

**IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF TEXAS  
HOUSTON DIVISION**

**WESTERNGECO L.L.C.,**

**Plaintiff,**

**V.**

**ION GEOPHYSICAL CORPORATION,  
FUGRO-GEOTEAM, INC., FUGRO-  
GEOTEAM AS, FUGRO NORWAY  
MARINE SERVICES AS, FUGRO, INC.,  
FUGRO (USA), INC. and FUGRO  
GEOSERVICES, INC.,**

**Defendants.**

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**CIVIL ACTION NO. 4:09-cv-01827**

**Judge Keith P. Ellison**

**JURY TRIAL DEMANDED**

**ION'S MOTION FOR JUDGMENT AS A MATTER OF LAW,  
MOTION FOR NEW TRIAL ON DAMAGES, AND  
ALTERNATIVELY, MOTION FOR REMITTITUR**

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**ION’S MOTION FOR JUDGMENT AS A MATTER OF LAW,  
MOTION FOR NEW TRIAL ON DAMAGES, AND  
ALTERNATIVELY, MOTION FOR REMITTITUR**

Defendant ION Geophysical Corporation (“ION”) files this Motion for Judgment as a Matter of Law, Motion for New Trial on Damages, and Alternatively, Motion for Remittitur, as follows:

**SUMMARY OF ARGUMENT**

The jury awarded WesternGeco L.L.C. (“WG”) \$105.9 million based on two defective and overlapping damage models: (1) a radical lost profits model unsupported by the law or evidence; and (2) a reasonable royalty model that failed to meet the basic requirements of patent law. A judgment based on the jury’s verdict would require this Court to ignore well-settled principles of patent damages and make new law.

The jury’s lost profits award must be vacated because it is not based on the domestic acts of infringement in this case—ION’s supply of components from the United States—but on the revenues that WG estimated its competitors received for their non-infringing use of ION’s

equipment in 10 seismic surveys performed in foreign waters. A judgment on this verdict would improperly impose damages on ION for the non-infringing use by third parties and result in the erroneous extraterritorial enforcement of United States patent law. WG's damages expert, Raymond Sims ("Sims"), impermissibly based his calculations on WG's guesstimates of the revenue its competitors received for the 10 surveys which WG admits were drawn from rumor and "innuendo." Sims also improperly used the *Panduit* test that is applicable only when the patentee and the infringer compete to sell similar products, and ION and WG do not. Sims then applied the test inconsistently with insufficient evidence to support three of the four *Panduit* factors. WG further failed to carry its burden by assuming critical facts, such as whether the claimed lost surveys were actually performed using ION's components.

WG also presented a reasonable royalty on all of ION's sales of its DigiFIN and Lateral Controller to customers other than former co-defendant Fugro, but failed to apportion the damages to account for the value of WG's patented improvement. Sims's reasonable royalty testimony also included unsupported claims for convoyed sales and products sold before WG gave ION actual notice of infringement.

Because the jury's verdict is based on theories with no foundation in the law and is not supported by sufficient evidence or is contrary to the great weight and preponderance of the evidence, ION is entitled to judgment as a matter of law ("JMOL") or a new trial on damages.

#### **NATURE AND STAGE OF THE PROCEEDING**

Trial of this case began on July 23, 2012. On August 13, 2012, the Fugro Defendants remaining in this case settled and were dismissed. Dkt. 525. The jury rendered its verdict on August 16, 2012, finding that certain patent claims were infringed under 35 U.S.C. § 271(f)(1) and (f)(2) and that ION's infringement was willful. Dkt. 536. The jury awarded WG lost profits of \$93,400,000 and a reasonable royalty of \$12,500,000, for a total award of \$105.9 million. *Id.*



**ISSUES TO BE DECIDED**

1. Whether the evidence is legally sufficient to support the jury's award of lost profits (Question 5), or the finding is against the great weight and preponderance of the evidence, when the finding is based on a damage model that inherently violates blackletter patent law, improperly allows WG to recover overlapping damages, and is based on nothing more than speculation and unsubstantiated testimony?
2. Whether the evidence is legally insufficient to support the jury's award of a reasonable royalty (Question 5), or the finding is against the great weight and preponderance of the evidence, when the finding is based on a damage model that improperly allowed WG to recover an amount beyond the value of its patented invention, unproven convoyed sales, and sales prior to the date notice of infringement was given?
3. Whether a new trial is necessary because damages are not segregated and/or are excessive, or in the alternative, the Court should grant a remittitur?

**STANDARD OF REVIEW**

The plaintiff has the burden to prove damages. *See Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1324 (Fed. Cir. 2009). If the plaintiff fails to present evidence of damages, JMOL should be granted. *See ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 868 (Fed. Cir. 2010); *see also* Fed. R. Civ. P. 50(a)(1) (JMOL is appropriate if a "reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue."). JMOL is reviewed *de novo*. *See LaserDynamics, Inc. v. Quanta Computer, Inc.*, --- F.3d---, No. 2011-1440, 2012 WL 3758093, at \*10 (Fed. Cir. Aug. 30, 2012) (attached as Ex. 1).

A new trial may be granted if (1) the verdict is against the great weight of the evidence, (2) the damages awarded are excessive, (3) the jury's findings are inconsistent, (4) prejudicial error was committed, or (5) to prevent injustice. *See Ellis v. Weasler Eng'g, Inc.*, 258 F.3d 326, 342 (5th Cir. 2001); *Smith v. Transworld Drilling Co.*, 773 F.2d 610, 612-13 (5th Cir.1985); *United States v. Flores*, 981 F.2d 231, 237 (5th Cir. 1993). An order for new trial or remittitur will not be disturbed absent an abuse of discretion or a misapprehension of the law. *See Poly-Am., L.P. v.*

*GSE Lining Tech., Inc.*, 383 F.3d 1303, 1307 (Fed. Cir. 2004); *see also LaserDynamics*, 2012 WL 3758093, at \*10.

## **BACKGROUND**

The relevant background may be found in ION’s Motion For New Trial on Infringement Under 35 U.S.C. § 271(f)(2) at § I, filed September 28, 2012, which is incorporated herein.

## **ARGUMENT**

### **I. LOST PROFITS**

#### **A. There Is No Legal Basis for the Lost Profits Award.**

##### **1. Damages cannot be based on third-party revenue realized from the non-infringing use of the patented device outside the United States.**

There is no authority to permit an award of lost profits against a component parts manufacturer for infringement under § 271(f) based on the revenue realized by third-parties using the patented invention outside the United States. Section 271(f) only imposes liability for the supply of components in or from the United States, not the extraterritorial use of those combined components. *See* 35 U.S.C. § 271(f); *cf. Waymark Corp. v. Porta Sys. Corp.*, 245 F.3d 1364, 1368 (Fed. Cir. 2001). WG’s claim for lost profits is nothing more than an attempt to circumvent the limits of § 271(f) and recover damages for extraterritorial, non-infringing conduct that United States patent law is not designed to reach.

As this Court has previously found in its prior rulings, § 271(f) has a meaning independent of § 271(a)-(c). Dkt. 365 at 46. The text of the statute does not require a direct infringement ever be shown, but rather the liability is based on “supplying”—which is the act that occurs in the United States. Just as § 271(f) does not require proof of direct infringement, so too it does not allow for damages based on conduct outside of the United States from making or using the patented invention.

a. ***The non-infringing use of the patented invention.***

The jury's lost profits award is improperly based on the non-infringing use of the patented invention by parties other than ION. Despite WG's protestations, the scope of recoverable damages is not unlimited, and the focus of the inquiry must be on the "act of infringement." *See* 35 U.S.C. § 284 (defining the damages recoverable for infringement as "damages adequate to compensate for the *infringement*, but in no event less than a reasonable royalty for the *use made of the invention by the infringer*, together with interest and costs as fixed by the court" (emphasis added)). Here, the act of infringement was ION's supply of component parts from the United States.<sup>1</sup> Yet, WG does not seek to recover for sales of components lost in competition to ION's supply of components in violation of § 271(f). Instead, the jury's lost profits award is based upon use by third parties of those components (in combination with other components, such as streamers, and a vessel) to perform surveys outside the United States. ION is not a party to those survey contracts, has no financial stake in the profitability of the survey contracts, and no role in bidding or competing for the survey contracts. All of this activity (by third parties neither controlled nor managed nor otherwise related to ION) takes place outside of the United States<sup>2</sup> and, thus, does not infringe a United States patent. *See* Dkt. 164 at \*22 (recognizing that surveys conducted outside the United States are not infringing acts); Dkt. 144 at \*43 (same). Such conduct is, therefore, not a proper basis for damages under § 271(f).

The Federal Circuit is clear on this issue. In *Cardiac Pacemakers*, the Federal Circuit, sitting *en banc*, evaluated whether § 271(f) applies to the supply of a device used to perform a particular method outside the United States. *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 576

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<sup>1</sup> Although ION vehemently denies that it has infringed any of WG's patents, for the sake of argument, in this motion, infringement under § 271(f) will be assumed.

<sup>2</sup> WG's director of marketing and vice president of sales, Robin Walker, admitted that the claimed lost profits surveys took place more than 12 miles from the coast of the United States. Trial Transcript ("Tr.") at 1868:20-1869:9. (All trial transcript excerpts are attached as Ex. 2).

F.3d 1348, 1362 (Fed. Cir. 2009). Relying on the statutory language and legislative history, the court concluded that § 271(f) does not apply to method claims. Consequently, liability did not extend to the use of components by third parties outside of the United States. *See id.* at 1365-66. Although not seeking to enforce its method claims at trial, WG nonetheless presented evidence of lost profits based on the overseas *use* of its patented invention under § 271(f). All of the Bittleston Patents (the ‘520, ‘967, ‘607 Patents) have a series of method claims followed by a series of apparatus claims for implementing those methods—at least in the context of the Bittleston Patents, the use of the apparatus is the same as practicing the method. *See* PTX1, PTX2, PTX3.<sup>3</sup> A patent owner should not be able to use a distinction with no meaningful difference to circumvent the rules against extraterritorial application of United States patent law.

b. ***Predicating damages on non-infringing, extraterritorial conduct improperly gives extraterritorial effect to United States law.***

The jury’s lost profits award runs afoul of precedent limiting the reach of United States patent law. The Supreme Court has clearly articulated a strong presumption against extending United States patent law to extraterritorial conduct. *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 454-55 (2007) (“The presumption that United States law governs domestically but does not rule the world applies with particular force in patent law.”). This bar against international enforcement of United States patent law has been in place for over 150 years. *See id.* at 456 (cautioning that the presumption that patent law only applies domestically is not defeated simply because a statute like § 271(f) specifically addresses extraterritorial application but “remains instructive in determining the *extent* of the statutory exception” (emphasis orig.)); *see also Dowagiac Mfg. Co. v. Minn. Moline Plow Co.*, 235 U.S. 641, 650 (1915) (“The right conferred

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<sup>3</sup> Due to their voluminous nature, the cited trial exhibits (which are in the record) are not attached to this Motion. Upon request, ION will deliver courtesy copies of any exhibits desired by the Court.

by a patent under our law is confined to the United States and its territories,” and infringement “cannot be predicated on acts wholly done in a foreign country.” (internal citation omitted)); *Brown v. Duchesne*, 60 U.S. 183, 195 (1856) (holding that use of a patented invention outside of the United States is not infringement).

Permitting WG to recover damages for the extraterritorial, non-infringing conduct of third parties results in the impermissible extraterritorial enforcement of United States patent law. WG’s approach in effect “converts a single act of supply from the United States into a springboard for liability each time” the component is used in a system or otherwise used outside of the United States—a proposition expressly rejected by the Supreme Court. *Microsoft*, 550 U.S. at 456. Foreign law, not United States law, governs the extraterritorial use of a patented invention. *See John Hopkins Univ. v. CellPro, Inc.*, 152 F.3d 1342, 1366 (Fed. Cir. 1998); *see generally* 35 U.S.C. § 271.

Because the lost profits award is premised on nothing more than foreign assembly and use by third-parties, JMOL for ION is warranted.

2. **The Panduit test only applies if the patentee’s and the infringer’s products compete.**

Even if WG’s theory were recognized by the law, WG cannot prove that the claimed lost profits were caused by the infringement. The legal test that WG used to establish but-for causation of its lost profits claim does not apply to this case. *See* Tr. at 2275:14-2276:2. As a result, the evidence does not support Sims’s opinion, the submission of a lost profits issue to the jury, or the verdict under the correct application of the law.

The *Panduit* test applies when a patent owner claims that “it lost sales *equal in quantity* to the infringing sales.” *See Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 671-72 (Fed. Cir. 1988) (emphasis orig.). The test provides that to obtain profits on sales the patentee would have

made but for the infringement, “*i.e.*, the *sales made by the infringer*, a patent owner must prove: (1) demand for the patented product, (2) absence of acceptable noninfringing substitutes, (3) his manufacturing and marketing capability to exploit the demand, and (4) the amount of the profit he would have made.” *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1156 (6th Cir. 1978) (emphasis added). The failure to establish any one of these factors is fatal to a lost profits claim. *Id.*

The logical premise of the *Panduit* test is that, if there is demand for a particular product and no available alternatives for it, the fact-finder may infer that in the absence of infringement purchasers of the product would transfer their demand for the infringing product to the patentee’s substitute product and, thus, the patentee would have captured the infringer’s sales if it had the capacity to make them. *See Bic Leisure Prods. Inc. v. Windsurfing Int’l, Inc.*, 1 F.3d 1214, 1218-19 (Fed. Cir. 1993). If the products “are not sufficiently similar to compete in the same market for the same customers, the infringer’s customers would not necessarily transfer their demand to the patent owner’s product in the absence of the infringer’s product.” *Id.* The inference provided by the *Panduit* test is, therefore, not possible where the patentee’s and the infringer’s products do not compete for the same customers. *Id.* at 1218 (“If the patentee’s and the infringer’s products are not substitutes in a competitive market, *Panduit*’s first two factors do not meet the ‘but for’ test—a prerequisite for lost profits.”).

ION and WG unquestionably sell different products to different customers. ION sells equipment to surveyors, not surveys. Tr. at 312:20-25, 4126:3-5 (including to WG), 4315:13-21, 2427:19-21, 2821:25-2822:4; *see also id.* at 2468:25-2469:1. ION’s surveyor customers combine ION’s equipment with other products to perform surveys. *See, e.g., id.* at 1234:3-10. In contrast, WG does not manufacture or sell marine seismic equipment or the patented system; rather, WG

sells surveys to oil companies and uses its equipment to perform the surveys. Tr. at 312:3-7, 243:8-11, 1639:4-12. While ION competes with other equipment suppliers for sales, WG competes with surveyors for survey jobs; thus, there is no market overlap among the customers buying ION's products and WG's surveys. See Tr. at 313:1-5, 2270:20-2271:7, 2468:25-2469:1; see also *id.* at 4548:19-21, 1694:25-1695:7, 4893:21-4894:7. Accordingly, the *Panduit* test is not applicable to this case. See *Mitutoyo Corp. v. Cent. Purchasing, LLC*, 499 F.3d 1284, 1291 (Fed. Cir. 2007) (affirming summary judgment for infringer because the patentee failed to establish any market overlap among the consumers buying the patentee's and the infringer's respective products, so as to entitle it to a jury trial on lost profit damages); *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1581 (Fed. Cir. 1996) (explaining that to apply the *Panduit* test, the district court "would have needed to ascertain whether [infringer's] and [patentee's] products competed for the same customers . . ."); *Comair Rotron, Inc. v. Nippon Densan Corp.*, 49 F.3d 1535, 1540 (Fed. Cir. 1995) (Rader, C.J., concurring) (cautioning that "before applying the *Panduit* test, a court must determine whether the accused device competes with the patentee's product in the marketplace. If not, the court should not employ the *Panduit* test.").

Because there is legally insufficient evidence that the parties' products compete, the *Panduit* test is inapplicable, and because liability and damages under § 271(f) are narrower than under § 271(a)-(c), ION is entitled to JMOL on lost profits (or at least a new trial). See *Mitutoyo*, 499 F.3d at 1291 (whether a party may receive lost profits is a question of law for the court).

**B. The Lost Profits Award Is Not Supported by Sufficient Evidence.**

WG's damages case rested on its expert, Sims. Sims's testimony, however, misapplied legal theories, used unreliable facts, and made speculative assumptions. It was admitted over ION's challenges to his original and revised theories and cannot support the jury's award. (See Dkt. 350, 391, 418, 425, 440); see *Lucent*, 580 F.3d at 1310 (holding that damages awards that are

“grossly excessive or monstrous, clearly not supported by the evidence, or based only on speculation or guesswork” lack a legally sufficient evidentiary basis).

1. **The CRM database is unreliable and cannot support lost profits.**

The exclusive source of the revenue figures used in Sims’s lost profits calculations—the Customer Relationship Management database (“CRM”)—is intrinsically unreliable. *See* Tr. at 2403:1-4, 2471:19-22, 2494:8-19; *see also id.* at 1651:4-11. WG did not offer any evidence from the surveyors or the oil companies associated with the 10 surveys to corroborate the guesstimates entered in the CRM for (a) the use of DigiFINs, or (b) the amount paid for the surveys. *See id.* at 2448:18-24, 2454:12-18, 2473:19-22 (Sims was told that information from the oil companies was not available to be compared to the CRM). Sims’s use of unsubstantiated information from the CRM is fatal to his lost profits testimony.<sup>4</sup>

The Federal Circuit requires that a “damages theory must be based on ‘sound economic and factual predicates.’” *See LaserDynamics*, 2012 WL 3758093, at \*11 (quoting *Riles*, 298 F.3d at 1311). The CRM alone is not such a sound predicate—yet no corroboration was offered by WG. ION’s damages expert, Lance Gunderson (“Gunderson”), testified that the CRM is not the type of source that he or others in his field would rely on as a basis for a damages analysis. Tr. at 4657:11-16, 4658:14-18, 4663:16-24. While WG’s survey competitors may be foreign, the purchasers each have operations in Houston—ExxonMobil, BP, Total, Conoco, and Statoil—and WG could have sought discovery in this district from these purchasers to corroborate the information in the CRM for proof of damages at trial.

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<sup>4</sup> For example, if a survey were never actually completed, WG would have no lost profits. Likewise, if a survey did not actually use DigiFIN, then WG would have no lost profits. If the payment terms were such that price drove the bid selection and there were no requirement that DigiFIN be used, then there is no proof that WG would have made the sale at the higher price—especially since the record shows other methods and apparatus could be used for at least some of the same functions. *See, e.g.*, Tr. at 3557:17-3558:11.



