a result of the
13 [REDACTED]. But Dr. Noll testified that he did not know how many people fell into that category: “We
14 have no way of knowing that.” *Id.* at 107:16-24.

15 Nor do plaintiffs otherwise offer any such evidence. Although the existence of such
16 customers is pivotal to their claim, plaintiffs have not conducted any consumer survey or other
17 investigation to try to identify these customers or determine how many might exist. Indeed, they
18 do not have evidence of, or testimony from, even a *single* customer (let alone enough customers
19 to affect prices) who says he or she (1) wanted to purchase a competing player rather than an
20 iPod, but (2) switched to buying music from iTunes instead of RealNetworks as a result of the
21 update, and (3) thereafter bought enough additional iTunes music that he or she was forced to buy an
22 iPod instead of a competing player. Nor can they identify any RealNetworks customers who
23 would have purchased an iPod but were locked out of doing so because of their Harmony
24 purchases. Even the named plaintiffs do not allege that they were locked in or out as a result of
25 [REDACTED]. None of them asserts that he or she purchased or would have purchased music from
26 Harmony and either bought or did not buy an iPod as a result of not being able to play Harmony
27 music on that iPod.

28 **Fourth**, despite extensive discovery related to Apple’s pricing committee, plaintiffs

1 cannot identify any evidence that Apple ever took into account the amount of sales from
2 RealNetworks or any other online store in setting iPod prices. Plaintiffs' theory is that Apple
3 increased its prices because the [REDACTED] supposedly increased the inelasticity of demand for iPods.
4 *See e.g.*, Amiri Decl, Ex. 8, p. 27. [REDACTED]

5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED] For prices to have been affected in the manner plaintiffs assert,
15 Apple not only would have had to take the [REDACTED] into account but do so before it could have
16 possibly known what effect it would have, if any. Given the enormous volume of iPod sales at
17 the time, and all of the factors that influence prices, it is complete speculation, at best, to say that
18 the pricing committee's decision would have been influenced by the kind of unknown, miniscule,
19 and theoretical change in demand elasticity plaintiffs hypothesize.

20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 [REDACTED]
24 [REDACTED]
25 [REDACTED]
26 [REDACTED]
27 [REDACTED] This
28 finding defies reality. Plaintiffs have no evidence that Apple ever priced its iPods in that fashion.

1 Over the years, Apple has obviously experienced changes in demand for its iPods that are much
2 greater than anything that could have resulted from Harmony being disabled. And yet it has
3 consistently adhered to its practice of setting only aesthetic prices—and not making small
4 incremental price changes in the manner a service station might change its gasoline prices. No
5 basis exists for saying it would have abandoned that longstanding practice if only Harmony had
6 continued operating.

7 In short, plaintiffs’ claim of impact is unrooted in any real-world evidence. Plaintiffs have
8 no documentary or percipient witness testimony to show even the most basic facts necessary for
9 their claim to be valid. This case has been pending for eight years. It has been over seven years
10 since Apple issued the challenged updates. If there were any evidence supporting their
11 implausible theory, Plaintiffs have had full opportunity to gather it. Their complete failure of
12 proof requires that summary judgment be granted.

13 **III. DR. NOLL’S REGRESSION MODEL IS INADMISSIBLE AND DOES NOT**
14 **RAISE A GENUINE FACTUAL ISSUE REGARDING IMPACT OR DAMAGES.**

15 With no direct evidence supporting their claim of impact on prices, plaintiffs rely on a
16 regression model to try to estimate both impact and the amount of damages. But that model does
17 not cure plaintiffs’ failure of proof. It rests on unsupported assumptions and reaches results that
18 conflict with real-world evidence. And it is improperly engineered through selective choice of
19 variables and manipulation of data to misleadingly create the appearance of an impact where none
20 exists. It is precisely the kind of “quite misleading” expert evidence that *Daubert* warns should
21 not be given to the jury. *Daubert*, 509 U.S. at 595.