Moreover, WG's employees and Sims admitted that the CRM is not a sound predicate for a variety of reasons. *First*, WG's senior management testified that the CRM contains "rumor," "innuendo," and, notably, rank hearsay, thus expressly admitting that the database includes potential inaccuracies and evidence that is not reliable or that would not fall under any rule that would separately permit its use at trial. *See* Tr. at 1731:14-21 (Walker); *see also* Tr. at 465:14-22 (Scoulios). Sims admitted that the bulk of the information in the CRM comes from WG's contacts with people in the industry, "talking to customers, seeing what's happening." Tr. at 2451:1-12. He even conceded that "some pieces of information within the database constitute "scuttlebutt" and that he is "not discounting [some CRM data] as rumor and innuendo." *See* Tr. at 2762:11-19, 2762:22-2763:5.

*Second*, a large number of unspecified individuals had access to the CRM, rendering it difficult, if not impossible, for WG to control who inputs data into the database or to check it for accuracy. *See* Tr. at 465:23-466:2; *see also id.* at 466:17-23 (multiple individuals from various geographic regions possessed the ability to input information into the CRM); *cf. id.* at 4663:5-15 (ION's expert explained that there is no way to sample the CRM figures and compare them to the actual numbers to validate the database's accuracy). In fact, only 10% of the information is verifiable through public sources. Tr. at 1655:13-15.

*Third*, the CRM includes information proven to be inaccurate. Sims compared the CRM entries for Fugro surveys to documents regarding those surveys obtained from Fugro in discovery and found that WG's guesstimates did not match Fugro's actual revenues. *See* Tr. at 2742:6-13. While Sims contended that, *in the aggregate*, the total Fugro survey revenues reported in the CRM were only slightly different than the total reported by Fugro, he conceded that in some individual cases the estimated numbers in the CRM were "far different" than what

Fugro actually realized. *See id.* at 2472:1-2473:22. Moreover, the average variance that Sims characterized as “close” was actually at least a million dollars per survey. *See id.* at 2473:6. The fact that the total of the inaccurate individual entries for each survey is “close” (as defined by Sims) to the total revenue actually realized by Fugro is in no way a statistical validation of the data’s accuracy. Similarly, inaccurate overestimates could easily exist for survey revenue attributed to the 10 non-Fugro surveys in Sims’s lost profits analysis that are not offset by correspondingly inaccurate low estimates, leading to an excessive award.

*Fourth*, WG admitted that the CRM is difficult to use, and, often, WG employees utilized it improperly or failed to enter important information at all, resulting in an incomplete and unreliable database.<sup>5</sup> *See* Tr. at 1656:5-6 (Walker admitted “I wouldn’t say [the CRM is] complete, it’s incomplete”); *see also id.* at 465:23-466:2, 466:17-467:5 (Scoulios conceded that members of WG’s North American group “weren’t the best” at entering information in the CRM and that “we should have used it a lot more than we did” and testifying that the CRM is “a very difficult database to use” and that WG employees “should be a lot better at it”); *id.* at 2571:21-22 (CRM is unwieldy).

Because Sims’s lost profits calculations are based on revenue numbers pulled directly from the CRM that is inaccurate, riddled with rumor, innuendo, and hearsay, and lacks underlying corroborating support, they are mere conjecture, excessive, and do not satisfy Federal Circuit requirements. *See Whitserve, LLC v. Computer Packages, Inc.*, --- F.3d ---, Nos. 2011-1206, 2011-1261, 2012 WL 3573845, at \* 15 (Fed. Cir. 2012) (attached as Ex. 3) (holding that expert testimony on damages in an infringement case “does not support the verdict because [it] is conclusory, speculative and, frankly, out of line with economic reality”); *Brooke Gr., Ltd. v.*

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<sup>5</sup> For one of the 10 claimed lost surveys (the Total Nigeria survey by Polarcus) WG’s database lists the awarded value as zero, so WG based its calculations on a different type of revenue, the opportunity value. PTX547 at Row 8507 (WG00942931).

*Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 242 (1993) (holding that “[w]hen an expert opinion is not supported by sufficient facts to validate it in the eyes of the law . . . it cannot support a jury’s verdict.”). Since WG could have sought corroborating evidence from survey purchasers with substantial operations in this district, WG has no excuse for failing to do so. The Court must grant JMOL for ION given the lack of evidence to support the verdict.

2. **WG did not prove that the 10 surveys were completed using DigiFIN.**

Lost profits on lost sales must be based on evidence of actual sales, not speculation, extrapolation, or assumptions. *See Oiness v. Walgreen Co.*, 88 F.3d 1025, 1029-30 (Fed. Cir. 1996) (reversing jury’s award of lost profits when the patentee did not present evidence of actual sales combined with reliable economic analysis, but only offered speculative and extrapolated evidence of the infringer’s sales); *Rolls-Royce PLC v. United Techs. Corp.*, No. 1:10cv457, 2011 WL 1740143, at \*8 (E.D. Va. May 4, 2011) (striking lost profits calculation based on “firm orders” that were subject to cancellation and might not have resulted in actual sales) (attached as Ex. 4); *cf. Meyer Intellectual Props. Ltd. v. Bodum, Inc.*, -- F.3d ---, No. 2011-1329, 2012 WL 3329695, at \*13 (Fed. Cir. Aug. 15, 2012) (attached as Ex. 5) (rejecting infringement analysis based on what the court assumed happened rather than the evidence in the record).

Remarkably, there was no proof at trial that the 10 surveys were performed, performed using DigiFIN, or paid for in the amount claimed. Tr. at 2397:9-12, 2406:20-24. WG merely offered evidence that ION sold DigiFIN to certain surveyors (PTX 922), that oil companies made requests for proposal (*See* Tr. at 2390:18-25), and estimated the amount its competitors were presumably awarded for 10 surveys (*see infra* § I.B.2). None of the requests for proposal specified the use of DigiFIN, and not even half of the tenders for the 10 surveys specifically call for use of lateral steering. *See* PTX680; PTX742; PTX485; PTX473 at 599961; PTX650 at 453802. In short, WG left the jury to assume the existence of material facts, in particular, that the

surveys were actually performed—using DigiFIN—and the oil company paid for them in the amount claimed. It offered no evidence from the oil companies or any other third party to corroborate those assumptions. In other words, WG did not show the sales occurred, what was paid, or what the profit was from each, or even what its own profits would have been but for the competitor's sale. ION is entitled to JMOL on lost profits or, alternatively, a new trial on damages.

3. **Sims's analysis of the *Panduit* factors is fatally flawed.**

Sims attempted to force the facts to fit the *Panduit* test by analyzing *different products* for the *different factors* of the test. When he analyzed Factor 2 (alternatives), Sims considered the availability of substitutes for DigiFIN in the form of equipment. Tr. at 2288:21-2296:7. Yet when he analyzed Factor 3 (capacity), he did not consider WG's capacity to make ION's equipment sales. *Id.* at 2296:20-2297:18. In fact, WG did not adduce *any* evidence at trial that it sold, offered for sale, or had the capacity to supply steering equipment or systems for sale. *See supra* § I.A.2. Likewise, when Sims evaluated Factor 4 (amount of profit), he did not calculate the profits based upon lost sales of equipment. *See* Tr. at 2402:15-2403:4 (calculating lost profits based on surveys). Because WG does not sell lateral steering systems or equipment, it presented no evidence at trial of the amount of profits it lost from its failure to make ION's component sales. Instead, for Factors 3 and 4, Sims considered surveys, rather than equipment, despite the fact that ION does not sell surveys. *Id.* at 2296:20-2297:18, 2378:13-21. WG provides no support for shifting the focus of the *Panduit* analysis from components to surveys. *See SmithKline Diagnostics, Inc. v. Helena Labs. Corp.*, 926 F.2d 1161, 1165 (Fed. Cir. 1991) (describing the demand, alternatives, and capacity factors of *Panduit* as relating to the same product, "the patented product"). In sum, WG did not attempt to offer any evidence that it would have been able to make ION's component sales or profit from them.

4. **There is insufficient evidence to support three of the *Panduit* factors.**

Even assuming that Sims's inconsistent application of the *Panduit* factors were proper, the evidence remains insufficient to support WG's burden of proof on *Panduit* Factors 2, 3, and 4.

a. ***Factor 2: Available Acceptable, Non-Infringing Alternatives***

Sims referenced two alternatives to ION's DigiFIN when considering *Panduit* Factor 2: (1) Nautilus (offered by Sercel, a subsidiary of surveyor CGGVeritas ("CGGV")); and (2) eBird (offered by Kongsberg). Tr. at 2296:10-14, *see generally id.* at 2289:16-22, 2293:11-13; *see also id.* at 4671:1-10, 4671:16-4672:13, 4678:20-24, 1231:21-23, 1232:8-13. Notably, WG did not offer any evidence that the alternatives were infringing or were unavailable and unacceptable *during the relevant time period.*

(i) *No Evidence the Alternatives Infringed*

WG did not offer any evidence that devices sold in competition to DigiFIN, that is, Nautilus and eBird, or their use in surveys, infringed its patents. The inventors and WG's technical experts did not even discuss Nautilus and eBird. *See generally* Dkts. 433, 437, 449, 460 at 1500-42 (Leonard), 1256-1498 (Triantafyllou), 495-612, 650-986 (Bittleston), 826-963 (Zajac). Also, the use of Nautilus and eBird in surveys conducted more than 12 miles from the United States coast cannot be infringing as a matter of law. *See supra* § I.A.1. (use of a patented system more than 12 miles offshore is non-infringing).

(ii) *No Evidence the Alternatives Were Unavailable*

WG offered no evidence that the alternatives were unavailable *during the relevant time.* The 10 surveys were performed between October 2009 and November 2011. Tr. at 4708:24-4711:6, 4685:6-11, 4709:17-4710:6. Specifically, one of the 10 surveys was conducted in late 2009, two in 2010, and seven in 2011. *Id.* at 4687:10-19, 4709:8-11, 4710:17-4711:6; *see also* Ex. 6, demonstrative timeline of surveys.

WG's evidence regarding the availability of Nautilus and eBird spans from 2008 to early 2010 and is, thus, irrelevant to the majority of the claimed lost surveys. WG offered evidence that in 2008 and 2009, Fugro stated there were no alternatives to DigiFIN. *See* Tr. at 2289:23-2290:11, 1075:13-20; PTX 313; PTX 920. However, these alternatives are sold and used by Fugro's competitors, and referred to a period that, at best, overlapped with the first survey.

The uncontroverted evidence established that alternative lateral steering systems were available to perform surveys at the time that at least 9 of the 10 surveys were performed: (1) Nautilus was used by Sercel's parent CGGV as early as October 2009 (and definitely by January 2010); and (2) Nautilus was commercially available to other surveyors by at least March 2011. Tr. at 4677:12-17, 4678:4-8; PTX 101; Tr. at 4546:9-16, 4549:8-14, 4678:9-15, 4680:2-6, 4678:25-4679:10, 4681:2-20, 2496:5-11, 4673:2-20; PTX 244 at 3; Tr. at 2561:11-2562:1, 4683:19-4685:5, 4547:11-14. Similarly, eBird was available to conduct surveys by October 2010 when surveyor PGS deployed the eBird active positioning control system on one of its vessels. *See* Tr. at 4681:21-24, 4683:14-15. Moreover, PGS owned the eBird and had every incentive to make and use its own device in its surveys regardless of what Fugro may have thought of that device at any time.

The earliest survey in WG's lost profits claim (the ConocoPhillips job awarded to CGGV) was performed in October 2009. Tr. at 4685:6-11. While it is possible that the evidence would permit a finding that there were no alternatives to lateral steering surveys using DigiFIN or Q-Marine at that time (*see id.* at 4685:6-14), all of the other surveys WG claims as lost were performed in 2010 and 2011 when Nautilus and/or eBird systems for lateral steering were available. Consequently, no reasonable jury could find that there were no available alternatives to lateral steering surveys using DigiFIN for 9 of the 10 claimed lost surveys. *See Grain*

*Processing*, 185 F.3d at 1353 (Fed. Cir. 1999) (“The critical time period for determining availability of an alternative is the period of infringement for which the patent owner claims damages . . .”).

(iii) *No Evidence the Alternatives Were Unacceptable*

The only evidence WG offered on unacceptability of alternatives related to an irrelevant time period and did nothing to dispute the fact that WG’s largest competitors were actually utilizing the alternatives. WG offered criticisms of the alternatives in 2009 or early 2010 by only one surveyor, Fugro, as opposed to surveyors generally.<sup>6</sup> *See, e.g.*, Tr. at 2294:1-12 (explaining that Fugro’s January 2009 test of Nautilus failed and Fugro never used Nautilus), 1074:19-1075:12 (similar), 1230:8-16 (similar); Tr. at 2295:10-20 (citing May 2010 internal Fugro email that Nautilus birds failed); *see also* PTX 250 at ION783248-49. It also pointed to ION’s internal review of its competitor’s product. Tr. at 2293:11-20 (citing ION employee testimony that at the beginning of 2010, Nautilus was not seen as commercially viable); *id.* at 2291:10-2292:2, 1072:23-1073:5, PTX 250 at ION 783248-49; PTX 233. Yet in 2010 and 2011 when 9 of the 10 lost surveys were performed, surveyors like CGGV and later PGS were actually using Nautilus and eBird to conduct surveys. *See, e.g.*, Tr. at 4678:25-4679:10, 4681:2-20, 4684:17-4685:5, 4681:21-24, 4683:14-15; *see also id.* at 1232:14-23. This use demonstrates that surveys employing lateral steering using Nautilus (and later eBird) were acceptable in the market at the relevant time.<sup>7</sup> *See Gargoyles, Inc. v. United States*, 113 F.3d 1572, 1578-79 (Fed. Cir. 1997) (sale of non-infringing product proved it was acceptable and available); *Grain Processing*, 185

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<sup>6</sup> Criticisms of other devices or systems by ION are irrelevant since acceptability is considered from the viewpoint of the customer. *See Grain Processing*, 185 F.3d at 1355; Tr. at 5094:16-21 (test is whether alternative is viewed as acceptable by customers); *see* Tr. at 2294:1-4 (“ION was looking at it from the perspective as a competing product. Fugro would have been looking at it from the perspective of something to use instead of DigiFIN.”).

<sup>7</sup> When lateral steering was not an express requirement of the bid, WG would also have had to show that other methods and apparatus to effect streamer separation and to prevent tangles would not have been acceptable.

F.3d at 1352 (“market sales of an acceptable noninfringing substitute often suffice alone to defeat a case for lost profits”). WG did not adduce any evidence to permit a reasonable jury to find the absence of acceptable non-infringing alternatives.<sup>8</sup>

b. **Factor 3: Capacity**

WG adduced conclusory and speculative evidence that it had capacity to perform 25 surveys (the original number included in Sims’s lost profits analysis before Fugro settled), without regard to the location, timing, and requirements of the 10 surveys charged against ION. Walker testified that WG had a vessel available to perform the 25 jobs in issue “in some cases.” Tr. at 1696:10-14. He failed, however, to identify *in which cases*, so it is impossible to know if any of those cases included the 10 surveys claimed against ION. Sims likewise failed to differentiate WG’s capacity to perform the 10 surveys claimed against ION from the 15 surveys claimed against Fugro. He opined generally that WG would have needed 54 months of vessel capacity to perform the total 25 claimed lost surveys and that WG would have had at least 59 months of vessel capacity if DigiFIN were unavailable because it would have made different business decisions. *Id.* at 2298:5-14.

Sims’s opinion on capacity is entirely speculative. Sims formed his opinion by assuming, based on information from one interested witness (Walker), that WG *would have built* additional capacity if DigiFIN had not been available. Tr. at 2488:17-2489:1. Sims theorized that WG (1) would have taken delivery of the *Cook* and *Tasman* vessels as originally scheduled, rather than

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<sup>8</sup> To the extent the jury’s lost profits award is based on a market share theory, ION is entitled to JMOL or a new trial on damages. WG adduced no evidence of its market share relative to any non-infringing alternatives that would permit a jury to award lost profits on some proportionate basis (even assuming surveys were fungible and *could* be allocated proportionately). WG consistently denied the existence of any non-infringing alternatives and claimed that it would have obtained *every* survey that required lateral steering in the absence of infringement. Rather than offer a market share theory and contend that it would have obtained a portion of the surveys conducted by surveyors other than Fugro using DigiFIN (or a portion of the revenue from those surveys) in proportion to its market share, WG claimed that it would have obtained 10 specific surveys that its expert selected because those surveys purportedly required lateral steering and “WesternGeco was the *only* provider that could provide lateral steering.” Tr. at 2378:10-2379:1 (emphasis added); *see also id.* at 2582:23-2583:5.



delaying delivery (*id.* at 2298:15-21, 1696:19-1697:3), (2) would not have removed Q-Marine equipment from the *Pride*, *Searcher*, and *Topaz* and installed new equipment on the *Cook* (*id.* at 2299:9-18, 1697:10-14), and (3) would have chartered source vessels and used the *Pride*, *Searcher*, and *Topaz* as Q-Marine vessels (*id.* at 2300:1-8). Sims's assumptions ignore the realities of the market and are contradicted by actual events.

First, although a surveyor must have a vessel in the region of the proposed survey (Tr. at 2486:7-13, 4704:5-12), Sims gave no consideration to the regions where the claimed lost surveys were to take place relative to the location of WG's Q-Marine vessels. *See id.* at 4702:4-19, 4704:13-20, 4705:7-20, 4983:16-25. He did not offer any analysis of where vessels were stationed or how they would have to move to fill these jobs. *See id.* at 4983:15-23. Instead, Sims merely assumed that WG would have had a certain number of months of capacity available worldwide and would have planned differently and deployed its vessels differently if DigiFIN were unavailable. *See id.* at 2486:20-2487:6.

Second, Sims did not consider the time of year that the claimed lost surveys were to be performed or the duration of the surveys. There is no evidence that WG had a Q-Marine vessel available in the correct region at the right time for the sufficient length of time to perform the claimed surveys. This has particularly significant implications for the claimed lost surveys that were to take place in areas with challenging weather because there is little flexibility on when those surveys can be performed, even if the oil company does not provide specific timing requirements. *See Tr.* at 2083:19-2084:2.

Third, WG did not show that it had the requisite type of vessel available to perform the surveys. For example, Sims did not consider the number of streamers required to perform the claimed lost surveys and whether WG had the right size vessels available at the time for each

job. *See* Tr. at 4703:11-4705:6. The evidence demonstrated that three of the vessels WG retired were older ones that towed fewer streamers (*id.* at 2484:3-9); thus, they could not meet the technical requirements of modern surveys (*see id.* at 2483:17-2484:9).