22 **A. Dr. Noll’s Regression Is Inadmissible Because It Does Not “Fit” The Facts Of**
23 **The Case Or The Economics Of Plaintiffs’ Own Theory.**

24 Damage models that are premised on unsupported assumptions or assumptions that are at
25 odds with the facts of the case or with plaintiffs’ own theory are inadmissible. *See Concord*
26 *Boat*, 207 F.3d at 1055-57 (expert’s economic model “should have been excluded” where it
27 “construct[ed] a hypothetical market which was not grounded in the economic reality of the stern
28 drive engine market, for it ignored inconvenient evidence”); *So. P. Commc’ns Co. v. Am. Tel. &*

1 *Tel. Co.*, 556 F. Supp. 825, 1077, 1079 (D.D.C. 1982) (concluding that “plaintiffs’ model of the
2 ‘but for’ world show[ed] no damages” where there was “obvious inconsistency between real
3 world competitive conditions and [plaintiffs’] assumptions about competition in the imaginary
4 ‘but for’ world”); *Daubert*, 509 U.S. at 591 (testimony must “fit” the facts of the case).

5 That is the case here, and is the threshold reason Dr. Noll’s regression should be excluded.
6 As shown in the preceding section, the price effect Dr. Noll’s model purports to find is
7 unsupported by any real-world evidence regarding the amount of Harmony sales, the purchasers
8 of Harmony music, the degree of any resulting lock-in or lock-out, or any awareness or considera-
9 tion by Apple’s pricing committee of any effect from the [REDACTED].

10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED] It pre-
18 dicts that Apple would have changed its prices across the board to every customer. No evidence
19 supports that implausible assertion. In *American Booksellers Ass’n, Inc. v. Barnes & Noble,*
20 *Inc.*, 135 F. Supp. 2d 1031 (N.D. Cal. 2001), the court refused to admit plaintiffs’ expert’s
21 economic model because it “contain[ed] entirely too many assumptions and simplifications that
22 [were] not supported by real-world evidence.” *Am. Booksellers Ass’n v. Barnes & Noble*, 135 F.
23 Supp. 2d 1031, 1041-42 (N.D. Cal. 2001). Among other flaws, the model did not “take into
24 account the actual retail pricing policies of plaintiffs or defendants and ... simply assume[d] that
25 prices will be set in a way that maximizes profits.” *Id.* at 1040. Dr. Noll’s model is flawed for
26 the same reason.

27 Dr. Noll’s regression is also inconsistent with his own economic theory. The model finds
28 a single, constant percentage overcharge on every iPod sold during the damage period with [REDACTED]

1 ■■■ Amiri Decl., Ex. 8 at Exs. 5-6. If his theory were correct, however, the lock-in would have
2 progressively increased during the damage period as consumers purchased more iTS music.
3 Dr. Noll offers no coherent theory how the alleged overcharge amount could possibly remain
4 constant in these circumstances. In his rebuttal report, Dr. Noll suggests that lock-out from the
5 ■■■ would affect iPod prices immediately. *Id.* at p. 27. Even if that were true, however, Dr.
6 Noll continues to assert that other customers would be locked in to buying iPods, that the extent
7 of lock-in would increase over time, and that the effect of lock-in is to “reduce[] the intensity of
8 price competition among” music players. *Id.* at n.7. He does not explain how, under these
9 circumstances, the price effect he postulates would remain constant over the entire two-year
10 damage period. *Id.*, Ex. 11 at 85:11-85:24.

11 Because it rests on unsupported assumptions that conflict with the real world, Dr. Noll’s
12 regression must be excluded. *See McGlinchy v. Shell Chem. Co.*, 845 F.2d 802, 807 (9th Cir.
13 1988) (affirming exclusion of damages study that rested on “unsupported assumptions”); *El*
14 *Aguila Food Prods., Inc. v. Gruma Corp.*, 301 F. Supp. 2d 612, 625 (S.D. Tex. 2003) *aff’d*, 131
15 F. App’x 450 (5th Cir. 2005) (excluding damages model that “ignore[d] market realities”).

16 **B. The Regression Does Not Properly Account For the Relevant Factors.**

17 A valid regression must account for the factors that may influence the characteristic being
18 measured—here, the price of iPods. Failure to do so can bias the results, by attributing an effect
19 to one event or characteristic that actually belongs to another. Dr. Noll’s regression fails to
20 satisfy this basic requirement in at least three separate respects, each of which independently
21 requires that his testimony be excluded.

22 **1. The regression does not properly account for the lawful effect of**
23 **iTunes 4.7 and thus uses the wrong “but-for” world.**

24 Dr. Noll’s regression includes variables for events that he contends may have affected
25 iPod prices. One of these variables is his iTunes 7.0 variable, which he claims measures the
26 effect of Harmony being disabled in 2006. Other variables include such things as the opening of
27 the iTS in April 2003, the original Harmony launch in July 2004, the release of iTunes 4.7 in
28 October 2004, and the record labels’ elimination of the DRM requirement for Apple’s compete-

1 tors in early 2008. Dr. Noll includes these other variables because, if plaintiffs' theory were
2 valid, he believes these events would be expected to affect iPod prices in the same manner
3 plaintiffs say the [REDACTED] did. For each of these variables except the variable for the release of
4 iTunes 4.7 (which he calls "Harmony Blocked"), Dr. Noll turns the variable "on" (*i.e.*, sets its
5 value to 1 in the equation) on the date of the event and leaves it on for the rest of the class period.

6 Dr. Noll treats iTunes 4.7 differently. In his initial report, Dr. Noll turned the iTunes 4.7
7 variable off as of September 12, 2006, the day the [REDACTED] was released. Amiri Decl., Ex. 4 at ¶ 90.
8 Dr. Noll admits that a variable should be included if it represents a factor that might plausibly
9 affect prices. ECF No. 685, p. 9. Thus, by turning the iTunes 4.7 variable off, his regression
10 treated iTunes 4.7 as having no plausible effect on prices after the [REDACTED] was released—and thus
11 treats the but-for world as one in which iTunes 4.7 did not exist. Amiri Decl., Ex. 4 at ¶¶ 94-95.

12 That treatment was inconsistent with plaintiffs' theory and with Dr. Noll's own admis-
13 sions. Plaintiffs' theory is that, by disabling Harmony in 2004 and allegedly increasing iTS sales,
14 iTunes 4.7 caused iPod prices to increase (albeit lawfully given this Court's ruling that iTunes 4.7
15 was lawful (ECF No. 627, p. 11)). And Dr. Noll admitted that, under plaintiffs' theory, this
16 alleged effect could persist even after the [REDACTED] was issued because the initial shutdown of
17 Harmony in 2004 could have caused consumers to permanently abandon Harmony. Amiri Decl.
18 Ex. 10 at 68:2-70:16 ("Q: And could that consumer expectation continue even after 7.0 is issued?
19 A: Exactly, it could."). For such consumers, it was iTunes 4.7 [REDACTED] that resulted in
20 fewer purchases from RealNetworks and whatever effect that may have had on iPod prices. By
21 nonetheless turning off the iTunes 4.7 variable when he turned on the iTunes 7.0 variable, Dr.
22 Noll caused the iTunes 7.0 variable to capture this continuing effect from iTunes 4.7. *See id.*, Ex.
23 3 at ¶102; Ex. 4 at ¶¶ 92-93.

24 In his rebuttal report, Noll responds by revising his regression to leave on the iTunes 4.7

25 [REDACTED]
26 [REDACTED]
27 [REDACTED]
28 [REDACTED] This, however, does not address the problem,

1 because the persistence effect he admits could have existed applies to all iPods, not just those
2 unaffected by 7.0. As discussed, wholly apart from the [REDACTED], some customers may have been
3 permanently dissuaded from using Harmony once it was disabled by iTunes 4.7, as Dr. Noll has
4 admitted. This effect does not depend on which iPod the customer owns or whether the [REDACTED] was
5 implemented on it. It is an effect on *consumers*, resulting from the earlier disabling of Harmony,
6 not from the iPod they later purchase.

7 In his latest model, Dr. Noll then compounds this error by not turning on the iTunes 7.0
8 variable for those iPod models on which [REDACTED] was not implemented. By doing so, he treats
9 [REDACTED] as not having any possible effect on demand for those models. But that treatment is
10 contrary to Dr. Noll’s own assertion that “[t]he effect on prices [from iTunes 7.0] is not
11 necessarily limited to just the products that were sold that had 7.0 in them.” *Id.*, Ex. 10 at 46:2-4.
12 According to Dr. Noll, that is because disabling Harmony in 2006 was a “market-defining event.”
13 *Id.*, Ex. 10 at 48:24-49:17. Thus, contrary to what he does in current model, Dr. Noll previously
14 admitted that turning on the iTunes 7.0 variable for all models is “the right way to do it.” *Id.*, Ex.
15 10 at 49:14.