In reality, there were more survey jobs available than WG had vessel availability to perform. WG made the business decision not to build additional capacity when actual demand for surveys exceeded its capacity to perform them. Tr. at 4690:18-25, 4696:5-18, 4707:10-24, 4691:23-4692:10; *see also id.* at 4694:15-4695:16, 4696:2-4 (WG's fleet was fully utilized). Indeed, WG could not perform three of the surveys in its lost profits claim because it lacked the capacity to perform them. It declined the Petronas job, recording in the CRM that the "Client intended to award to us, but we had no vessel availability". *See* Tr. at 4690:1-15 (citing CRM, PTX 544 at WG00949754, Row 58), 4711:13-4712:4. WG bid the ConocoPhillips job in Australia with a conventional vessel because it had no available Q-Marine vessel. Tr. at 4693:2-4694:11, 4706:1-4707:4, *see also* 4704:5-9. Finally, regarding the July 2011 Statoil survey, the CRM reflects "WG not issued invitation to tender, due to WG stating no availability." *Id.* at 4691:1-18 (citing CRM, PTX 545 at WG00949757 at Row 23). Sims's assumption that WG would have increased its vessel capacity in response to greater demand is contradicted by the fact that WG did not make that choice when demand actually existed.<sup>9</sup>

**c. Factor 4: Amount of Lost Profits**

Sims calculated the lost profits from the 10 surveys by subtracting WG's costs to conduct the claimed lost surveys from the revenues WG guessed that its competitors received for them. *See* Tr. at 2378:13-21, 2402:17-23. Both parts of this computation are speculative and unreliable.

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<sup>9</sup> WG's bidding a conventional vessel without lateral steering capacity in its ConocoPhillips bid shows that where lateral steering is a bid requirement, ships without lateral survey can compete for sales. Tr. at 4693:16-4694:5.

(i) *Speculative and Conclusory Calculation of Lost Profits*

The revenue figures Sims used were WG's internal estimates of third parties' revenues noted in the CRM and, thus, are speculation with no corroboration. Tr. at 2402:24-2403:4, 2471:19-22.

The cost information Sims used was based only on Sims's summary conclusion that "based on their actual financial records, looking at their actual Q-Marine division financial records, looking at the costs over that time period, I determined what those costs were, and that was \$141 million over that time period for those 25 surveys." Tr. at 2404:1-5; *see also id.* at 2402:8-17 (adding \$19.2 million in costs for depreciation of the extra equipment WG would have needed to outfit additional vessels). No underlying data was admitted, nor was any testimony or other document from WG put into evidence to summarize the data. WG certainly could have put on a fact witness or provided a summary in admissible form to provide evidence of its own costs. Sims simply provided an ultimate conclusion that an aggregate of \$93.4 million of the lost profits relates to the 10 non-Fugro surveys. Tr. at 2406:5-19. Moreover, since Sims did not divide out or otherwise compute the costs for each survey, or even testify he used an average or otherwise could apportion the lost profits, if fewer than all of the 10 surveys are permitted as the basis for lost profits, there would be no way to determine the damages based on the remaining surveys.

(ii) *WG Would Not Have Been Awarded the 10 Surveys*

Sims also failed to account for a variety of factors that prove that WG would not have been awarded all of the 10 surveys even if DigiFIN were unavailable. First, Sims did not address customer demand for solid streamers. Tr. at 4723:25-4724:10, 4727:25-4728:7. Some oil companies prefer solid streamers over liquid-filled streamers. *See* ION469, PTX733, ION461, DX462, FD 239; Tr. at 4722:9-20, 4723:8-24. WG did not have a Q-Marine vessel with solid streamers until April 2010 (Tr. at 2522:2-8, 2522:14-17, 4722:21-24, 4725:14-23, 1833:4-7; *see* 1831:12-23, 1833:4-7) and still does not have solid streamers on all of its Q-Marine vessels (Tr.

at 1835:22-1836:2; *see id.* at 4726:14-4727:24). WG's inability to offer solid streamers would have prevented it from obtaining one of the 10 lost surveys, and possibly others. Specifically, solid streamers were mandatory for ExxonMobil; BP preferred them; and Petronas only accepted them. Tr. at 4724:25-4725:13, 5097:9-19; DX461, DX462. The ExxonMobil survey claimed as lost was dated January 2010, months before WG had even one Q-Marine vessel with solid streamers. Tr. at 4727:5-12; *see id.* 2522:18-22. Likewise, Sims did not show how WG would overcome this problem in the BP and Petronas bids.<sup>10</sup>

Second, in its July 2012 order on *Daubert*, the Court, excluded a survey on which WG conceded it had not placed a bid. Dkt. 402 at 7. At trial, however, the burden was on WG to show that it had bid for each claimed lost survey, and that its bid would have been accepted but for ION's actions. *See Bott v. Four Star Corp.*, 807 F.2d 1567, 1571 (Fed. Cir. 1986) (concluding that there was no evidence that patentee would have earned a profit on sales to Fiat but for the infringement when patentee did not bid against infringer for the Fiat business). Although Sims conclusorily stated that WG bid on all 10 of the claimed lost surveys (Tr. at 2624:10-12, 2629:13-18), there is *no* support for that statement. *Id.* at 4712:16-23, 4739:15-21. To the contrary, the evidence indicates that WG did not bid on 9 of the 10 jobs<sup>11</sup> (Tr. at 4708:22-4712:23) and it did not even bid the tenth job with Q-Marine (*id.* at 4693:2-4694:11, 4706:1-

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<sup>10</sup> Additionally, although Sims did not even address the issue, WG would not have obtained the ExxonMobil survey—and possibly the two Total surveys—claimed as lost because of its policy of refusing to release the raw sensor data obtained by Q-Marine. *See* Tr. at 4735:16-22; *see id.* at 4729:19-4731:25, 4035:5-11, 1757:7-10; ION268 at WG00862321. ExxonMobil indicated that it would not use WG because of its refusal to make the raw data available. Tr. at 4732:5-4734:24, 4739:25-4740:4; *see id.* at 1757:11-16; *see also id.* at 4735:4-18, 4740:9-14, 1757:11-19 (WG's refusal to release the raw sensor data was also a "big issue" for Total).

<sup>11</sup> For six of the 10 claimed lost surveys, there are no documents or bid reference numbers in the CRM: BP Angola survey; ExxonMobil Angola survey; Petronas Malaysia survey; and the three Statoil Norway surveys (7-2011, 8-2011, 6-2011. Tr. at 4710:17-4711:6. For three surveys, WG recorded a bid reference number in the CRM, but provided no other documentation of its connection to the job: BP Australia survey; Total Nigeria survey; and Total Angola survey. *Id.* at 4709:17-4710:16. The only survey for which WG had the tender documents is the ConocoPhillips Australia survey (*id.* at 4709:8-16)—and it bid that job with a *conventional* vessel, revealing that WG believed substitutes for lateral steering were acceptable. *Id.* at 4693:2-4694:11, 4706:1-4707:4.

4707:4). In fact, WG was not issued an invitation to tender for one of the claimed lost Statoil jobs. Tr. at 4712:5-15. Because WG failed to prove that it actually bid on each survey (and that its bid would have been accepted but for ION's action), WG cannot show what its lost profits would have been (that is, the difference between its bid and its cost). WG could have produced and put into evidence proof of each of these bids had it made any of them, but deliberately choose not to do so—or could not do so.

Third, Sims did not address the impact of WG's high prices and the price elasticity of demand for surveys on WG's ability to compete for the 10 survey bids, for instance, by comparing WG's bids on the 10 surveys to the winning bids. *See* Tr. at 4737:25-4738:14. Yet, WG's high prices were responsible for its loss of survey jobs, likely one of the 10 surveys.<sup>12</sup> *See id.* at 4718:10-4719:19, *see also id.* at 1742:5-12, 1744:3-1746:17; DX178. The evidence of the foregoing issues and Sims's failure to account for them reveals that WG failed to prove *Panduit* Factor 4. *See* Tr. at 4740:15-4741:1.

ION is entitled to JMOL or, at a minimum, a new trial on damages. Alternatively, ION requests that the Court order a remittitur of the amount of the lost profits attributed to the ExxonMobil survey and the other surveys on which WG did not provide evidence that it made a bid with Q-Marine, that it bid the other requirements or preferences of the purchaser (*e.g.*, solid streamers) and had a vessel available (9 of the ten bids). Since Sims did not calculate an amount for each survey, this would require remittitur of all lost profits. Although ION does not believe it proper to perform rough apportionment, equally allocating the amount of the award to each

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<sup>12</sup> According to WG's CRM, its bid for the ConocoPhillips survey using Q-Marine was approximately 58% higher than the bid awarded. Tr. at 4721:7-4722:3; *see also id.* at 4719:20-4720:24 (price was the number one issue for ConocoPhillips). Because price was the key issue for ConocoPhillips, and DigiFINs were not required, WG would have had to show that other traditional survey methods, cheaper than its own, would not have been acceptable to ConocoPhillips. In fact, WG apparently also bid the same survey at a lower price by including in its bid the option for a vessel without Q-Marine—the patented technology. There was no showing that the company who got the bid completed the job, was paid or that it used any type of lateral steering in the survey.

survey regardless of price or cost where no facts permit it, at the very least, remittitur should be for 90 percent of the award.

5. **The jury was not properly instructed on the burden of proof.**

If WG established the *Panduit* factors, ION met its burden to show that the resulting inference of but-for causation is unreasonable. *See Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1545 (if the patentee establishes the *Panduit* causation inference, the burden shifts to the infringer to show that the inference “is unreasonable for some or all of the lost sales.”). The evidence overwhelmingly shows that there are multiple reasons why the 10 surveys would not have been awarded to WG despite the *Panduit* inference, namely, WG’s lack of solid streamers, refusal to release raw sensor data, failure to bid on 9 of the claimed lost surveys, and high prices. *See supra*, § I.B.4.a.ii.

Significantly, WG concedes that: (1) it does not know why it wins or loses bids and, thus, cannot attribute the cause of a lost survey to any particular factor; and (2) the reasons WG loses bids can only be truly known in about 10% of cases involving public bids for government entities. *See* Tr. at 1866:19-1867:2. It admitted that oil companies often do not reveal the reason why surveys are lost to the competition and even when they do, they cannot be believed. *Id.* at 1837:17-22, 1838:24-1839:5; *see also id.* at 2464:24-2465:3, 2465:11-13; *id.* at 1839:17-20 (oil companies do not want to disclose the reasons for bid awards). WG does not know when it wins bids as a result of lateral steering and simply assumes the reason. Tr. at 1866:19-1867:2. Even when WG does know (or suspects) that it lost a bid as a result of lateral steering, that information often is not entered into the CRM. *See id.* at 1726:1-1727:7; *see also id.* at 4660:20-25 (CRM does not state that WG lost any specific sale because of DigiFIN; it does mention losing sales due to price and other issues). These admissions by WG establish that it is unreasonable to infer that WG would have been awarded the 10 lost surveys in the absence of infringement.

Despite the evidence establishing the unreasonableness of the causation inference, the Court refused ION's request that the jury be instructed on the burden of proof shifting to the infringer to disprove the *Panduit* inference. Dkt. 505, 506, 509, 530. As a result, the jury was not properly instructed to consider whether the causation inference was unreasonable as to the 10 lost profits surveys. Because the great weight of the evidence establishes that it was unreasonable, ION is entitled to a new trial on damages.

6. **Lost profits cannot be based on the entire value of the surveys.**

Although its patents do not cover surveys or lateral steering (*see* Tr. at 578:12-15, PTX1-PTX5), but only an improvement (or in the case of the Zajac Patent, an improvement on an improvement), WG based its lost profits claim on the entire value of the 10 surveys.<sup>13</sup> Neither Sims nor WG made any effort to apportion the value of the surveys between their patented and unpatented features. *See* Tr. at 1725:6-10, 1907:6-25.

Nor did WG invoke the entire market value rule or present evidence to justify use of the entire value of the 10 surveys in Sims's calculations of lost profits, rather than the value attributed to the claims in the patents-in suit. "[T]he entire market value rule permits recovery of damages based on the value of a patentee's entire apparatus containing several features when the patent-related feature is the 'basis for customer demand.'" *Rite-Hite*, 56 F.3d at 1549 (recognizing that the entire market value rule applies to both reasonable royalty and lost profits computations) (citation omitted). The rule is derived from Supreme Court precedent requiring

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<sup>13</sup> The Bittleston Patents identify prior art in the specification that shows horizontal or vertical steering of birds with automatic control. *See* PTX1. Further, the Bittleston Patents themselves have some indicia of apportionment of their value—estimating the time saved in avoiding tangles in turning mode and the cost savings from that advance. *Id.* Moreover, the valuable turning mode in the specification and in many of the claims in the Bittleston Patents is not present in the DigiFIN. As shown in ION's JMOL on Enablement, there is no dispute that WG kept much of the information it used in this business to implement Q-Marine as trade secret, including the algorithms. WG's patents state explicitly that they are on improvements. *See, e.g.*, PTX1 at 7. WG asserted only one apparatus claim from each patent in suit, and liability was found only for sale of components; there was no liability established for practicing any method claim.

the patentee to give “evidence tending to separate or apportion the defendant’s profits and the patentee’s damages between the patented feature and the unpatented features, and such evidence must be reliable and tangible, and not conjectural or speculative,” or show that “the entire value of the whole machine, as a marketable article, is properly and legally attributable to the patented feature.” *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1318 (Fed. Cir. 2011) (quoting *Garretson v. Clark*, 111 U.S. 120, 121 (1884)). The entire market value rule is a “narrow exception” to the general rule that damages must be apportioned to only the value of the contribution of the invention to the product. *See LaserDynamics*, 2012 WL 3758093, at \*11.

The Federal Circuit recently explained that it is not enough to show that the patented feature “is viewed as valuable, important, or even essential” to the use of the entire product or that without the patented feature the product “would be commercially unviable.” *LaserDynamics*, 2012 WL 3758093, at \*12. Likewise, proof that consumers would not want the product without the patented feature “is not tantamount to proof” that the feature drives the market for the product. *Id.* “If given a choice between two otherwise equivalent [products] only one of which practices the [patented feature], proof that consumers would choose the [product with the patented feature] says nothing as to whether the presence of that functionality is what motivates consumers to buy a [product] in the first place. It is this latter and higher degree of proof that must exist to support an entire market value theory.” *Id.* at \*12 (noting that there was no evidence that the patented feature alone motivated consumers to purchase the product such that the entire value of the product could be attributed to the patented feature).

Here, WG presented no evidence that the demand for the patented feature “is what motivates consumers to buy [surveys] in the first place.” *See LaserDynamics*, 2012 WL 3758093, at \*12; *see also Rolls-Royce*, 2011 WL 1740143, \*7 (striking expert opinion basing lost profits of a



patented fan blade on the entire market value of a jet engine because the patentee did not provide evidence that the fan blade was the basis for consumer demand for the entire engine; commentary by the infringer's employees and commercial success of the product was not sufficient); *Carefusion 303, Inc. v. Sigma Int'l*, No. 10cv0442 DMS (WMC), 2012 WL 392808, at \*2 (S.D. Cal. Jan. 3, 2012) (granting summary judgment on patentee's lost profits claim based on the entire market value of a product because patentee set forth no evidence to justify application of the rule) (attached as Ex. 7).

Because WG and Sims did not apportion the value of the allegedly lost surveys to the value of the patented technology and did not invoke the entire market value rule or present evidence to permit a reasonable jury to award the entire market value of surveys as lost profits, Sims's use of the entire survey revenues is baseless and resulted in an excessive award.

## II. IMPROPER RECOVERY OF BOTH MEASURES OF DAMAGES

A patentee may recover *either* lost profits *or* a reasonable royalty for each infringing act, but *not both*. See *Lucent*, 580 F.3d at 1324 (stating that “[t]wo *alternative* categories of infringement compensation are the patentee's lost profits and the reasonable royalty . . .”) (emphasis added); *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 1078 (Fed. Cir. 1983) (recognizing that there are two methods for determining patent damages: actual damages or, if they cannot be proven, a reasonable royalty). WG's damages model, however, did not allow the jury to award lost profits for some infringing acts and a reasonable royalty for the others. Instead, WG's damages were structured so that the jury awarded a reasonable royalty and lost profits for some of the same acts of alleged infringement.

Under WG's theory, certain acts of infringement are necessarily subject to two measures of damages: (1) a reasonable royalty paid for the supply of **every** DigiFIN and Lateral Controller from the United States; **and** (2) lost profits resulting from the use of those **very same** products in

10 surveys. Tr. at 4939:1-4940:18, 2406:5-19, 5087:2-22. WG did not offer any evidence that would permit the jury to subtract the DigiFINs or Lateral Controllers allegedly used in the 10 surveys from those supplied and accounted for in the requested royalty figure to avoid a double recovery—let alone to determine how many of the sold DigiFINs or Lateral Controllers, or which product sales, were later used in one or more of the 10 surveys. *See* Tr. at 5087:2-22. For example, there is no evidence regarding how many DigiFIN units were used to conduct each of the 10 surveys such that the jury could have avoided awarding a reasonable royalty on those particular units. Further, there was no evidence that all of the 10 surveys were actually completed or whether and how the DigiFINs were used in the surveys, or if the same or different DigiFINs or Lateral Controllers were used in the surveys (*e.g.*, two surveys by the same surveyor). *See supra*, § I.B.2. To the extent an explanation is offered that the jury’s award of a reasonable royalty of \$12.5 million (an amount \$2.4 million lower than Sims’s figure), was an attempt to correct for the double recovery, it is the result of pure conjecture and unsupported by the evidence. (The difference might have also been due to the use of a lower royalty rate, exclusion of some alleged convoyed sales from the base, or any number of other reasons.).

Because the evidence did not permit the jury to award any amount of lost profits without awarding two measures of damages for the same acts of infringement, a reasonable jury could not have awarded both damages measures without improperly overcompensating WG.

### III. REASONABLE ROYALTY

#### A. The Reasonable Royalty Is Not Based on the Value of the Patented Improvement.

As with lost profits, WG and its expert made no effort to equate the reasonable royalty to the value of the patented technology. Instead, Sims calculated the royalty based on the total revenue from sales of DigiFIN and Lateral Controller to customers other than Fugro. *See* Tr. at 2428:17-23, 2439:24-2440:3.

A reasonable royalty may be calculated on the sale of a product provided that the royalty reflects only the contribution of the patented technology, not the entire value of the product. *See Lucent*, 580 F.3d 1337-39 (“[w]hen a patent is for an improvement, and not for an entirely new machine or contrivance, the patentee must show in what particulars his improvement has added to the usefulness of the machine or contrivance. He must separate its results distinctly from those of the other parts. . . . [and] give evidence tending to separate or apportion . . . between the patented feature and the unpatented features.” (quoting *Garretson*, 111 U.S. at 121)); *see also ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 869 (Fed. Cir. 2010) (“Any evidence unrelated to the claimed invention does not support compensation for infringement but punishes beyond the reach of the statutes.”). Other courts have strictly enforced this requirement. *See, e.g., Uniloc*, 632 F.3d at 1320 (disallowing consideration of the entire market value of a product for a minor patent improvement simply because the royalty rate was low); *LaserDynamics*, 2012 WL 3758093, at \*11 (emphasizing the need to apportion because calculating a royalty on the entire product “carries a considerable risk that the patentee will be improperly compensated for non-infringing components of that product”).