16 The effect of these errors is to find an impact where none exists. Fixing these errors—by
17 leaving on the iTunes 4.7 variable throughout the period and by turning on the iTunes 7.0 variable
18 as to all models—reduces the claimed damages to zero. *Id.*, Ex. 14 at ¶ 7, ¶ 15 & Ex. JT-2a JT2b.
19 Damages for resellers are likewise reduced to zero even if only the latter error is corrected—*i.e.*,
20 the iTunes 7.0 variable is turned for all models, without changing his treatment of the iTunes 4.7
21 variable. *Id.*

22 **2. The regression does not account for the impact of the unchallenged**
23 **aspects of [REDACTED].**

24 Dr. Noll’s regression includes a single “iTunes 7.0” variable that he asserts measures the
25 alleged unlawful overcharge in iPod prices. *Id.*, Ex. 3 at p. 81; *see also* Ex. 3 at ¶ 80. However,
26 plaintiffs challenge only one aspect of the iTunes 7.0—[REDACTED]. They do not challenge the other
27 aspects of iTunes 7.0 that are much more likely to affect demand for iPods, “including new album
28 covers views of music, TV shows, movies with better browsing capability and videos with ‘near

1 DVD’ quality.” *Id.*, Ex. 3 at ¶ 113; *see also* Ex. 4 at ¶ 110. Reflecting all of these value-
2 enhancing features, Apple described iTunes 7.0 at the time as “the most significant enhancement
3 to the world’s most popular music jukebox and online music and video store since it debuted in
4 2001.” *Id.*, Ex. 12. Dr. Noll’s regression must control for these other, unchallenged aspects of
5 iTunes 7.0 to ensure that the coefficient on the iTunes 7.0 variable captures **only** the price impact
6 of the challenged conduct. *Id.*, Ex. 3 at ¶¶ 80, 108; Ex. 4 at ¶ 48.

7 Dr. Noll does not deny the need to control for the other, unchallenged aspects of iTunes
8 7.0—and he admits that failing to control for them would result in erroneously attributing to the
9 █████ a price effect caused by something else. *Id.*, Ex. 10 at 34:19-25, 35:2-5. He asserts,
10 however, that all of the attributes of iTunes 7.0 that might affect iPod prices are captured in his
11 other variables. When pressed to identify those other variables, he pointed to the variables for the
12 type of iPod (classic, mini, nano and shuffle) and his variables for storage capacity and photo and
13 video capability. *Id.* at 31:11-32:21.

14 This is insufficient. Dr. Noll cannot explain how any of these variables would capture the
15 effect of the other, unchallenged aspects of iTunes 7.0. The fact that a given iPod is a nano or a
16 classic does not shed any light on whether the ability to browse by album cover increased the
17 value of that iPod. Nor does the iPod’s storage capacity answer that question. Similarly, ability
18 to display a video is not the same as being able to play, for the first time, a full-length movie.

19 Because iTunes 7.0 included “unique attributes” that Dr. Noll’s model ignores, the model
20 cannot accurately determine whether “any price-elevating impact of iTunes 7—assuming there
21 even was one—was due to the █████ as opposed to other value-enhancing features of iTunes 7.”
22 Amiri Decl., Ex. 3 at ¶ 113. Expert damages calculations that fail to “segregate the losses, if any,
23 caused by acts which were not antitrust violations from those that were” will not assist the trier of
24 fact and must be excluded.⁴ That is the situation here.

25 ⁴ *City of Vernon v. S. Cal. Edison Co.*, 955 F.2d 1361, 1372-73 (9th Cir. 1992) (damages
26 study that treated lawful acts as “contribut[ing] to the damage figure” was not competent
27 evidence of damages); *see also Concord Boat*, 207 F.3d at 1056-57 (expert opinion as to the
28 alleged overcharge “should not have been admitted because it ... did not separate lawful from
unlawful conduct”); *In re Se. Milk Antitrust Litig.*, 2012 WL 1032797, at *5-6 (expert damages

(continued)

1 **3. The regression does not account for major product characteristics and**
2 **other factors relevant to price.**

3 Dr. Noll recognizes that product features are important determinants of price, and thus his
4 regression includes variables for a few such characteristics—*e.g.*, storage capacity, photo and
5 video capability, and size (cubic inches). *Id.*, Ex. 10 at 30:22-32:21 & Ex. 7 at Ex. 13. But he
6 omits numerous other characteristics that are equally (if not more) likely to affect price, including
7 battery life, display size, weight, screen resolution, and type of connector (USB or FireWire). *Id.*,
8 Ex. 3 at ¶ 110; *see also* Ex. 4 at ¶ 111, Ex. 10.