The obligation to apportion the contribution of the patented invention from the other aspects of the product is an essential part of the *Georgia-Pacific* factors (*e.g.*, at least, Factors 10 and 13). *See Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970); Dkt. at 530 at 27-28. Specifically, *Georgia-Pacific* Factor 10 requires consideration of the “nature of the patented invention” and Factor 13 requires evaluation of “[t]he portion of the realizable profit that should be credited to the invention as distinguished from non-patented elements. . . .” *See id.*

WG's patents offer an improvement to existing technology rather than a revolutionary invention. *See, e.g.*, PTX1, at 7 (discussing prior art lateral devices and systems). The specification itself identifies prior art systems that use birds for vertical movement of streamers for depth control as part of an automated system (similar to ION's DigiBIRD). Recognizing this, Gunderson used ION's DigiBIRD<sup>14</sup> device as a base to determine the relative value of the improvements for lateral steering in DigiFIN. *See generally* Tr. at 4746:10-4747:14.

The specifications in the patents provide evidence of apportionment, stating that the inventions are improvements over prior art systems. *See, e.g.*, PTX1 at 7 (anticipating the benefits of the patented technology to be reductions in "horizontal out-of-position conditions that necessitate reacquiring seismic data in a particular area (i.e. in-fill shooting)," reduced tangling, and reduced vessel turning time and reductions in costs of "approximately 30%."). Further, the "turn mode" in the patents, is not in the DigiFIN, which means a license to ION would not have permitted it to exploit this advantage of the patents. This turn mode is one of the most important benefits of the patents. *See id.* Further, the claimed inventions, if valid, are only for the physical components, not the software, as none is claimed or disclosed in either the Bittleston or Zajac Patents. *See generally* PTX1, PTX2, PTX3, PTX5; *see also* ION's Motion for Judgment as a Matter of Law on Enablement and, Alternatively, Motion for New Trial, 9-28-12, at § B.2.

The lack of any apportionment by Sims is fatal to the reasonable royalty presented by WG and JMOL for ION or a new trial on damages is required. *See ResQNet*, 594 F.3d at 868, 872 (reversing award because patentee failed to meet its burden to present a legally cognizable damages theory supported by reliable evidence, even though infringer offered no expert testimony to counter patentee's damages expert's testimony).

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<sup>14</sup> ION's DigiBIRD provides vertical control for the streamer and has been on the market since the nineties. Tr. at 3186:3-3187:10.

**B. The Reasonably Royalty Cannot Be Based on Convoyed Sales.**

Sims testified that sales of DigiFIN would have resulted in convoyed sales and accounted for them in his calculation of a reasonable royalty. Tr. at 2502:14-2503:2. Sims based his analysis of convoyed sales on insufficient and irrelevant data that, in fact, are contrary to the inferences he draws from them. This data was taken from three lost sales that ION's damages expert, Gunderson, used to quantify the sales ION lost due to WG's tortious interference with ION's business relationships, a claim that was not presented to the jury. *See* Dkt. 440 at 5; Tr. at 2430:3-14, 4852:4-4854:19, 4769:15-4770:6. The three lost sales are not a representative sample of ION's *actual* sales from which conclusions may be drawn. *See, e.g.* Tr. at 2430:2-2431:22, 2514:7-2515:1. For all the reasons stated in ION's Motion to Exclude the Opinions of Raymond Sims Regarding a Reasonable Royalty, Dkt. 440, which is incorporated herein by reference, Sims's testimony on convoyed sales is based on conjecture and is inherently unreliable and cannot support his conclusion or the jury's finding. *See IP Innovation L.L.C. v. Red Hat, Inc.*, 705 F. Supp. 2d 687, 689 (E.D. Tex. 2010) (Rader, J. of the Federal Circuit sitting by designation) (where "sound economic and factual predicates are absent from a reasonable royalty analysis," Rule 702 requires that it be excluded).

**C. The Jury Was Not Instructed on the Marking Requirements.**

ION is entitled to a new trial on damages because the Court failed to submit ION's requested marking instruction, allowing the jury to award excessive damages. Patentees are required to provide either actual or constructive notice to the public of their patented article. 35 U.S.C. § 287(a); *Nike, Inc. v. Wal-Mart Stores, Inc.*, 138 F.3d 1437, 1443 (1998). When a patentee fails to show either that it marked or was not required to mark, the patentee is precluded from recovering damages for any infringement that occurred prior to the date the alleged infringer was notified of the infringement. *See* 35 U.S.C. § 287(a); *Tesco Corp. v. Weatherford*

*Intern., Inc.*, 722 F. Supp. 2d 755, 770 (S.D. Tex. 2010) (Ellison, J.). Regardless of whether marking was required for the method claims, the only claims to survive to trial were apparatus claims.

ION requested that the jury be instructed to determine when actual notice was given in considering the damages issue, *see* Dkt. 508, at 5, and objected to the Court's failure to include any such instruction in the court's charge. *See* Dkt. 508, at p. 5-6; Dkt. 509 at p. 1-2; *also see* Ex. 8 (requesting charge objections in writing). Because Sims's testimony on the reasonable royalty included damages for infringement prior to the date of actual notice, the Court's failure to include the instruction in the final charge resulted in an improper award of damages to WG. *See* 35 U.S.C. § 287(a); *see* Dkt. 530. Failure to submit ION's requested instruction is reversible error warranting a new trial. *See Minks v. Polaris Indus., Inc.*, 546 F.3d 1364, 1375-76 (Fed. Cir. 2008) (reversing judgment and remanding for new trial based on erroneous jury instruction under § 287(a)). In the alternative, ION requests that the Court remit the reasonable royalty award because the royalty should be based on the DigiFINs sold after June 12, 2009 (the date WG filed this lawsuit against ION, thus, unquestionably providing actual notice).

#### **IV. AGGREGATED DAMAGES**

If the Court sets aside any jury finding on infringement or validity as to any claim, a new trial is necessary because damages were not segregated by claim. Dkt. 536. WG's damage model was based on the aggregate impact of all the WG patents, and the effect of any one cannot be segregated from the lump sum damage award. The jury answered a single damages question for multiple alleged acts of infringement. If any liability theory was not supported in the evidence, or submitted based on a legal error, the entire case must be reversed for a new trial because it cannot be determined whether the jury based its damage award on an unsound theory. *See Verizon Serv. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1310 (Fed. Cir. 2007) (vacating

damage award where infringement finding as to one of several patents was reversed and damages were not apportioned). Because, at the very least, ION is entitled to JMOL on one or more of the liability issues, reversal and a new trial are required.

#### V. EXCESSIVE DAMAGES

The Court instructed the jury throughout the trial and in the jury charge that ION infringed Claim 18 of the '520 Patent under § 271(f)(1), and instructed the jury that the DigiFIN was an active streamer positioning device as recited in Claim 14 of the '038 Patent. If the Court changes these positions on post-trial motions, then the Court's statements incorrectly instructed the jury and a new trial is warranted. The jury's deference to the Court's instructions on liability no doubt caused it to award excessive damages. Also, because the jury's decision was supported by nothing more than speculative and legally insufficient evidence, this Court is not required to give deference to the jury's verdict. *See Lucent*, 580 F.3d at 1310. The jury could not have made a fair assessment of the evidence when it awarded WG such an inordinate amount of damages, and judgment should be rendered in ION's favor. *See id.*

Alternatively, the damage award is so against the great weight and preponderance of the evidence as to result in a clear showing of excessiveness necessitating a new trial or, at least, remittitur. *See Eiland v. Westinghouse Elec. Corp.*, 58 F.3d 176, 182 (5th Cir. 1995); *Westbrook v. General Tire & Rubber Co.*, 754 F.2d 1233, 1241 (5th Cir. 1985).

#### **CONCLUSION**

For all of the foregoing reasons, Defendant ION Geophysical Corporation respectfully requests that the Court grant JMOL in its favor on damages or a new trial on damages and, in the alternative, ION requests remittitur. ION further requests that the Court grant it such other relief to which it may show itself entitled.

Dated: September 28, 2012.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on the 28<sup>th</sup> day of September, 2012, the foregoing was electronically filed with the Clerk of Court using the CM/ECF system which will send notification of such filing to the following:

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/s/ David L. Burgert  
\_\_\_\_\_  
David L. Burgert

**IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF TEXAS  
HOUSTON DIVISION**

<b>WESTERNGECO L.L.C.,</b>	§	
	§	
<b>Plaintiff,</b>	§	
	§	
<b>V.</b>	§	<b>CIVIL ACTION NO. 4:09-cv-01827</b>
	§	
<b>ION GEOPHYSICAL CORPORATION, FUGRO-GEOTEAM, INC., FUGRO- GEOTEAM AS, FUGRO NORWAY MARINE SERVICES AS, FUGRO, INC., FUGRO (USA), INC. and FUGRO GEOSERVICES, INC.,</b>	§	<b>Judge Keith P. Ellison</b>
	§	
	§	
	§	
	§	
<b>Defendants.</b>	§	<b>JURY TRIAL DEMANDED</b>
	§	

**ION’S MOTION FOR JUDGMENT AS A MATTER OF LAW,  
MOTION FOR NEW TRIAL ON DAMAGES, AND  
ALTERNATIVELY, MOTION FOR REMITTITUR**

**APPENDIX**

- Exhibit 1: *LaserDynamics, Inc. v. Quanta Computer, Inc.*, --- F.3d---, No. 2011-1440, 2012 WL 3758093 (Fed. Cir. Aug. 30, 2012)
- Exhibit 2: Excerpts from trial transcripts
- Exhibit 3: *Whitserve, LLC v. Computer Packages, Inc.*, --- F.3d ---, Nos. 2011-1206, 2011-1261, 2012 WL 3573845 (Fed. Cir. 2012)
- Exhibit 4: *Rolls-Royce PLC v. United Techs. Corp.*, No. 1:10cv457, 2011 WL 1740143 (E.D. Va. May 4, 2011)
- Exhibit 5: *Meyer Intellectual Props. Ltd. v. Bodum, Inc.*, -- F.3d ---, No. 2011-1329, 2012 WL 3329695 (Fed. Cir. Aug. 15, 2012)
- Exhibit 6: Gunderson Timeline (Gunderson Demonstrative Exhibit 20)
- Exhibit 7: *Carefusion 303, Inc. v. Sigma Int’l*, No. 10cv0442 DMS (WMC), 2012 WL 392808 (S.D. Cal. Jan. 3, 2012)
- Exhibit 8: August 14, 2012 email from Court

# **EXHIBIT 1**

--- F.3d ----, 2012 WL 3758093 (C.A.Fed. (Tex.))  
(Cite as: 2012 WL 3758093 (C.A.Fed. (Tex.)))

**FIND Request:** 2012 WL 3758093, at \*10  
Only the Westlaw citation is currently available.

United States Court of Appeals,  
Federal Circuit.  
LASERDYNAMICS, INC., Plaintiff–Appellant,  
v.  
QUANTA COMPUTER, INC., Defendant–Cross  
Appellant,  
and  
Quanta Computer USA, Inc., Quanta Storage, Inc.,  
and Quanta Storage America, Inc., Defendants.

Nos. 2011–1440, 2011–1470.  
Aug. 30, 2012.

**Background:** Patentee brought action against manufacturer of optical disc drives (ODDs) and related assembler of laptop computers, alleging active inducement of infringement of patent for optical disc discrimination method that enabled ODD to identify automatically the type of optical disc inserted into ODD. The United States District Court for the Eastern District of Texas, T. John Ward, J., 2009 WL 3763444, granted in part defendants' motion for summary judgment on issues of patent exhaustion and implied license, and, after conducting trial and granting assembler's motions for new trial on damages issues, 2010 WL 2331311, and to exclude certain expert testimony, 2011 WL 7563818, entered judgment on jury verdict awarding patentee \$8,500,000, and then denied assembler's motion for judgment as a matter of law. Parties cross-appealed.

**Holdings:** The Court of Appeals, Reyna, Circuit Judge, held that:

- (1) patentee could not use entire market value rule to establish reasonable royalty damages against assembler;
- (2) assembler had implied license to patent with respect to ODDs that were made by manufacturer to fulfill bona fide orders from licensees and then sold to assembler by licensees;

- (3) issue of whether end users of accused laptop computers directly infringed claim of patent was for jury;
- (4) erroneous instruction was not plain error warranting new trial;
- (5) date for hypothetical negotiation of license to be used in determining reasonable royalty damages was date on which sales of accused laptop computers into United States began causing underlying direct infringement by end users;
- (6) probative value of evidence pertaining to settlement in another case was substantially outweighed by danger of unfair prejudice, confusion of issues, and misleading jury; and
- (7) expert's opinion that reasonable royalty would be six percent of each ODD sold within laptop computer by assembler was arbitrary and speculative, warranting new trial on damages.

Affirmed in part, reversed in part, and remanded.

#### West Headnotes

#### [1] Courts 106 ¶96(7)

106 Courts

106II Establishment, Organization, and Procedure

106II(G) Rules of Decision

106k88 Previous Decisions as Controlling or as Precedents

106k96 Decisions of United States Courts as Authority in Other United States Courts

106k96(7) k. Particular questions or subject matter. Most Cited Cases

For issues not unique to patent law, Court of Appeals for the Federal Circuit applies the law of the regional circuit where appeal in patent infringement case would otherwise lie.

#### [2] Federal Courts 170B ¶827

170B Federal Courts

170BVIII Courts of Appeals

170BVIII(K) Scope, Standards, and Extent  
170BVIII(K)4 Discretion of Lower Court  
170Bk825 New Trial or Rehearing  
170Bk827 k. Inadequate or excessive damages. Most Cited Cases

Under the law of the Fifth Circuit Court of Appeals, grant or denial of a motion for a remittitur or a new trial is reviewed for an abuse of discretion.

**[3] Federal Courts 170B ↪823**

170B Federal Courts  
170BVIII Courts of Appeals  
170BVIII(K) Scope, Standards, and Extent  
170BVIII(K)4 Discretion of Lower Court  
170Bk823 k. Reception of evidence. Most Cited Cases

Evidentiary rulings are reviewed for an abuse of discretion under the law of the Fifth Circuit Court of Appeals.

**[4] Federal Courts 170B ↪776**

170B Federal Courts  
170BVIII Courts of Appeals  
170BVIII(K) Scope, Standards, and Extent  
170BVIII(K)1 In General  
170Bk776 k. Trial de novo. Most Cited Cases

Decisions on motions for summary judgment and for judgment as a matter of law are reviewed de novo under the law of the Fifth Circuit Court of Appeals.

**[5] Patents 291 ↪318(4.1)**

291 Patents  
291XII Infringement  
291XII(B) Actions  
291k318 Profits  
291k318(4) Entire Profits or Those Attributable to Infringement of Patent  
291k318(4.1) k. In general. Most Cited Cases

Where small elements of multi-component products are accused of infringement, calculating a

royalty on the entire product carries a considerable risk that the patentee will be improperly compensated for non-infringing components of that product, and it is therefore generally required that royalties be based not on the entire product, but instead on the smallest salable patent-practicing unit. 35 U.S.C.A. § 284.

**[6] Patents 291 ↪318(4.1)**

291 Patents  
291XII Infringement  
291XII(B) Actions  
291k318 Profits  
291k318(4) Entire Profits or Those Attributable to Infringement of Patent  
291k318(4.1) k. In general. Most Cited Cases

If it can be shown that patented feature drives demand for entire multi-component product, patentee may be awarded damages as a percentage of revenues or profits attributable to entire product under “entire market value rule,” which is narrow exception to general rule that where small elements of multi-component products are accused of infringement, reasonable royalty damages should be based on smallest salable patent-practicing unit, rather than entire product. 35 U.S.C.A. § 284.

**[7] Patents 291 ↪318(4.1)**

291 Patents  
291XII Infringement  
291XII(B) Actions  
291k318 Profits  
291k318(4) Entire Profits or Those Attributable to Infringement of Patent  
291k318(4.1) k. In general. Most Cited Cases

“Entire market value rule” allows for recovery of reasonable royalty damages in patent infringement action based on value of entire apparatus containing several features, where feature patented is the basis for customer demand. 35 U.S.C.A. § 284.

**[8] Damages 115 ↪184**

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115 Damages

115IX Evidence

115k183 Weight and Sufficiency

115k184 k. In general. Most Cited Cases

A damages theory must be based on sound economic and factual predicates.

[9] Patents 291 318(4.5)

291 Patents

291XII Infringement

291XII(B) Actions


291k318 Profits

291k318(4) Entire Profits or Those Attributable to Infringement of Patent

291k318(4.5) k. Process patents.

Most Cited Cases

Patentee of patent for optical disc discrimination method that enabled optical disc drive (ODD) to identify automatically the type of optical disc inserted into ODD did not show that patented method drove demand for laptop computers, precluding patentee's use of entire market value rule to establish reasonable royalty damages against laptop assembler for active inducement of infringement; there was no evidence that patented feature alone motivated consumers to buy laptop computers, such that value of entire computer could be attributed to patented feature, and, instead, patentee showed only that consumers would be hesitant to buy computers without patented feature. 35 U.S.C.A. § 284.

[10] Patents 291 312(2)

291 Patents

291XII Infringement

291XII(B) Actions


291k312 Evidence

291k312(2) k. Admissibility. Most

Cited Cases

Lack of economic analysis quantitatively supporting expert's one-third apportionment of proposed royalty rate, in action alleging active inducement of infringement of patent for optical disc discrimination method that enabled optical disc drive (ODD) to identify automatically the type of optical

disc inserted into ODD, alone justified exclusion of expert's opinions at trial; rate appeared to have been plucked out of thin air, based on vague qualitative notions of relative importance of ODD technology to laptop computers assembled and sold by alleged infringer. 35 U.S.C.A. § 284.

[11] Patents 291 318(4.5)

291 Patents

291XII Infringement

291XII(B) Actions


291k318 Profits

291k318(4) Entire Profits or Those Attributable to Infringement of Patent

291k318(4.5) k. Process patents.

Most Cited Cases

Per-unit running royalty was not the only form of reasonable royalty to which patentee and laptop computer assembler could have agreed, in hypothetical negotiation to license patent for optical disc discrimination method that enabled optical disc drive (ODD) to identify automatically type of optical disc inserted into ODD, and therefore patentee, in its action for alleged active inducement of infringement, was not compelled to base reasonable royalty on price of entire laptop computer pursuant to entire market value rule; patentee's license agreements for lump-sum royalties were not calculated as percentage of any component or product, and assembler's purported lack of internal tracking and accounting of individual components and "mask price" purchases did not prevent patentee from obtaining accurate information about ODD values from third parties, industry practices, and the like. 35 U.S.C.A. § 284.