9 “Omitted variable bias arises when important explanatory variables that have been
10 omitted from the regression model are correlated with included explanatory variables. . . . This
11 misspecification will bias the resulting coefficient estimates, and make these estimates unreliable
12 for damage estimation.” American Bar Association, *Proving Antitrust Damages: Legal and*
13 *Economic Issues* 148 (2d ed. 2010). Thus, courts have repeatedly recognized that failing to
14 control for major variables renders a regression unreliable and inadmissible.⁵ That is the
15 circumstance here. As Dr. Noll recognized by including some product characteristic variables in
16 his regression, product features are important to determining price—and there is no basis for
17 thinking that storage capacity (which he included) is relevant while battery life, screen size,
18 screen resolution, weight and type of connector (all of which he excluded) are irrelevant. As Dr.
19 Noll has admitted, a variable should be included if “prices plausibly could be affected by it.”

20 _____
21 model measuring price impact of lawful merger rather than price impact of the alleged conspiracy
could not establish antitrust injury).

22 ⁵ *In re Live Concert Antitrust Litig.*, 863 F. Supp. 2d 966, 973-83 (C.D. Cal. 2012)
23 (excluding expert regression that failed to account for major variables); *In re REMEC Inc. Sec.*
24 *Litig.*, 702 F. Supp. 2d 1202, 1273-74 (S.D. Cal. 2010) (excluding regression that made “no
25 attempt to account for other possible causes” of changes in stock price); *In re Graphics*
26 *Processing Units*, 253 F.R.D. at 496-97 (finding plaintiffs’ econometric models to be “grossly
27 lacking” where they omitted “factors that would likely have an impact on prices); *In re*
28 *Methionine Antitrust Litig.*, MDL No. 00-1311, 2003 U.S. Dist. LEXIS 14828, at *9-10 (N.D.
Cal. Aug. 22, 2003) (holding that failure to take into account variables that could affect price
rendered analysis unreliable); *Blomkest Fertilizer, Inc. v. Potash Corp. of Saskatchewan*, 203
F.3d 1028, 1038 (8th Cir. 2000) (finding econometric model not to be probative where the model
failed to take into account relevant events).

1 ECF No. 685, p. 9. That standard is more than satisfied as to the omitted characteristics here.
2 Not only are the attributes on their face just as likely (or more likely) to affect demand as the
3 attributes Dr. Noll included, [REDACTED]

4 [REDACTED]
5 [REDACTED] Moreover, under plaintiffs' theory, each of these characteristics would be
6 expected to be correlated with the iTunes 7.0 variable, as each would be expected to make iPods
7 more desirable and thus increase demand.

8 The relevance of these characteristics is confirmed by regressions run by Apple's experts,
9 which included variables for the excluded characteristics. When the proper but-for world is used,
10 controlling for even a few of the iPod features Dr. Noll omitted reduces the claimed damages to
11 zero. Amiri Decl., Ex. 14 at ¶ 6, ¶¶12-14, ¶¶16-22 & Ex. JT-1a, JT-1b. By failing to control for
12 the relevant product characteristics, Dr. Noll's regression erroneously attributes iPod price
13 changes to [REDACTED] that actually are the result of the omitted variables, and "produce[s] an
14 overcharge where none exists." *Id.* ¶¶ 79-80; *see also* Amiri Decl. Ex. 4 at ¶ 110. The regression
15 is thus inadmissible. As the court recognized in excluding the regression model in *Freeland v.*
16 *AT&T Corp.*, 238 F.R.D. 130 (S.D.N.Y. 2006), "an unsupported assumption that changes in
17 quality would never affect . . . price is insufficient to justify its exclusion from the regression
18 analysis, particularly in light of evidence to the contrary." *Id.* at 148.

19 In his rebuttal report, Dr. Noll does not dispute the need to control for product character-
20 istics that could affect price. Nor does he deny that the product characteristics he omitted could
21 affect price. He argues instead that his other variables capture any effect from the omitted
22 features. Amiri Decl., Ex. 8 at pp. 8, 31. But he does not explain how, for example, a variable
23 for storage capacity (or video capability) would measure the impact of introducing batteries with
24 longer battery life. Or how a variable for the size of the iPod captures the value of enhanced
25 screen resolution. He suggests that his nano variable would capture the effect of any feature "that
26 is found only in an iPod nano." *Id.* at p. 31. But he does not assert that the features he has
27 excluded are unique to the nano or to any other specific iPod model. In fact, they are not. Battery
28 life, display size, weight, screen resolution, and type of connector (USB or FireWire) are not

1 specific to any model – any more than are the storage capacity or video capability variables Dr.
2 Noll opted to include in his model.