[12] Patents 291 323.3

291 Patents

291XII Infringement

291XII(B) Actions

291k323 Final Judgment or Decree

291k323.3 k. Relief from judgment or

decree. Most Cited Cases

Under the law of the Fifth Circuit Court of Ap-

--- F.3d ----, 2012 WL 3758093 (C.A.Fed. (Tex.))

(Cite as: 2012 WL 3758093 (C.A.Fed. (Tex.)))

peals, ostensible waiver by alleged infringer of challenge to patentee's use of entire market value rule to establish reasonable royalty damages, including any challenge to testimony of patentee's expert on such theory, did not preclude district court from exercising its discretion, in infringement action, to consider issue in deciding alleged infringer's post-verdict motion for remittitur or new trial on issue of damages. 35 U.S.C.A. § 284.

**[13] Patents 291 ↪ 323.3**

291 Patents

291XII Infringement

291XII(B) Actions

291k323 Final Judgment or Decree

291k323.3 k. Relief from judgment or decree. Most Cited Cases

Under the law of the Fifth Circuit Court of Appeals, identifying and correcting its error in permitting patentee's theory of reasonable royalty damages, which relied upon entire market value rule, to go to jury in action for active inducement of infringement of patent for optical disc discrimination method that enabled optical disc drive (ODD) to identify automatically type of optical disc inserted into ODD, by granting alleged infringer's post-trial motion for remittitur or new trial, was not abuse of district court's discretion, even if district court could have deemed waived, and ignored, alleged infringer's arguments regarding entire market value rule. 35 U.S.C.A. § 284.

**[14] Patents 291 ↪ 324.5**

291 Patents

291XII Infringement

291XII(B) Actions

291k324 Appeal

291k324.5 k. Scope and extent of review in general. Most Cited Cases

Existence vel non of an implied patent license is a question of law that is reviewed de novo.

**[15] Patents 291 ↪ 210**

291 Patents

291X Title, Conveyances, and Contracts

291X(C) Licenses and Contracts

291k208 Requisites and Validity of Licenses

291k210 k. Implied licenses. Most

Cited Cases

Laptop computer assembler had implied license to patent for optical disc discrimination method that enabled optical disc drive (ODD) to identify automatically the type of optical disc inserted into ODD with respect to ODDs that were made by related manufacturer to fulfill bona fide orders from patent licensees and then sold to assembler by those licensees; manufacture of ODDs and their eventual sale to assembler for incorporation into laptop computers, all via licensees and valid exercises of licensees' "have made" and "sell" rights, were legitimate and separate business transactions that did not expand or circumvent licenses.

**[16] Patents 291 ↪ 314(5)**

291 Patents

291XII Infringement

291XII(B) Actions

291k314 Hearing

291k314(5) k. Questions of law or fact. Most Cited Cases

Issue of whether, under district court's claim constructions, end users of accused laptop computers directly infringed claim of patent for optical disc discrimination method that enabled optical disc drive (ODD) to identify automatically the type of optical disc inserted into ODD was for jury in action against laptop assembler for active inducement of patent infringement.

**[17] Federal Courts 170B ↪ 630.1**

170B Federal Courts

170BVIII Courts of Appeals

170BVIII(D) Presentation and Reservation in Lower Court of Grounds of Review

170BVIII(D)2 Objections and Exceptions

170Bk630 Instructions

--- F.3d ----, 2012 WL 3758093 (C.A.Fed. (Tex.))

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170Bk630.1 k. In general. Most

Cited Cases

Plain error standard of review applied on appeal to challenge to jury instruction to which no objection was raised at trial.

**[18] Federal Courts 170B ↪611**

170B Federal Courts

170BVIII Courts of Appeals

170BVIII(D) Presentation and Reservation in Lower Court of Grounds of Review

170BVIII(D)1 Issues and Questions in Lower Court

170Bk611 k. Necessity of presentation in general. Most Cited Cases

Plain error is “clear” or “obvious” and must affect substantial rights, and is reversible only if it seriously affects the fairness, integrity, or public reputation of judicial proceedings.

**[19] Federal Civil Procedure 170A ↪1951.7**

170A Federal Civil Procedure

170AXV Trial

170AXV(A) In General

170Ak1951.7 k. Fair and impartial trial in general. Most Cited Cases

**Witnesses 410 ↪246(2)**

410 Witnesses

410III Examination

410III(A) Taking Testimony in General

410k246 Examination by Court or Jury

410k246(2) k. Calling and examination by court. Most Cited Cases

Although a district court is afforded broad discretion over the manner in which trial is conducted, and may intervene to help expand upon or clarify witness testimony and evidence, such intervention may not come at the cost of strict impartiality.

**[20] Federal Courts 170B ↪906**

170B Federal Courts

170BVIII Courts of Appeals

170BVIII(K) Scope, Standards, and Extent

170BVIII(K)6 Harmless Error

170Bk906 k. Remarks and conduct of trial judge. Most Cited Cases

In reviewing a claim that the district court appeared partial, Court of Appeals must determine whether the judge's behavior was so prejudicial that it denied defendant a fair, as opposed to a perfect, trial, and, in performing its review, Court of Appeals must consider the district court's actions in light of the entire trial record and consider the totality of the circumstances.

**[21] Patents 291 ↪314(1)**

291 Patents

291XII Infringement

291XII(B) Actions

291k314 Hearing

291k314(1) k. In general. Most Cited Cases

Potential inconsistency in representations by assembler of laptop computers regarding frequency with which its purchases of optical disc drives (ODDs) for incorporation into computers were made via buy/sell arrangements did not warrant instruction that jury could take into account instruction pointing out potential inconsistency and raising associated questions of credibility in judging credibility of all other positions taken by assembler, in patentee's action alleging assembler's active inducement to infringe patent for optical disc discrimination method that enabled ODD to identify automatically type of optical disc inserted into ODD.

**[22] Patents 291 ↪323.3**

291 Patents

291XII Infringement

291XII(B) Actions

291k323 Final Judgment or Decree

291k323.3 k. Relief from judgment or decree. Most Cited Cases

Instruction in patentee's action alleging active inducement to infringe patent for optical disc discrimination method that enabled optical disc drive



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(ODD) to identify automatically type of optical disc inserted into ODD, which erroneously allowed jury to take into account potential inconsistency in representations by laptop computer assembler regarding frequency with which its purchases of ODDs for incorporation into computers were made via buy/sell arrangements in judging credibility of all other positions taken by assembler in case, was not plain error warranting new trial; assembler was given second trial on issue of damages, which cured any prejudice that instruction might have caused in that regard, and instruction, when viewed in context, was not so severe as to prevent assembler from receiving fair trial on liability issue.

**[23] Patents 291 319(1)**

291 Patents  
291XII Infringement  
291XII(B) Actions  
291k319 Damages  
291k319(1) k. In general. Most Cited

Cases

In general, hypothetical negotiation date to determine reasonable royalty damages in patent infringement action, based on what willing licensor and licensee would bargain for, is the date on which infringement began. 35 U.S.C.A. § 284.

**[24] Patents 291 289(1)**

291 Patents  
291XII Infringement  
291XII(B) Actions  
291k289 Time to Sue  
291k289(1) k. Limitations. Most Cited

Cases

**Patents 291 319(1)**

291 Patents  
291XII Infringement  
291XII(B) Actions  
291k319 Damages  
291k319(1) k. In general. Most Cited

Cases

Six-year limitation on recovery of past damages for patent infringement does not preclude hypothetical negotiation date used to determine reasonable royalty damages, based on what willing licensor and licensee would bargain for, from being date on which infringement began, even if damages cannot be collected until some time later. 35 U.S.C.A. §§ 284, 286.

**[25] Patents 291 319(1)**

291 Patents  
291XII Infringement  
291XII(B) Actions  
291k319 Damages  
291k319(1) k. In general. Most Cited

Cases

Failure to mark patented product or prove actual notice of patent pursuant to statute precludes recovery of damages prior to marking or notice date, but does not prevent hypothetical negotiation date used to determine reasonable royalty damages, based on what willing licensor and licensee would bargain for, from being set before marking or notice occurs. 35 U.S.C.A. §§ 284, 287.

**[26] Patents 291 319(1)**

291 Patents  
291XII Infringement  
291XII(B) Actions  
291k319 Damages  
291k319(1) k. In general. Most Cited

Cases

Reasonable royalty determination, for purposes of making damages evaluation in patent infringement action, must relate to the time that infringement occurred, and not be an after-the-fact assessment. 35 U.S.C.A. § 284.

**[27] Patents 291 259(1)**

291 Patents  
291XII Infringement  
291XII(A) What Constitutes Infringement  
291k259 Contributory Infringement; In-

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ducement

291k259(1) k. In general. Most Cited

Cases

Although active inducement can ultimately lead to direct infringement of patent, absent direct infringement there is no compensable harm to a patentee. 35 U.S.C.A. § 271(b).

[28] Patents 291 319(1)

291 Patents

291XII Infringement

291XII(B) Actions

291k319 Damages

291k319(1) k. In general. Most Cited

Cases

In determining reasonable royalty damages in case of alleged active inducement of patent infringement, based on what willing licensor and licensee would bargain for, hypothetical negotiation of license is deemed to take place on date of first direct infringement traceable to alleged infringer's first instance of inducement conduct. 35 U.S.C.A. §§ 271(b), 284.

[29] Patents 291 319(1)

291 Patents

291XII Infringement

291XII(B) Actions

291k319 Damages

291k319(1) k. In general. Most Cited

Cases

Date for hypothetical negotiation of license to be used in determining reasonable royalty damages for active infringement of patent for optical disc discrimination method that enabled optical disc drive (ODD) to identify automatically the type of optical disc inserted into ODD sales by laptop assembler was date on which sales of accused laptop computers into United States began causing underlying direct infringement by end users. 35 U.S.C.A. §§ 271(b), 284.

[30] Evidence 157 146

157 Evidence

157IV Admissibility in General

157IV(D) Materiality

157k146 k. Tendency to mislead or confuse. Most Cited Cases

Evidence 157 219(3)

157 Evidence

157VII Admissions

157VII(A) Nature, Form, and Incidents in General

157k219 Acts or Conduct

157k219(3) k. Compromise or settlement. Most Cited Cases

Probative value of evidence of settlement agreement in another infringement action by patentee, into which parties entered on eve of trial, after alleged infringer had been sanctioned repeatedly by court, was substantially outweighed by danger of unfair prejudice, confusion of issues, and misleading jury with respect to issue of reasonable royalty damages in action alleging active inducement of infringement by assembler of laptop computers; settlement appeared to be least reliable license in the record, given disadvantages faced by alleged infringer due to sanctions imposed, lump-sum license fee reached was six times larger than next highest amount paid for license, and, in light of changing landscape in market, settlement entered into three years after hypothetical negotiation date was in many ways not relevant to hypothetical negotiation analysis. Fed.Rules Evid.Rule 408, 28 U.S.C.A.; 35 U.S.C.A. § 284.

[31] Patents 291 312(2)

291 Patents

291XII Infringement

291XII(B) Actions

291k312 Evidence

291k312(2) k. Admissibility. Most Cited Cases

Approach taken by patentee's expert was reasonable attempt to value optical disc drives (ODDs) sold by laptop computer assembler based on arms-

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length transactions, and therefore expert's use of \$41 per ODD value to determine reasonable royalty damages, which was calculated based on sample of approximately 9,000 non-infringing ODDs made by non-party licensee, could not be excluded from trial on *Daubert* grounds, in patentee's action against assembler for active inducement to infringe patent for optical disc discrimination method that enabled ODD to identify automatically the type of optical disc inserted into ODD. 35 U.S.C.A. § 284.

[32] Patents 291 ↪ 323.3

291 Patents

291XII Infringement

291XII(B) Actions

291k323 Final Judgment or Decree

291k323.3 k. Relief from judgment or

decree. Most Cited Cases

Opinion of patentee's expert, that reasonable royalty in action against laptop assembler and seller alleging active inducement of infringement of patent for optical disc discrimination method that enabled optical disc drive (ODD) to identify automatically type of optical disc inserted into ODD would be six percent of each ODD sold within laptop computer by assembler-seller, was arbitrary and speculative, and thus warranted new trial on damages; two patent licensing programs and licensing survey upon which expert relied to the exclusion of licenses for patent itself, even though they did not concern patented technology, were not sufficiently comparable to hypothetically negotiated license, and expert's six percent running royalty theory could not be reconciled with actual licensing evidence, which included lump-sum amounts not exceeding \$1,000,000. 35 U.S.C.A. § 284; Fed.Rules Evid.Rule 702, 28 U.S.C.A.

Patents 291 ↪ 328(2)

291 Patents

291XIII Decisions on the Validity, Construction, and Infringement of Particular Patents

291k328 Patents Enumerated

291k328(2) k. Original utility. Most Cited

Cases

5,587,981. Infringed in Part.

Appeals from the United States District Court for the Eastern District of Texas, No. 06-CV-0348, T. John Ward, Judge. Matthew C. Gaudet, Duane Morris LLP, of Atlanta, GA, argued for plaintiff-appellant. On the brief were Robert L. Byer, of Pittsburgh, PA, and Gregory M. Luck, of Houston, TX, and Kristina Caggiano, of Washington, DC. Of counsel was Thomas W. Sankey, of Houston, TX.

Terrence Duane Garnett, Goodwin Procter, LLP, of Los Angeles, CA, argued for defendant/cross-appellant. With him on the brief were Vincent K. Yip, and Peter J. Wied.

Before DYK, CLEVINGER, and REYNA, Circuit Judges.

REYNA, Circuit Judge.

\*1 These appeals come before us after two trials in the district court—a first trial resolving the claims of patent infringement and damages, and a second trial ordered by the district court to retry the damages issues. The parties raise various issues relating to the proper legal framework for evaluating reasonable royalty damages in the patent infringement context. Also before us are questions regarding implied license, patent exhaustion, infringement, jury instructions, and the admissibility of a settlement agreement. For reasons explained in detail below, we *affirm-in-part*, *reverse-in-part*, and *remand*.

I. BACKGROUND

A. The Patented Technology and the Optical Disc Drive Industry

LaserDynamics, Inc. (“LaserDynamics”) is the owner of U.S. Patent No. 5,587,981 (“the '981 Patent”), which was issued in 1996. The patent is directed to a method of optical disc discrimination that essentially enables an optical disc drive (“ODD”) to automatically identify the type of optical

disc—e.g., a compact disc (“CD”) versus a digital video disc (“DVD”)—that is inserted into the ODD. Claim 3, which was asserted at trial, is representative:

3. An optical disk reading method comprising the steps of:

processing an optical signal reflected from encoded pits on an optical disk until total number of data layers and pit configuration standard of the optical disk is identified;

collating the processed optical signal with an optical disk standard data which is stored in a memory; and

settling modulation of servomechanism means dependent upon the optical disk standard data which corresponds with the processed optical signal;

(c) [sic] the servomechanism means including:

a focusing lens servo to modulate position of a focusing lens; and

a tracking servo to modulate movement of a pickup.

This automated process saves the user from having to manually identify the kind of disc being inserted into the ODD before the ODD can begin to read the data on the disc. The patented technology is alleged to be particularly useful in laptop computers where portability, convenience, and efficiency are essential. At least as early as 2006, a laptop computer was not commercially viable unless it included an ODD that could automatically discriminate between optical discs.

Yasuo Kamatani is the sole inventor of the '981 Patent. In 1998, viewing DVD technology as the next major data and video format, Mr. Kamatani founded LaserDynamics and assigned the '981 Patent to the company. Mr. Kamatani is the sole employee of LaserDynamics, which is exclusively in

the business of licensing Mr. Kamatani's patents to ODD and consumer electronics manufacturers.

When LaserDynamics was founded, the DVD market had reached few mainstream consumers, and there was some skepticism among electronics companies as to the likely success of this technology compared with the established VHS format. By 2000, however, DVD sales and the ODD market were sharply rising. By 2003, most homes had DVD players and nearly every computer had an ODD. An ODD having automatic disc discrimination capability quickly became the industry standard for DVD players and computers.<sup>FNI</sup>

B. LaserDynamics' Licensing History of the '981 Patent

\*2 According to LaserDynamics, it was initially difficult to generate interest in licensing the '981 Patent, due to the novelty of the technology and LaserDynamics' limited operating capital and bargaining power. Nevertheless, LaserDynamics entered into sixteen licensing agreements from 1998 to 2001. These licenses were granted to well known electronics and ODD manufacturers such as Sony, Philips, NEC, LG, Toshiba, Hitachi, Yamaha, Sanyo, Sharp, Onkyo, and Pioneer. All of the licenses were nonexclusive licenses granted in exchange for one time lump sum payments ranging from \$57,000 to \$266,000. There is no evidence that these licenses recited the lump sum amounts as representing a running royalty applied over a certain period of time or being calculated as a percentage of revenues or profits. These sixteen licenses were admitted into evidence in the first trial, as explained below.

Several other lump sum licenses were granted by LaserDynamics between 1998 and 2003 to other ODD and electronics manufacturers via more aggressive licensing efforts involving actual or threatened litigation by LaserDynamics. These licenses, in addition to the sixteen licenses from the first trial, were admitted in the second trial.

On February 15, 2006, LaserDynamics (and

Mr. Kamatani) entered into a license agreement with BenQ Corporation to settle a two-year long litigation for a lump sum of \$6 million. This settlement agreement was executed within two weeks of the anticipated trial against BenQ. *Kamatani v. BenQ Corp.*, No. 2:03-CV-437 (E.D.Tex. Jan.20, 2006) (pre-trial conference order indicating trial was expected to begin in the last week of February 2006). By the time of the settlement, BenQ had been repeatedly sanctioned by the district court for discovery misconduct and misrepresentation. The district court had allotted BenQ one-third less time than Mr. Kamatani for *voir dire*, opening statement, and closing argument, had awarded attorneys' fees to Mr. Kamatani for bringing the sanctions motion, had stricken one of BenQ's pleaded defenses, and had sanctioned BenQ \$500,000.00 as an additional punitive and deterrent measure. *Kamatani v. BenQ Corp.*, No. 2:03-CV-437, 2005 U.S. Dist. LEXIS 42762, at \*20, \*44-46 (E.D.Tex. Oct.6, 2005). The district court believed that its harsh sanctions were justified because BenQ's extensive misconduct "demonstrate[d] a conscious intent to evade the discovery orders of this Court, as well as violate[d] this Court's orders and the rules to an extent previously unknown by this Court." *Id.* at \*44-45. The BenQ settlement agreement was admitted into evidence in the second trial.

Finally, in 2009 and 2010, LaserDynamics entered into license agreements with ASUSTeK Computer and Orion Electric Co., Ltd., respectively, for lump sum payments of \$1 million or less. These two licenses were admitted into evidence in the second trial.

In total, twenty-nine licenses were entered into evidence in the second damages trial. With the exception of the \$6 million BenQ license, all twenty-nine licenses were for lump sum amounts of \$1 million or less.

C. Quanta Computer Inc. and Quanta Storage Inc.

\*3 Quanta Storage, Inc. ("QSI") is a manufacturer of ODDs that was incorporated in 1999. QSI is headquartered in Taiwan and is a partially-owned

subsidiary of Quanta Computer, Inc. ("QCI"), with which it shares some common officers, directors, and facilities. QCI's corporate headquarters are also located in Taiwan, and its factories are located in China. QCI holds a minority share in QSI and does not control QSI's operations.

QCI assembles laptop computers for its various customers, which include name brand computer companies such as Dell, Hewlett Packard ("HP"), Apple, and Gateway. QCI does not manufacture ODDs, but will install ODDs into computers as instructed by its customers. QCI will sometimes purchase ODDs directly from ODD manufacturers such as Sony, Panasonic, Toshiba, or QSI, as directed by QCI's customers. Predominantly, however, QCI will be required to purchase the ODDs from the customer for whom QCI is assembling the laptop computer. In other words, QCI's typical practice is to buy ODDs from Dell, HP, Apple, or Gateway, which in turn purchased the ODDs from the ODD manufacturers. Because QCI eventually sells the fully assembled laptop computers—including the ODDs—to its customers, this process is called a "buy/sell" arrangement. When QCI purchases ODDs from one of its customers in a buy/sell context, it buys the ODDs for an artificially high "mask price" set by the customer and designed to hide the actual lower price of the ODDs from the customer's competitors. Thus, the mask price is always higher than the actual price to the customer.

QSI first sold its ODDs for integration into laptop computers in the United States in 2001. In 2002, LaserDynamics offered QSI a license under the '981 Patent, but QSI disputed whether its ODDs were within the scope of the '981 Patent and declined the offer. QCI sold its first computer in the United States using an ODD from QSI in 2003. It was not until August 2006 that LaserDynamics offered a license to QCI concurrently with the filing of this lawsuit. To date, neither QSI nor QCI has entered into a licensing agreement with LaserDynamics relating to the '981 Patent.

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#### D. ODDs Made by Philips and Sony/NEC/Optiarc

Just as computer sellers Dell, HP, Apple, and Gate way outsource the assembly of their computers to companies like QCI, some sellers of ODDs outsource the assembly of their ODDs. QSI assembles ODDs for Philips and Sony/NEC/Optiarc—two of the largest sellers of ODDs. As discussed above, Philips and Sony/NEC/Optiarc are licensed by LaserDynamics to make and sell ODDs within the scope of the '981 Patent. Under the license agreements, both Philips and Sony/NEC/Optiarc also enjoy “have made” rights that permit them to retain companies like QSI to assemble ODDs for them.

When QCI purchases ODDs directly from Philips or Sony/NEC/Optiarc—i.e., not under a buy/sell arrangement—QCI has no knowledge of which entity assembled the ODDs. QCI pays Philips or Sony/NEC/Optiarc directly for the ODDs, which are not sold under the QSI brand name even if assembled by QSI.

#### II. PROCEDURAL HISTORY

\*4 In August 2006, LaserDynamics brought suit against QCI and QSI for infringement of the '981 Patent. Because asserted claim 3 of the '981 Patent is directed to a method of disc discrimination performed by an ODD, as opposed to the ODD itself, LaserDynamics relied on a theory of infringement that QSI's and QCI's sales of ODDs and laptop computers, respectively, actively induced infringement of the method by the end users of the ODDs and laptop computers. *See* 35 U.S.C. § 271(b).

On a pre-trial summary judgment motion brought by QCI and QSI relating to their defenses of patent exhaustion and implied license, the district court made the following rulings:

(1) “the exhaustion doctrine does not apply to sales made overseas by [LaserDynamics'] licensees”;

(2) “QCI has an implied license with respect to

drives manufactured by non-Quanta entities licensed by [LaserDynamics] under worldwide licenses and sold by those licensees to QCI for incorporation into QCI computers. In addition, QSI is not liable for manufacturing drives for Philips or Sony/NEC/Optiarc which are, in turn, resold into the United States to non-Quanta entities”; and

(3) “the Quanta defendants do not have an implied license with respect to drives that are manufactured by QSI and eventually sold to QCI (or another Quanta entity), notwithstanding the fact that those drives are sold through Philips or Sony/NEC/Optiarc, two of [LaserDynamics'] licensees. *E.I. Du Pont de Nemours & Co. v. Shell Oil Co.*, 498 A.2d 1108, 1116 (Del.1985). The effect of such transactions is to grant an impermissible sublicense.”

*LaserDynamics, Inc. v. Quanta Storage Am., Inc.*, No. 2:06-CV-348-TJW-CE, 2009 U.S. Dist. LEXIS 115848, at \*3–5 (E.D. Tex. June 29, 2009) (“*Pre-Trial Op.*”). Based on these rulings, LaserDynamics dropped its claims against QSI and opted to pursue its active inducement of infringement claims against QCI only at trial.

QCI was first on notice of the '981 Patent in August 2006 when the complaint was filed. Between August 2006 and the conclusion of the first trial in June 2009, QCI sold approximately \$2.53 billion of accused laptops into the United States. LaserDynamics sought reasonable royalty damages under 35 U.S.C. § 284. Pursuant to the analytical framework for assessing a reasonable royalty set forth in *Georgia-Pacific Corp. v. United Plywood Corp.*, 318 F.Supp. 1116 (S.D.N.Y.1970),<sup>FN2</sup> the date of the “hypothetical negotiation” between the parties was deemed by the district court (over QCI's objections) to be August 2006—the date that QCI first became aware of the '981 Patent and was therefore first potentially liable for active inducement of infringement. *See Global-Tech Appliances, Inc. v. SEB S.A.*, —U.S. —, —, 131 S.Ct. 2060, 2068, 179 L.Ed.2d

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1167 (2011) (holding that knowledge of the patent is necessary to prove active inducement of infringement).

#### A. The First Trial

The damages theory advanced by LaserDynamics in the first trial was presented chiefly through LaserDynamics' expert, Mr. Emmett Murtha. Mr. Murtha opined that a running royalty of 2% of the total sales of laptop computers by QCI is what the parties would have agreed to as a reasonable royalty had they engaged in a hypothetical negotiation in August 2006. This opinion was based on Mr. Murtha's understanding, obtained primarily from LaserDynamics' other expert witnesses, that the technology covered by the '981 Patent provided an important and valuable function that was present in all ODDs currently in use, and that the presence of this function was a prerequisite for any laptop computer to be successful in the marketplace. Since QCI sold laptop computers and not ODDs, Mr. Murtha viewed the complete laptop computer as an appropriate royalty base.

\*5 To arrive at his 2% per laptop computer royalty rate, Mr. Murtha began by finding that 6% would be a reasonable royalty rate to pay with respect to an ODD alone. Mr. Murtha reached his conclusion of a 6% per ODD royalty by relying on "comparable rates in two separate licensing programs involving DVDs where the rates were 3.5 in one case and 4 percent in another case." A621, A650–54.<sup>FN3</sup> The two patent licensing programs were undertaken by third parties in the DVD industry around 2000. *Id.* He also relied on "a very comprehensive royalty survey that was done by the Licensing Executive Society in 1997," which he viewed as "a standard textbook for people who are seeking to set reasonable royalty rates." *Id.* The licensing survey was not limited to any particular industry but "was across whatever technologies were being licensed by the people who responded," and suggested that in general, across all of those unrelated technologies, "for a minor improvement, we would charge 2 to 5 percent. For a major improve-

ment, we would charge 4 to 8 percent. And for a major breakthrough, 6 to 15 percent..." A653–54. There is no evidence in the record that the two third-party licensing programs or the industries involved in the licensing survey included the patented technology or even involved optical disc discrimination methods. *See id.*; A652 ("[T]he two licensing programs are important, because they indicate the going rate, if you will, *at least for those patents, which may or may not be as important as the one in question.*") (emphasis added); A653 ("Q. Was the [licensing] survey directed to ODD technology? A. No.").

Mr. Murtha did not deem the sixteen lump sum licenses that were entered into between LaserDynamics and various electronics companies between 1998 and 2001 to establish a royalty rate for the '981 Patent. Although he conceded that QCI would "absolutely" be aware of these prior agreements in a hypothetical negotiation context, he dismissed any probative value of these 16 licenses because they were entered into before the August 2006 hypothetical negotiation date. He reasoned that, by 2006, the DVD market was larger and more established such that the value of the patented technology was better appreciated and LaserDynamics had more bargaining power.

Based on his discussions with LaserDynamics' other experts, Mr. Murtha concluded that the patented technology in the ODD is responsible for one-third of the value of a laptop computer containing such an ODD. Thus, he arrived at his 2% per laptop computer rate simply by taking one-third of the 6% rate for the ODD. When Mr. Murtha's proffered 2% running royalty rate was applied to QCI's total revenues from sales of laptop computers in the United States—\$2.53 billion—the resulting figure presented to the jury was \$52.1 million.

By contrast, QCI's theory of damages was that a lump sum of \$500,000 would be a reasonable royalty. QCI's expert, Mr. Brett Reed, found the 16 licenses in evidence—all lump sums ranging between \$50,000 and \$266,000—to be highly indic-

ative of the value of the patented technology according to LaserDynamics, and of what a reasonable accused infringer would agree to pay for a license.

\*6 Prior to the first trial, QCI filed a motion for partial summary judgment, or in the alternative a motion pursuant to *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993), with respect to damages. QCI sought to limit damages to a one-time lump sum of \$232,376.00 based on LaserDynamics' prior licenses, and to preclude Mr. Murtha from offering any opinion to the contrary for being unreliable by ignoring this established licensing practice. QCI's motion heavily criticized Mr. Murtha's opinions for being fundamentally inconsistent with LaserDynamics' licenses in either form or amount. However, QCI's motion did not challenge Mr. Murtha's one-third apportionment calculation to go from his 6% rate per ODD to his 2% rate per laptop computer, nor did it challenge his use of a completed laptop computer as a royalty base. The district court never ruled on QCI's motion. QCI also moved *in limine* to preclude testimony regarding damages in excess of \$266,000 or suggesting that the prior 16 licenses did not establish a royalty rate. The district court denied this motion. At no point during the first trial did QCI object to or seek to limit Mr. Murtha's testimony relating to his apportionment or royalty base selection, nor did QCI file a pre-verdict motion for judgment as a matter of law ("JMOL") implicating such issues pursuant to Federal Rule of Civil Procedure 50(a).

Two other issues arose during the first trial that are pertinent to this appeal: (1) the district court's instructions to the jury concerning QCI's position regarding its buy/sell arrangements, and (2) the adequacy of LaserDynamics' proof of infringement. We discuss each issue in turn.

#### 1. The District Court's Instruction to the Jury

Upon perceiving a change in position by QCI concerning the frequency with which QCI's ODDs were obtained via a buy/sell arrangement, the dis-

trict court instructed the jury as follows:

[P]rior to yesterday, the position of Quanta Computers was that this buy/sell arrangement ... [was] one of the ways in which ... they did their business. Yesterday, the testimony was, for the first time, that that was the predominant method of doing business. You are instructed that this constitutes a significant change in the testimony, and no documents have been produced to support that, and that you may take this instruction into account in judging the credibility of all of this witness' testimony and all other Quanta Computer's positions in this case.

A34–35. A prior ruling from the magistrate judge permitted QCI to utilize a demonstrative showing how a buy/sell arrangement works “conditioned on the Defendants' representation that they would use the demonstratives to show generally one way that QCI obtains optical drives.” A5100. QCI believed the district court's later instruction was based on a false premise that QCI had changed its position. Prior to trial, LaserDynamics was made aware of QCI's contention that approximately 85% of its ODD purchases were through buy/sell arrangements. The testimony elicited by QCI at trial was ostensibly consistent with this contention, representing that QCI obtains drives from its customers “more frequently” than from ODD sellers. A754. Arguing that QCI did not run afoul of the earlier magistrate judge's condition that the demonstrative show only “one way” QCI obtains its drives, QCI viewed the district court's instruction unfairly prejudicial and moved for a new trial on that basis. QCI's motion for a new trial on these grounds was denied.

#### 2. QCI's Challenge to the Proof of Infringement

\*7 QCI challenged LaserDynamics' contentions that the end users of the ODDs directly infringed the '981 Patent. Asserted claim 3 of the '981 Patent includes the step of “processing an optical signal reflected from encoded pits on an optical disk....” The district court construed the phrase “encoded pits on an optical disk” to mean “depression[s] in



the surface of the disk which represent[ ] data or information.” *LaserDynamics, Inc. v. Asus Computer Int’l*, No. 2:06-cv-348-TJW-CE, 2008 U.S. Dist. LEXIS 63498, at \*13 (E.D.Tex. Aug. 18, 2008) (“*Markman Order*”). The subsequent claimed step of “collating the processed optical signal with an optical disk standard data which is stored in a memory” was construed to mean “comparing the processed optical signal with an optical disk standard data stored on a memory.” *Id.* at \*15. The *Markman Order* further explained that “there is no requirement that the same optical signal determine both the total number of data layers and also pit configuration standard.” *Id.* According to LaserDynamics’ expert, industry standards require that each type of optical disc (i.e., CD, DVD, etc.) has a particular arrangement of depressions within the data layer as well as a particular depth of the data layer from the surface of the disc, such that the depth and arrangement of depressions have a one-to-one correspondence. LaserDynamics’ theory of infringement was that the optical signal in the accused ODDs included a “counter value” that tracked the time for the ODD to change focus from the transparent outer surface of the disc to the internal data layer. When the counter value was compared with a known threshold counter value for a given type of optical disc, the type of disc (including its standard arrangement of depressions) could be identified.

QCI filed a motion for JMOL of non-infringement, arguing that the ODDs in its laptop computers, by measuring a counter value of time, were not literally measuring an arrangement of depressions, which QCI contended was required by the language of claim 3 and the district court’s claim constructions. Specifically, QCI notes claim 3 requires a step of “settling modulation of servomechanism means dependent upon the optical disk standard data which corresponds with the processed optical signal,” which the district court construed as “establishing the regulation of the automatic feedback control system for mechanical motion dependent upon the recognized arrangement of depressions for an optical storage medium which

corresponds to the processed optical signal.” *Markman Order* at \*16. QCI alleged that this construction indicates that the reference to operating the servo-mechanism based on “optical disk standard data” requires the ODD to identify a spatial value—“the recognized arrangement of depressions”—not to calculate a temporal “counter value” in order to discriminate between optical disc types. A3190. The district court denied QCI’s motion for JMOL, finding no basis to disturb the jury’s infringement verdict.

#### B. The First Jury Verdict and Post-Trial Proceedings

\*8 The jury ultimately returned a verdict finding QCI liable for active inducement of infringement, and awarded \$52 million in damages to LaserDynamics, almost the exact amount proffered by Mr. Murtha. After the verdict, QCI filed a motion for a remittitur or new trial pursuant to Federal Rule of Civil Procedure 59(a). In this motion, QCI argued that the verdict was grossly excessive and against the great weight of the evidence, and for the first time argued that Mr. Murtha’s testimony should have been excluded due to his unreliable methodology in applying the “entire market value rule”—i.e., using the revenues from sales of the entire laptop computers as the royalty base—without having established that the patented feature drives the demand for the entire laptop computer. *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1549 (Fed.Cir.1995). In other words, QCI argued that LaserDynamics failed to establish that the disc discrimination method covered by claim 3 of the ‘981 Patent was “the basis for customer demand” for the laptop computers. *Id.*

The district court granted QCI’s motion, finding that LaserDynamics had indeed improperly invoked the entire market value rule. *LaserDynamics, Inc. v. Quanta Computer, Inc.*, No. 2:06-cv-348-TJW-CE, 2010 U.S. Dist. LEXIS 56634 (E.D. Tex. June 9, 2010) (“*New Trial Op*”). The district court reasoned that “[t]he price of the finished computers should not have been included

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in the royalty base [because] LaserDynamics presented no evidence that its patented method drove the demand for QCI's finished computers." *Id.* at \*9. "At best," LaserDynamics had only established that "almost all computers sold in the retail market include optical disc drives and that customers would be hesitant to purchase computers without an optical disc drive." *Id.* at \*10. LaserDynamics' theory in the first trial was thus found to violate *Rite-Hite* as well as our then-recent decision in *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301 (Fed.Cir.2009),<sup>FN4</sup> which further expounded on the entire market value rule. The district court concluded that the \$52 million damages award was unsupported and excessive, and granted QCI's motion. *Id.* at \*12-13. Because the district court did not view Mr. Murtha's 6%-per-ODD royalty as clearly excessive, LaserDynamics was given the option of a new trial on damages or a remittitur to \$6.2 million, which was calculated using the 6% royalty rate applied to each ODD sold as part of QCI's laptop computers. *Id.* at \*11-13. LaserDynamics declined to accept the remittitur to \$6.2 million and elected to have a new trial.

### C. The Second Trial

Prior to the second trial on damages, QCI renewed its objections to the anticipated testimony of Mr. Murtha concerning his dismissive view of the existing licenses to the '981 Patent, and challenged his 6% royalty rate based on ODD average price for being improperly based on non-comparable licensing evidence. QCI also expressly challenged Mr. Murtha's 2% royalty applying the entire market value rule, relying on our decisions in *Lucent Technologies*, 580 F.3d 1301, and *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292 (Fed.Cir.2011). QCI's objections regarding the application of the entire market value rule were sustained. *LaserDynamics, Inc. v. Quanta Computer, Inc.*, No. 2:06-cv-348-TJW-CE, 2011 U.S. Dist. LEXIS 42590, at \*8 (E.D.Tex. Jan. 7, 2011) ("Mr. Murtha's opinions that a reasonable royalty is 2% of the entire market value of a computer, and that a disk drive constitutes a third of the value of the com-

puter, are excluded."). The district court permitted LaserDynamics to put on evidence regarding a 6% running royalty damages model based on ODD average price, but subject to certain restrictions regarding proof of comparability to the hypothetically negotiated license. *LaserDynamics, Inc. v. Quanta Computer, Inc.*, No. 2:06-cv-348-TJW-CE, at 3 (E.D.Tex. Jan. 19, 2011) ("[T]he court DENIES Quanta's cross-motion to preclude Laser from arguing that a running royalty is appropriate."); *LaserDynamics*, 2011 U.S. Dist. LEXIS 42590, at \*10 (permitting Mr. Murtha to rely on the 1997 Licensing Executive Society survey "to allude to general practices, such as preference for a running royalty or a lump sum, but [not to] testify as to the royalty rates discussed in the survey"); *id.* at \*11 (ordering that, if seeking to present licenses as comparable to the jury, "[i]t is not sufficient to state that both patents cover optical disk drive technology. The plaintiff must establish the functionality enabled by the patent-in-suit as well as the functionality purportedly covered by the licensed patent and compare their economic importance").