3 Like the expert in *Freeland*, Dr. Noll has “offered no empirical analysis to support his
4 conclusion” that the features he has excluded are irrelevant to price, despite their obvious
5 importance to inconsumers. 238 F.R.D. at 146. His regression is thus “so incomplete as to be
6 inadmissible as irrelevant.” *Id.* at 147 (quoting *Bazemore v. Friday*, 478 U.S. 385, 400 (1986)).

7 **C. The Regression Does Not Provide Statistically Significant Results.**

8 Dr. Noll’s regression is inadmissible for an additional, independent reason: his damages
9 estimates are not statistically significant. Dr. Noll asserts that his regression should be accepted
10 because the low standard errors on the coefficients he reports supposedly show that the
11 coefficients are statistically significant. Amiri Decl., Ex. 6 at p. 80. But he has vastly
12 underestimated the standard errors. When properly calculated, the standard errors show that the
13 coefficient for 7.0 is statistically *insignificant*—*i.e.*, no different from zero and thus meaningless
14 to show any impact on prices.⁶

15 As Dr. Noll explains, a fundamental assumption relied on in regression analysis is that the
16 errors or residuals (the portion of the price that cannot be explained by the explanatory variables)
17 are uncorrelated or independent of one another—*i.e.*, that “the magnitude of the error in one
18 observation does not reveal any information about the magnitude of the error in another
19 observation.” *Id.*, Ex. 8 at pp. 36-38; Ex. 11 at 23:9-24:7; Ex. 4 at pp. 32-33. If the errors within
20 a group are correlated (not independent), they are said to be clustered and must be addressed by
21 standard correction methods. *Id.*, Ex. 4 at pp. 34-35; *Proving Antitrust Damages*, p. 147
22 (allowing for clustering is “used generally in practice”). If no correction is made, the standard
23 errors will be miscalculated and will under- or over-estimate the model’s precision. Amiri Decl.,
24

25 ⁶ Standard errors measure the precision with which the coefficients are estimated—the
26 confidence that the true value is near the estimated value. The smaller the standard error, the
27 more precise the results. Standard errors can be used to calculate a t-statistic, which reflects the
28 degree of confidence that the estimate for the coefficient did not arise by chance when the true
effect of the variable in question is actually zero. Amiri Decl., Ex. 3 at pp. 46-47; Ex. 4 at pp. 22-
23, 27-37.

1 Ex. 11 at 25:15-20; Ex. 4 at pp. 34-37; Ex. 3 at pp. 50-51.⁷

2 Dr. Noll admits that there are standard procedures to test whether the errors in a regression
3 are correlated. *Id.*, Ex. 14 24:9-14. But he did not employ any of those procedures, even after
4 Apple’s experts explained that the errors in his regression are in fact correlated. *Id.* at 27:9-32:8,
5 45:23-46:9. Had he run such a test, he would have discovered that errors within certain groups or
6 clusters are highly correlated, revealing that the independence assumption is false. *Id.*, Ex. 14,
7 ¶ 10.

8 Correcting for this fundamental error renders Dr. Noll’s estimated “overcharges”
9 statistically indistinguishable from zero. On his regression for reseller transactions, the t-statistic
10 for the iTunes 7.0 coefficient goes from 37.599 to a corrected 0.577. *Id.*, Ex. 14, at ¶ 9 & n.9 &
11 Exhs. JT-1a, JT-1b & App. D1a, D1b. And in the direct sales regression, it goes from 448.711 to
12 1.536. *Id.* T-statistics of less than 2 signify the result is not statistically significant. *Id.*, Ex. 4 at
13 ¶ 63. Because its results are not statistically significant, Dr. Noll’s “model provides no reliable
14 evidence that the iTunes 7 update had any material effect on the prices of iPods.” *Id.*, Ex. 3 at ¶
15 99; *see also* Ex. 4 at ¶¶ 79-84.