\*9 Before the second trial, QCI also filed a motion *in limine* to exclude the 2006 BenQ settlement agreement from evidence for having its probative value substantially outweighed by the danger of unfair prejudice or confusion of the issues under Federal Rule of Evidence 403. QCI's motion emphasized the unique circumstances of the BenQ settlement that rendered it non-comparable, as it was executed shortly before trial and after BenQ had been repeatedly sanctioned by the district court. QCI also challenged the probative value of any per unit royalty rate that might be extrapolated from the BenQ settlement, which involved only a one time lump sum royalty payment of \$6 million. The district court denied QCI's motion, reasoning that LaserDynamics could use the BenQ agreement to "prove up a per unit royalty rate from the information provided in the agreement" so as to support its 6% per ODD royalty rate. *LaserDynamics, Inc. v. Quanta Computer, Inc.*, No. 2:06-cv-348-TJW-CE, at 3 (E.D.Tex. Jan. 19,

2011).

In light of these rulings, LaserDynamics offered testimony that damages should be \$10.5 million based on a running royalty of 6% of the average price of a standalone ODD. While the average per-unit ODD price utilized in the first trial was the \$28 mask price, LaserDynamics now used a \$41 per ODD value that was calculated based on a relatively small sample of about 9,000 licensed noninfringing drives made by Sony that were sold as replacement drives by QCI. In response to QCI's objections, LaserDynamics contended that this increased value was accurate and reliable because prior to the first trial both QSI and QCI were accused of inducing infringement. According to LaserDynamics, the prices of QSI's ODDs and QCI's laptop computers were evaluated to support LaserDynamics' damages theory going into the first trial since it was not until after the district court's rulings in the *Pre-Trial Opinion* that LaserDynamics dropped its claims against QSI. Going into the second trial, however, only QCI was accused of active inducement, and so the price of ODDs sold by QCI became a more central issue. Since QCI does not itself make and sell standalone ODDs, and since QCI presented no representative sales price, LaserDynamics used the average price of the replacement ODDs sold by QCI. QCI nevertheless contends that this \$41 price is far too high since the evidence is undisputed that mask price of \$28 paid by QCI is always higher than the actual price of the ODD.

QCI's expert testified that the appropriate damages amount was a lump sum payment of \$1.2 million, based in large part on the fact that none of the now twenty-nine licenses in evidence (excluding the BenQ settlement) exceeded lump sum amounts of \$1 million. Based on evidence that QCI could have switched from QSI drives to other licensed ODD suppliers to avoid infringement at a cost of \$600,000, QCI's expert also opined that QCI would have paid twice that amount to have the freedom to use ODDs from any supplier.

\*10 The jury ultimately awarded a lump sum

amount of \$8.5 million in damages. QCI moved for JMOL on the grounds that the hypothetical negotiation date had been improperly set as August 2006, that the evidence at trial did not support the jury's award of \$8.5 million, and that LaserDynamics had failed to offer proof at trial to support its \$10.5 million damages theory. The district court denied QCI's motion for JMOL.

\* \* \*

LaserDynamics appealed the district court's granting QCI's motion for a new trial and/or remittitur based on the entire market value rule. QCI cross-appealed the district court's denial of a new trial on the alternative ground of the district court's allegedly prejudicial instruction to the jury. QCI also cross-appealed the district court's entry of summary judgment on the issues of implied license and patent exhaustion, its denial of QCI's motion for JMOL of non-infringement following the first trial, and its denial of QCI's motion for JMOL following the second trial. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

### III. DISCUSSION

[1][2][3][4] For issues not unique to patent law, we apply the law of the regional circuit where this appeal would otherwise lie, which in this case is the Fifth Circuit. *i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 841 (Fed.Cir.2010). Thus, the grant or denial of a motion for a remittitur or a new trial is reviewed for an abuse of discretion. *Brunnemann v. Terra Int'l, Inc.*, 975 F.2d 175, 177 (5th Cir.1992); *Bonura v. Sea Land Serv., Inc.*, 505 F.2d 665,669 (5th Cir.1974). Evidentiary rulings are reviewed for an abuse of discretion. *Industrias Magromer Cueros Y Pieles S .A. v. La. Bayou Furs*, 293 F.3d 912, 924 (5th Cir.2002). Decisions on motions for summary judgment and JMOL are reviewed de novo. *Cambridge Toxicology Group v. Exnicios*, 495 F.3d 169, 173, 179 (5th Cir.2007).

For reasons explained in detail below, we hold: (a) that the district court properly granted a new trial on damages following the first jury verdict; (b) that the district court erred in finding that QCI does

not have an implied license to assemble and sell laptops using ODDs purchased via Philips and Sony/NEC/Optiarc; (c) that the district court properly denied QCI's motion for JMOL of non-infringement; (d) that the district court's jury instruction does not alone warrant a new trial on liability; (e) that the district court erred by setting the hypothetical negotiation date as August 2006; (f) that the district court erred in admitting the BenQ settlement agreement into evidence; and (g) that the district court erred in permitting Mr. Murtha to offer his opinion concerning a 6% per ODD running royalty rate based on ODD average price as a proper measure of reasonable royalty damages in the second trial. We address each of these issues in turn.

#### A. The District Court Properly Granted a New Trial on Damages

LaserDynamics contends that the district court erred by granting QCI's motion for a new trial on damages after the conclusion of the first trial. Essentially, LaserDynamics believes that the district court was precluded from ordering a new trial under the circumstances, since QCI never raised its entire market value rule argument until after the jury verdict, and thereby waived any right to seek a new trial to rectify that error. Moreover, LaserDynamics denies that it improperly relied on the entire market value rule during the first trial, but contends that it instead used a permissible "product value apportionment" method. *LaserDynamics* Br. at 36–44. We disagree with both of LaserDynamics' arguments.

##### 1. The Entire Market Value Rule

\*11 We begin by noting that some products are made of many different components, one or more of which components may be covered by an asserted patent, while other components are not. This is especially true for electronic devices, which may include dozens of distinct components, many of which may be separately patented, the patents often being owned by different entities. To assess how much value each patented and non-patented com-

ponent individually contributes to the overall end product—e.g., a personal computer—can be an exceedingly difficult and error-prone task.

[5] By statute, reasonable royalty damages are deemed the minimum amount of infringement damages "adequate to compensate for the infringement." 35 U.S.C. § 284. Such damages must be awarded "for the use made of the invention by the infringer." *Id.* Where small elements of multi-component products are accused of infringement, calculating a royalty on the entire product carries a considerable risk that the patentee will be improperly compensated for non-infringing components of that product. Thus, it is generally required that royalties be based not on the entire product, but instead on the "smallest salable patent-practicing unit." *Cornell Univ. v. Hewlett-Packard Co.*, 609 F.Supp.2d 279, 283, 287–88 (N.D.N.Y.2009) (explaining that "counsel would have wisely abandoned a royalty base claim encompassing a product with significant non-infringing components. The logical and readily available alternative was the smallest salable infringing unit with close relation to the claimed invention—namely the processor itself .").

[6][7] The entire market value rule is a narrow exception to this general rule. If it can be shown that the patented feature drives the demand for an entire multi-component product, a patentee may be awarded damages as a percentage of revenues or profits attributable to the entire product. *Rite-Hite*, 56 F.3d at 1549, 1551. In other words, "[t]he entire market value rule allows for the recovery of damages based on the value of an entire apparatus containing several features, when the feature patented constitutes the basis for customer demand." *Lucent*, 580 F.3d at 1336 (quoting *TWM Mfg. Co. v. Dura Corp.*, 789 F.2d 895, 901 (Fed.Cir.1986)). The entire market value rule is derived from Supreme Court precedent requiring that "the patentee ... must in every case give evidence tending to separate or apportion the defendant's profits and the patentee's damages between the patented feature and the unpatented features, and such evidence must be reli-

able and tangible, and not conjectural or speculative.” *Garretson v. Clark*, 111 U.S. 120, 121, 4 S.Ct. 291, 28 L.Ed. 371 (1884). The Court explained that “the entire value of the whole machine, as a marketable article, [must be] properly and legally attributable to the patented feature.” *Id.*

[8] In effect, the entire market value rule acts as a check to ensure that the royalty damages being sought under 35 U.S.C. § 284 are in fact “reasonable” in light of the technology at issue. We have consistently maintained that “a reasonable royalty analysis requires a court to hypothesize, not to speculate.... [T]he trial court must carefully tie proof of damages to the claimed invention’s footprint in the market place.” *ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 869 (Fed.Cir.2010). A damages theory must be based on “sound economic and factual predicates.” *Riles v. Shell Exploration & Prod. Co.*, 298 F.3d 1302, 1311 (Fed.Cir.2002). The entire market value rule arose and evolved to limit the permissible scope of patentees’ damages theories.

\*12 Importantly, the requirement to prove that the patented feature drives demand for the entire product may not be avoided by the use of a very small royalty rate. We recently rejected such a contention, raised again in this case by LaserDynamics, and clarified that “[t]he Supreme Court and this court’s precedents do not allow consideration of the entire market value of accused products for minor patent improvements simply by asserting a low enough royalty rate.” *Uniloc*, 632 F.3d at 1319–20 (explaining that statements in *Lucent* suggesting otherwise were taken out of context). We reaffirm that in any case involving multi-component products, patentees may not calculate damages based on sales of the entire product, as opposed to the smallest salable patent-practicing unit, without showing that the demand for the entire product is attributable to the patented feature.

Regardless of the chosen royalty rate, one way in which the error of an improperly admitted entire market value rule theory manifests itself is in the

disclosure of the revenues earned by the accused infringer associated with a complete product rather than the patented component only. In *Uniloc*, we observed that such disclosure to the jury of the overall product revenues “cannot help but skew the damages horizon for the jury, regardless of the contribution of the patented component to this revenue.” *Id.* at 1320 (noting that “the \$19 billion cat was never put back into the bag,” and that neither cross-examination nor a curative jury instruction could have offset the resulting unfair prejudice). Admission of such overall revenues, which have no demonstrated correlation to the value of the patented feature alone, only serve to make a patentee’s proffered damages amount appear modest by comparison, and to artificially inflate the jury’s damages calculation beyond that which is “adequate to compensate for the infringement.” *Id.*; see 35 U.S.C. § 284.

Turning to the facts of this case, LaserDynamics and Mr. Murtha unquestionably advanced an entire market value rule theory in the first trial. Mr. Murtha opined that a 2% running royalty applied to QCI’s total revenues from sales of laptop computers in the United States—\$2.53 billion—was an appropriate and reasonable royalty. The resulting figure presented to the jury was \$52.1 million, and the jury awarded damages in nearly that exact amount. Whether called “product value apportionment” or anything else, the fact remains that the royalty was expressly calculated as a percentage of the entire market value of a laptop computer rather than a patent-practicing ODD alone. This, by definition, is an application of the entire market value rule.

[9] LaserDynamics’ use of the entire market value rule was impermissible, however, because LaserDynamics failed to present evidence showing that the patented disc discrimination method drove demand for the laptop computers. It is not enough to merely show that the disc discrimination method is viewed as valuable, important, or even essential to the use of the laptop computer. Nor is it enough to show that a laptop computer without an ODD

practicing the disc discrimination method would be commercially unviable. Were this sufficient, a plethora of features of a laptop computer could be deemed to drive demand for the entire product. To name a few, a high resolution screen, responsive keyboard, fast wireless network receiver, and extended-life battery are all in a sense important or essential features to a laptop computer; take away one of these features and consumers are unlikely to select such a laptop computer in the marketplace. But proof that consumers would not want a laptop computer without such features is not tantamount to proof that any one of those features alone drives the market for laptop computers. Put another way, if given a choice between two otherwise equivalent laptop computers, only one of which practices optical disc discrimination, proof that consumers would choose the laptop computer having the disc discrimination functionality says nothing as to whether the presence of that functionality is what motivates consumers to buy a laptop computer in the first place. It is this latter and higher degree of proof that must exist to support an entire market value rule theory.

\*13 Our decision in *Lucent* is illustrative. There, the patent at issue involved a helpful and convenient “date picker” feature that was being used within the grand scheme of Microsoft’s Outlook email software. We held that because the patented feature was “but a tiny feature of one part of a much larger software program,” a royalty could not be properly calculated based on the value of the entire Outlook program because “there was no evidence that anybody anywhere at any time ever bought Outlook ... because it had [the patented] date picker.” *Lucent*, 580 F.3d at 1332–33 (emphasis added).

In this case, Mr. Murtha never conducted any market studies or consumer surveys to ascertain whether the demand for a laptop computer is driven by the patented technology. On the record before us, the patented method is best understood as a useful commodity-type feature that consumers expect

will be present in all laptop computers. There is no evidence that this feature alone motivates consumers to purchase a laptop computer, such that the value of the entire computer can be attributed to the patented disc discrimination method. As the district court aptly stated, “[a]t best,” LaserDynamics proved only that “almost all computers sold in the retail market include optical disc drives and that customers would be hesitant to purchase computers without an optical disc drive.” *New Trial Op.* at \*10. The district court correctly found that this evidence fails to satisfy the requirements of our precedent to support the usage of the entire market value rule when calculating reasonable royalty damages.

[10] Furthermore, Mr. Murtha’s one-third apportionment to bring his royalty rate down from 6% per ODD to 2% per laptop computer appears to have been plucked out of thin air based on vague qualitative notions of the relative importance of the ODD technology. The district court correctly concluded that “[a]lthough [LaserDynamics] argues that the many activities that may be performed on a computer using a disk drive, such as playing movies, music and games, transferring documents, backing up files, and installing software comprise a third of the value of a computer, [Mr. Murtha] offers no credible economic analysis to support that conclusion.” *LaserDynamics*, 2011 U.S. Dist. LEXIS 42590, at \*6. This complete lack of economic analysis to quantitatively support the one-third apportionment echoes the kind of arbitrariness of the “25% Rule” that we recently and emphatically rejected from damages experts, and would alone justify excluding Mr. Murtha’s opinions in the first trial. *Cf. Uniloc*, 632 F.3d at 1318 (“Gemini’s starting point of a 25 percent royalty had no relation to the facts of the case, and as such, was arbitrary, unreliable, and irrelevant. The use of such a rule fails to pass muster under *Daubert* and taints the jury’s damages calculation.”).

[11] Finally, we reject the contention that practical and economic necessity compelled LaserDy-

namics to base its royalty on the price of an entire laptop computer. *LaserDynamics* Br. at 15–18. LaserDynamics emphasizes that QCI is in the business of assembling and selling complete laptop computers, not independent ODDs, and that QCI does not track the prices, revenues, or profits associated with individual components. Likewise, LaserDynamics points out that QCI purchases ODDs for a “mask price,” which the district court described as “nominal” and essentially “an accounting fiction” that offers “little evidence of the drives’ actual value.” *LaserDynamics, Inc. v. Quanta Computer, Inc.*, No. 2:06–cv–348–TJW–CE (E.D.Tex. Jan. 21, 2011). LaserDynamics further points to Mr. Murtha’s testimony that, in his prior experience working in patent licensing at IBM, IBM would often base royalties on entire products to address such accounting difficulties. Thus, LaserDynamics concludes that the parties would have had to use the value of the entire laptop computer as the royalty base in structuring a hypothetical license agreement, as it reflects the only true market value of anything that QCI sells.

\*14 LaserDynamics overlooks that a per-unit running royalty is not the only form of a reasonable royalty that the parties might have agreed to in a hypothetical negotiation. An alternate form is evidenced by the many license agreements to the ‘981 Patent in the record for lump sum royalties that are not calculated as a percentage of *any* component or product, which immediately belies the argument that using a laptop computer as the royalty base is “necessary.” LaserDynamics’ necessity argument also fails to address the fundamental concern of the entire market value rule, since permitting LaserDynamics to use a laptop computer royalty base does not ensure that the royalty rate applied thereto does not overreach and encompass components not covered by the patent. That is, if difficulty in precisely identifying the value of the ODDs is what justifies using complete laptop computers as the royalty base, when it comes time to then apportion a royalty rate that accounts for the ODD contribution only, the exceedingly difficult and error-prone

task of discerning the ODD’s value relative to all other components in the laptop remains.

Moreover, LaserDynamics provides no reason that QCI’s own lack of internal tracking and accounting of individual components or its “mask price” purchases precludes LaserDynamics from deriving or obtaining accurate information concerning ODD values from third parties, industry practices, etc. LaserDynamics in fact did obtain and use alternative pricing information from Sony-made ODDs in the second trial. As explained below, this Sony-made ODD pricing information was not *per se* unreliable, as the jury was entitled to weigh it against QCI’s competing views of appropriate ODD pricing. Thus, we see no reason to establish a necessity-based exception to the entire market value rule for LaserDynamics in this case.

## 2. The Grant of a New Trial

[12] Having established that LaserDynamics’ theory of damages was legally unsupported, we turn to the question of whether the district court abused its discretion in granting QCI’s post-verdict motion and offering LaserDynamics a choice between a new damages trial and a remittitur of the damages verdict to \$6.2 million. While LaserDynamics is correct that QCI made no pre-verdict objection or raised any challenge whatsoever to Mr. Murtha’s testimony on an entire market value rule theory, under Fifth Circuit law this ostensible waiver by QCI does not preclude the district court from exercising its discretion to consider the issue. *See Garriott v. NCsoft Corp.*, 661 F.3d 243 (5th Cir.2011) (finding that an otherwise waived argument made in a motion for a new trial was properly addressed and preserved when the district court exercised its discretion to consider the issue in its opinion denying the motion).

[13] The Fifth Circuit has determined that “[a] district court has discretion to consider new theories raised for the first time in a post-trial brief, ... and an issue first presented to the district court in a post-trial brief is properly raised below when the district court exercises its discretion to consider the

issue.” *Quest Medical, Inc. v. Aprill*, 90 F.3d 1080, 1087 (5th Cir.1996) (citations omitted). In this case, whether or not the district court could have deemed QCI's entire market value rule arguments waived and ignored them, it did not. In light of QCI's post-trial briefing, the district court identified the error of permitting the entire market value rule theory to go to the jury, and exercised its discretion to correct the error. We find no abuse of discretion in the district court's decision to grant QCI's motion for a remittitur or a new trial under these circumstances, and we therefore affirm the district court on this point.

B. QCI Has an Implied License to Assemble Laptops Using ODDs from QSI via Philips and Sony/NEC/Optiarc

\*15 [14] QCI contends that it has an implied license to assemble laptop computers for its customers that include the accused ODDs assembled by QSI for Philips or Sony/NEC/Optiarc, pursuant to Philips's and Sony/NEC/Optiarc's “have made” rights under their patent license agreements with LaserDynamics. The QSI-assembled ODDs at issue are sold by Philips or Sony/NEC/Optiarc either directly to QCI or indirectly to QCI via QCI's customers such as Dell and HP, as directed by QCI's customers. “The existence *vel non* of an implied license is a question of law that we review *de novo*.” *Anton/Bauer, Inc. v. PAG, Ltd.*, 329 F.3d 1343, 1348 (Fed.Cir.2003).