16 **IV. DR. NOLL’S RELEVANT MARKET OPINIONS SHOULD BE EXCLUDED AND**
17 **SUMMARY JUDGMENT GRANTED FOR FAILURE OF PROOF ON THAT**
18 **ISSUE.**

19 To prove a monopolization claim, the plaintiff must define the relevant product market.
20 *Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 455-59 (1993). Doing so requires identifying
21 “the pool of goods or services that enjoy reasonable interchangeability of use and cross-elasticity
22 of demand.” *Oltz v. St. Peter’s Cmty. Hosp.*, 861 F.2d 1440, 1446 (9th Cir. 1988). Dr. Noll
23 purports to define two relevant product markets: the device market, which he opines includes

24
25 ⁷ *Proving Antitrust Damages*, pp. 145-46 (“There can be substantial consequences from
26 estimating the standard errors for the coefficient estimates as if the errors were uncorrelated when
27 they are in fact correlated. With positive correlation between the error terms, the incorrectly
28 estimated standard error generally will be biased downward, making the regression coefficients
seem to be more precisely estimated than they really are. As a result, a statistical test on the
coefficients may yield what appears to be a statistically significant result but is not.”).

1 only portable digital media players; and the music market, which he opines consists solely of
2 digital audio files. Amiri Decl., Ex. 6 at pp. 23-42. This testimony should be excluded, because
3 it is not the product of reliable economic principles and methods.

4 Dr. Noll did not employ the economic methods courts have recognized as valid for
5 defining a relevant market. He admits that economists typically determine relevant markets by
6 estimating cross-elasticity of demand. *Id.* at pp. 23-24. But he did not do that. He similarly
7 alludes to the “hypothetical monopolist” test endorsed by the Department of Justice. But he did
8 not employ that method either. Nor did he conduct any other thorough quantitative analysis of
9 prices, costs or output of potential competing products. Like the expert excluded in *Menasha*
10 *Corp. v. News Am. Mktg. In-Store, Inc.*, 354 F.3d 661, 664 (7th Cir. 2004), he “introduced no
11 econometric analysis of any kind” related to market definition. He asserts that economists rely on
12 surveys of buyers, or statements of executives in the industry. But he does not present any such
13 evidence.

14 Rather than relying on any accepted economic methods, Dr. Noll offers his own truncated
15 review of what he perceives to be the similarities or dissimilarities between certain products, with
16 an occasional citation to a news article or other report from the internet. He does not purport to
17 be applying any economic expertise in doing so. Nor does he profess to have any industry or
18 other experience that would make him an expert on what consumers consider to be substitutes for
19 digital music and music players. This portion of his report could have just as easily been written
20 by a non-expert lawyer or anyone else with the ability to run internet searches. It is not valid
21 expert opinion. *See Live Concert*, 863 F. Supp. 2d at 994 (excluding expert report purporting to
22 define relevant product market where expert “purported to rely on ‘industry information’ ... [but]
23 did not utilize a reliable methodology for interpreting and applying this information”).⁸

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25 ⁸ *Brown Shoe Co. v. United States*, 370 U.S. 294 (1962), held that “practical indicia” may
26 determine “[t]he boundaries of ... a submarket.” *Id.* at 325. But the Ninth Circuit has never held
27 that the relevant product market can be defined “*exclusively* by reference to these ‘practical
28 indicia.’” *In re Live Concert*, 863 F. Supp. 2d at 985-86; *accord Reifert v. S. Cent. Wisc. MLS*
Corp., 450 F.3d 312, 320 (7th Cir. 2006). And Dr. Noll did not in any event employ any
economic expertise related to any practical indicia.

1 In addition to not applying any relevant expertise, Dr. Noll’s non-expert product review is
2 flawed. As to the player market, he refers only to CD players and cell phones, without discussing
3 any other potentially competing devices for playing digital music, such as notebook computers
4 and home stereo systems—products that Apple’s witnesses testified they considered to be
5 competitive products. Amiri Decl., Ex. 13 at 48:4-10. Likewise, Dr. Noll does not address
6 whether customers might substitute free downloads from peer-to-peer file sharing sites for iTunes
7 music, disregarding evidence that the availability of free downloads was a major challenge to the
8 success of paid music stores like iTunes. *Id.*, Ex. 3 at ¶ 125. Instead, Dr. Noll “focused on finding
9 the perfect substitute[s] for [iPods and iTunes music],” ignoring that some “flexible elastic
10 buyer[s]” will switch to “substitutes, even if the substitutes are imperfect.” *Va. Vermiculite Ltd.*
11 *v. W.R. Grace & Co.-Conn.*, 98 F. Supp. 2d 729, 737 (W.D. Va. 2000) (excluding expert
12 testimony for failure to “thoroughly examine substitutes when defining the market”); *Ky.*
13 *Speedway, LLC v. Nat’l. Assoc. of Stock Car Auto Racing, Inc.*, 588 F.3d 908, 916-17 (6th Cir.
14 2009) (affirming order striking expert’s “report and deposition testimony because he had included
15 only Busch series and open-wheeled races as possible substitutes for attending live NASCAR
16 stock-car racing events or watching them on television” without considering “other sports—and
17 possibly other forms of entertainment—as substitutes”).

18 To the extent Dr. Noll does address possible substitutes, he excludes them based on
19 improper considerations. For example,

- 20 • Dr. Noll assumes that cell phones must be able to download music over wireless carriers’
21 networks to be substitutes for iPods. Amiri Decl., Ex. 6 at pp. 29-31. But iPods never had
22 that capability during the class period. *Id.*, Ex. 3 at ¶ 130. Only the iPod Touch could
23 download music at all, and only over a Wi-Fi connection, not a wireless network. *Id.*
- 24 • Dr. Noll excludes on-demand and non-interactive streaming music from the market
25 because those services were not fully available on mobile devices during the class period.
26 *Id.*, Ex. 6 at pp. 33-39. But support for mobile devices is not relevant to consumers who
27 purchased music to play on other devices, and Dr. Noll presents no analysis as to the
28 volume of iTunes sales for use on such other devices. *Id.*, Ex. 3 at ¶ 126.

- 1 • Dr. Noll opines that a streaming music service (like Pandora) is “most likely” not a
2 substitute for iTS music because it is not fully customizable. *Id.*, Ex. 6 at p. 37. But he
3 offers no data or reasoned analysis to explain why a service must be fully customizable
4 before consumers will choose it over permanent downloads.
- 5 • Dr. Noll offers only untested, subjective opinions for his conclusion that CDs are not close
6 substitutes for downloads, (*see id.*, Ex. 6 at pp. 39-41), [REDACTED]
7 [REDACTED]
8 [REDACTED]

9 Expert opinions based on untested assumptions and subjective opinions, as opposed to
10 market data, are routinely excluded as inadmissible under *Daubert*.⁹ Even “reasonable” or
11 “intuitively obvious” presumptions cannot form the basis for expert opinions. *See United Food*
12 *Mart, Inc. v. Motiva Enters., LLC*, 404 F. Supp. 2d 1344, 1349-50 (S.D. Fla. 2005) (expert
13 opinion based on “reasonable” assumption that gas stations located within two miles on one
14 another on the same road compete excluded because expert did not “test [it] by reference to
15 specific facts of this case”); *SMS Sys. Maint. Servs., Inc. v. Digital Equip. Corp.*, 188 F.3d 11, 25
16 (1st Cir. 1999) (refusing to credit expert opinion based on an “intuitively obvious proposition”
17 and sources the expert “neither attaches nor discusses”).

18 In sum, Dr. Noll’s proposed relevant product definitions must be excluded because they
19 are the product of untested, subjective opinions regarding customer preferences, as opposed to
20 any economic analysis of the markets, the interchangeability of products, or actual consumer
21 behavior. And, because—absent Dr. Noll’s opinion—plaintiffs have no basis upon which to prove
22 a relevant market, summary judgment should be granted on this ground as well. *In re Live*
23 *Concert*, 843 F. Supp. 2d at 1000 (granting summary judgment for lack of proof of relevant
24 market after excluding expert witness opinion); *Va. Vermiculite, Ltd. v. W.R. Grace & Co.-Conn.*,

25 ⁹ *See In re Live Concert*, 863 F. Supp. 2d at 994 (excluding expert’s relevant market
26 definition where expert “relied on his own subjective opinion in order to determine which
27 performers qualify as ‘rock’ artists”); *McLaughlin Equip. Co., Inc. v. Servaas*, No. 98-127-C-T/K,
28 2004 WL 1629603, at *6 (S.D. Ind. Feb. 18, 2004) (excluding expert’s relevant market opinion
where it was “based on insufficient data,” including only one piece of market data).

1 108 F. Supp. 2d 549, 576 (W.D. Va 2000) (same); *Ky. Speedway*, 588 F.3d at 919 (affirming
2 summary judgment after concluding that expert testimony on relevant market had been properly
3 excluded).

4 **CONCLUSION**

5 Dr. Noll's testimony regarding impact, damages and relevant market should be excluded
6 and summary judgment granted to Apple.

7 Dated: December 20, 2013

Respectfully submitted,

8 JONES DAY

9
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12 Counsel for Defendant APPLE INC.

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