At oral argument before this court, counsel for QCI explained that the vast majority of the allegedly infringing ODDs would be covered under QCI's implied license theory, and that QCI's arguments concerning patent exhaustion pertain to only those same ODDs. *Oral Arg.* at 0:30–1:30, available at <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2011-1440.mp3>. Because we find that QCI has an implied license, we do not reach QCI's patent exhaustion arguments.<sup>FN5</sup>

The district court relied solely on *E.I. Du Pont de Nemours & Co. v. Shell Oil Co.*, 498 A.2d 1108

(Del.1985), in finding that “the Quanta defendants do not have an implied license with respect to drives that are manufactured by QSI and eventually sold to QCI (or another Quanta entity), notwithstanding the fact that those drives are sold through Philips or Sony/NEC/Optiarc, two of [LaserDynamics'] licensees.” *Pre-Trial Op.* at \*4 (citing *Du Pont*, 498 F.3d at 1116). According to the district court, “[t]he effect of such transactions is to grant an impermissible sublicense.” *Id.* We disagree.

In *Du Pont*, E.I. Du Pont de Nemours and Company, Inc. (“Du Pont”) had entered into a license agreement with Shell Oil Company (“Shell”) permitting Shell to “make, have made, use and sell for use or resale” an insecticide product covered by Du Pont's patent. 498 A.2d at 1110. The license agreement expressly prohibited any sublicensing by Shell. *Id.* Union Carbide Agricultural Corporation, Inc. (“Union Carbide”) later sought permission from Shell to produce the patented insecticide, but Shell declined due to the prohibition on sublicensing in its licensed agreement with Du Pont. *Id.* at 1111. Instead, Shell and Union Carbide came up with the following arrangement: (1) Union Carbide would manufacture the insecticide under the “have made” provision of the license agreement between Shell and Du Pont, then (2) Shell would immediately sell back the insecticide to Union Carbide pursuant to Shell's right to “sell for use or resale.” *Id.* at 1111. The minimum amounts of insecticide that Union Carbide agreed to make and the minimum amounts that Shell agreed to sell back to Union Carbide were identical. *Id.* at 1115–16. The Supreme Court of Delaware deemed this arrangement an impermissible sublicense, rather than a permissible exercise of Shell's “have made” and “sell” rights, because “ultimately, Union Carbide was producing [the insecticide], not for Shell, but rather for itself.” *Id.* (citing *Carey v. United States*, 164 Ct.Cl. 304, 326 F.2d 975, 979 (Ct.Cl.1964) (explaining that “the test is, whether the production is by or for the use of the original licensee or for the sublicensee himself or for someone else”)).



\*16 The case before us presents a different situation from that in *Du Pont*. The ODDs provided to QCI via Philips and Sony/NEC/Optiarc were undoubtedly assembled by QSI for Philips and Sony/NEC/Optiarc, not for QSI or QCI. Even though the ODDs made by QSI were in reality shipped directly from QSI to QCI, the substance of the transactions make clear that QSI's manufacture of the ODDs was limited to the needs and requests of Philips and Sony/NEC/Optiarc. QSI had no unfettered ability to make more ODDs than were ordered from it. Nothing in the record suggests that this overall arrangement is designed to circumvent the terms of the patent licenses between LaserDynamics and Philips or Sony/NEC/Optiarc. Indeed, the shipping and manufacturing arrangements involved in this case reflect typical on-time delivery logistics of modern industrial reality.

The apposite precedent is our decision in *Cyrix Corp. v. Intel Corp.*, 77 F.3d 1381 (Fed.Cir.1996). That case involved Cyrix Corporation ("Cyrix"), a designer and seller of microprocessors, contracting with other companies to manufacture integrated circuit chips containing the Cyrix-designed microprocessors, then selling the chips back to Cyrix. *Id.* at 1383. Cyrix used manufacturers that were licensed under patents owned by Intel, including SGS-Thomson Microelectronics, Inc. ("ST"). *Id.* ST had acquired by assignment a license from Intel "to make, have made ... [and] sell" the patented chips. *Id.* ST could not itself fulfill Cyrix's orders, however, and, relying on its "have made" rights, arranged for its Italian non-subsidiary affiliate company ("ST-Italy") to manufacture the chips, which ST then sold to Cyrix. *Id.* The district court distinguished this situation from that in *Du Pont* and held that ST did not exceed its rights under the Intel license by having ST-Italy make the chips for ST to sell to Cyrix. *Id.* at 1384. Cyrix and ST were both found to not infringe Intel's patents on this basis.

We affirmed, rejecting Intel's argument that the arrangement among ST, ST-Italy, and Cyrix was a mere paper transaction—a "sham" designed to cir-

cumvent Intel's license to ST. *Id.* at 1387–88. We endorsed the district court's reasoning that, unlike in *Du Pont*, "[t]he production of the [chips] is for the use of ST, the original licensee, and not for the use of ST-Italy." *Id.* at 1387. As we explained, "[i]f the facts in this case had been that Cyrix made the product for ST under ST's 'have made' rights and then ST sold the product back to Cyrix, then they would have been analogous to those in *du Pont*, but those are not our facts." *Id.* at 1388.

[15] This case likewise presents no "sham" transaction as in *Du Pont*. QSI made the ODDs at issue here to fulfill bona fide orders from licensees Philips and Sony/NEC/Optiarc. The ODDs were then sold to QCI by the licensees. QCI did not make the ODDs for Philips or Sony/NEC/Optiarc and then immediately purchase the ODDs back so as to effectively receive a sublicense and obtain as many ODDs as it wanted. Rather, as in *Cyrix*, the manufacture of the ODDs by QSI and their eventual sale to QCI for incorporation into laptop computers, all via Philips and Sony/NEC/Optiarc, were legitimate and separate business transactions that did not expand or circumvent the patent licenses. *Id.* at 1387–88 ("The two agreements, one permitting ST-Italy to manufacture microprocessors for ST and the other providing for ST's sale of microprocessors to Cyrix, were separate business transactions."). Both the manufacture and sale of the ODDs were valid exercises of the "have made" and "sell" rights, respectively, under the license agreements in this case. We therefore conclude that QCI has an implied license to the '981 Patent with respect to the ODDs made by QSI and sold to QCI via Philips or Sony/NEC/Optiarc.

#### C. The District Court Properly Denied QCI's Motion for JMOL of Non-Infringement

\*17 [16] QCI contends that LaserDynamics' evidence at the first trial was inadequate to prove direct infringement by end users of the accused laptops of asserted claim 3 under the district court's claim constructions. As discussed above, claim 3 requires, *inter alia*, the steps of "processing an op-

tical signal reflected from encoded pits on an optical disk until total number of data layers and pit configuration standard of the optical disk is identified” and “collating the processed optical signal with an optical disk standard data which is stored in a memory.” The district court construed the phrase “encoded pits on an optical disc” to mean “depression[s] in the surface of the disc which represent[ ] data or information” *Markman Order*, at \*13. The step of “collating the processed optical signal with an optical disk standard data which is stored in a memory” was construed to mean “comparing the processed optical signal with an optical disk standard data stored on a memory.” *Id.* at \*15.

QCI does not challenge the district court's claim constructions, but only whether the trial record supports the jury's verdict of infringement. Contrary to QCI's argument, nothing in these claim constructions dictates that the arrangement of depressions be “identified” or “recognized” in any particular manner. Substantial evidence exists to show that the industry standards for various optical discs require specified arrangements of the depressions horizontally as well as specified depths of the data layers. The record amply supports that the depth of the data layer precisely correlates to the pit configuration arrangement, such that the measurement of the depth (via a counter value) is a measurement of the pit arrangement. Under the claim constructions, the jury was entitled to find infringement on this basis, and we therefore affirm the district court's denial of QCI's motion for JMOL of non-infringement.

#### D. The District Court's Jury Instruction Does Not Alone Warrant a New Trial on Liability

As discussed above, upon perceiving a change in position by QCI concerning the frequency with which QCI's ODDs were obtained via a buy/sell arrangement, the district judge instructed the jury as follows: “this constitutes a significant change in the testimony, and no documents have been produced to support that, and that you may take this instruc-

tion into account in judging the credibility of all of this witness' testimony and all other Quanta Computer's positions in this case.” A34–35. QCI contends that this instruction so unfairly prejudiced QCI that only a new trial could rectify the error.

[17][18][19][20] Since QCI did not object at trial, we review the district court's instruction for plain error. *Rodriguez v. Riddell Sports, Inc.*, 242 F.3d 567, 579 (5th Cir.2001). Plain error is “clear” or “obvious” and must affect substantial rights. *Id.* (quoting *United States v. Calverley*, 37 F.3d 160, 162–64 (5th Cir.1994)). Such error is reversible only if it “seriously affect[s] the fairness, integrity, or public reputation of judicial proceedings.” *Id.* (citations omitted). Although a district court is afforded broad discretion over the manner in which trial is conducted, and may intervene to help expand upon or clarify witness testimony and evidence, such intervention “may not come at the cost of strict impartiality.” *Id.* (quoting *United States v. Saenz*, 134 F.3d 697, 702 (5th Cir.1998)). Thus, “[i]n reviewing a claim that the trial court appeared partial, this court must determine whether the judge's behavior was so prejudicial that it denied the [defendant] a fair, as opposed to a perfect, trial.” *Id.* (citations and internal quotation marks omitted). In performing this review, we must consider the district court's actions in light of the entire trial record and consider the totality of the circumstances. *Saenz*, 134 F.3d at 702.

\*18 [21] Our review of the record shows that QCI made different representations concerning the frequency with which its ODD purchases were made via buy/sell arrangements. It is not the same to suggest that a certain method is “one way” business is done when in fact it is the predominant way—85% of the time—that business is done. Nevertheless, the district court's response to this potential inconsistency was harsh and prejudicial to QCI. The question of whether there was any inconsistency here, and the associated questions of credibility, should have been for the jury to decide. It is one thing to point out a potential inconsistency to

the jury and to raise an associated question of credibility. But it was error to instruct the jury to “take this instruction into account in judging the credibility of ... *all other Quanta Computer's positions in this case.*” A34–35 (emphasis added).

[22] Notwithstanding whether there was any inconsistency in QCI's positions, on the balance, we do not view the district court's instruction to constitute plain error that standing alone warrants a new trial. QCI was given a second trial on the issue of damages, which cured any prejudice that the district court's instruction might have caused in that regard. As for infringement liability, a portion of the case put on through entirely different witnesses, we are not convinced that the instruction, in context, was so severe as to prevent QCI from a receiving a “fair, as opposed to a perfect, trial” on infringement. *Rodriguez*, 242 F.3d at 579 (citations omitted). However, if the same testimony is introduced at a subsequent trial, the court must leave to the jury the decision whether any inconsistency exists.

#### E. The District Court Erred By Setting the Hypothetical Negotiation Date as August 31, 2006

During both trials, QCI was bound by the district court's ruling that the hypothetical negotiation date for purposes of the *Georgia-Pacific* reasonable royalty analysis was August 2006—i.e., when the lawsuit was filed. The district court reasoned that since QCI was being accused of active inducement of infringement, which requires knowledge of the patent, and since QCI was not notified of the patent until August 2006, this date was when QCI first became liable to LaserDynamics. Based in large part on this late date, LaserDynamics' expert Mr. Murtha testified that he disregarded almost all of LaserDynamics' twenty-nine licenses in evidence that were executed earlier, reasoning that the economic landscape had since changed.

[23] We have explained that “[t]he correct determination of [the hypothetical negotiation] date is essential for properly assessing damages.” *Integra Lifesciences I, Ltd. v. Merck KGaA*, 331 F.3d 860, 870 (Fed.Cir.2003). In general, the date of the hy-

pothetical negotiation is the date that the infringement began. See *Georgia-Pacific*, 318 F.Supp. at 1123. We have consistently adhered to this principle. See, e.g., *Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 435 F.3d 1356, 1363–64 (Fed.Cir.2006) (“[T]he hypothetical negotiation relates to the date of first infringement.”); *State Indus., Inc. v. Mor-Flo Indus., Inc.*, 883 F.2d 1573, 1580 (Fed.Cir.1989) (“The determination of a reasonable royalty ... [is based] on what a willing licensor and licensee would bargain for at hypothetical negotiations on the date infringement started.”).

\*19 [24][25][26] We have also been careful to distinguish the hypothetical negotiation date from other dates that trigger infringement liability. For example, the six-year limitation on recovery of past damages under 35 U.S.C. § 286 does not preclude the hypothetical negotiation date from taking place on the date infringement began, even if damages cannot be collected until some time later. See *Wang Labs., Inc. v. Toshiba Corp.*, 993 F.2d 858, 870 (Fed.Cir.1993). Similarly, the failure to mark a patented product or prove actual notice of the patent pursuant to 35 U.S.C. § 287 precludes the recovery of damages prior to the marking or notice date, but the hypothetical negotiation date may nevertheless be properly set before marking or notice occurs. *Id.* (“[T]he court confused limitation on damages due to lack of notice with determination of the time when damages first began to accrue, and it is the latter which is controlling in a hypothetical royalty determination.”). In sum, “[a] reasonable royalty determination for purposes of making a damages evaluation must relate to the time infringement occurred, and not be an after-the-fact assessment.” *Riles v. Shell Exploration & Prod. Co.*, 298 F.3d 1302, 1313 (Fed.Cir.2002) (citing *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 1079 (Fed.Cir.1983) (“The key element in setting a reasonable royalty ... is the necessity for return to the date when the infringement began.”)).

[27][28][29] Here, there is no dispute that while QCI first became liable for active inducement

of infringement in August 2006, QCI's sales of accused laptop computers into the United States began causing the underlying direct infringement by end users in 2003. From the premise that the hypothetical negotiation must focus on the "date when the infringement began," *Hanson*, 718 F.2d at 1079, we note that active inducement of infringement is, by definition, conduct that causes and encourages infringement. 35 U.S.C. § 271(b) ("Whoever actively induces infringement of a patent shall be liable as an infringer."). While active inducement can ultimately lead to direct infringement, absent direct infringement there is no compensable harm to a patentee. See *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 500, 84 S.Ct. 1526, 12 L.Ed.2d 457 (1964) ("It is true that a contributory infringer is a species of joint-tortfeasor, who is held liable because he has contributed with another to the causing of a single harm to the plaintiff."). Thus, we hold that in the context of active inducement of infringement, a hypothetical negotiation is deemed to take place on the date of the first direct infringement traceable to QCI's first instance of inducement conduct in this case, 2003.

Our holding is consistent with the purpose of the hypothetical negotiation framework, which seeks to discern the value of the patented technology to the parties in the marketplace when infringement began. In considering the fifteen *Georgia-Pacific* factors, it is presumed that the parties had full knowledge of the facts and circumstances surrounding the infringement at that time. Indeed, the basic question posed in a hypothetical negotiation is: if, on the eve of infringement, a willing licensor and licensee had entered into an agreement instead of allowing infringement of the patent to take place, what would that agreement be? This question cannot be meaningfully answered unless we also presume knowledge of the patent and of the infringement at the time the accused inducement conduct began. Were we to permit a later notice date to serve as the hypothetical negotiation date, the damages analysis would be skewed because, as a legal construct, we seek to pin down how the pro-

spective infringement might have been avoided via an out-of-court business solution. See *Wordtech Sys. v. Integrated Networks Solutions, Inc.*, 609 F.3d 1308, 1319 (Fed.Cir.2010) ("The hypothetical negotiation 'attempts to ascertain the royalty upon which the parties would have agreed had they successfully negotiated an agreement just before infringement began,' and 'necessarily involves an element of approximation and uncertainty.'" (quoting *Lucent*, 580 F.3d at 1324-25)). It also makes sense that in each case there should be only a single hypothetical negotiation date, not separate dates for separate acts of infringement, and that a direct infringer or someone who induced infringement should pay the same reasonable royalty based on a single hypothetical negotiation analysis.

\*20 Lastly, QCI points out that the accused ODDs were manufactured by QSI as early as 2001, and urges us to deem 2001 the date of first infringement for the hypothetical negotiation. However, it is QCI that is accused of active inducement here, and the record shows that QCI and QSI are related but independently operated companies, and that QCI does not own a controlling interest in QSI. Thus, there is no basis on which to further push back the hypothetical negotiation date to 2001. See *BMC Res., Inc. v. Paymentech, LP*, 498 F.3d 1373, 1380-82 (Fed.Cir.2007) (declining to impute responsibility for allegedly infringing conduct from one party to another).

Because our decision alters the time period when the analysis under *Georgia-Pacific* is to take place, we remand for a new trial on damages pursuant to the 2003 hypothetical negotiation date with respect to those accused laptop computers not encompassed by QCI's implied license as discussed above.

#### F. The District Court Erred in Admitting the BenQ Settlement Agreement

[30] Before the second trial, QCI filed a motion *in limine* seeking to exclude the 2006 LaserDynamics-BenQ settlement agreement from evidence pursuant to Federal Rule of Evidence 403. QCI's mo-

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tion emphasized the unique circumstances of the BenQ settlement, which was entered into on the eve of trial after BenQ had been repeatedly sanctioned by the district court. We conclude that the district court abused its discretion in denying QCI's motion and allowing the agreement into evidence.

Rule 403 provides for the exclusion of otherwise relevant evidence when the probative value of that evidence is substantially outweighed by the danger of unfair prejudice, confusing the issues, or misleading the jury. Along these lines, Federal Rule of Evidence 408 specifically prohibits the admission of settlement offers and negotiations offered to prove the amount of damages owed on a claim. The propriety of using prior settlement agreements to prove the amount of a reasonable royalty is questionable. *See, e.g., Rude v. Westcott*, 130 U.S. 152, 164, 9 S.Ct. 463, 32 L.Ed. 888 (1889) (“[A] payment of any sum in settlement of a claim for an alleged infringement cannot be taken as a standard to measure the value of the improvements patented, in determining the damages sustained by the owners of the patent in other cases of infringement.”); *Deere & Co. v. Int'l Harvester Co.*, 710 F.2d 1551, 1557 (Fed.Cir.1983) (holding that “as the White license was negotiated against a backdrop of continuing litigation and [defendant's] infringement of the Schreiner patent, the district court could properly discount the probative value of the White license with regard to a reasonable royalty”); *see also Hanson*, 718 F.2d at 1078–79 (observing that “license fees negotiated in the face of a threat of high litigation costs may be strongly influenced by a desire to avoid full litigation” and “should not be considered evidence of an established royalty” (quoting *Panduit Corp. v. Stahlin Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1164 n. 11 (6th Cir.1978) (Markey, J.))). The notion that license fees that are tainted by the coercive environment of patent litigation are unsuitable to prove a reasonable royalty is a logical extension of *Georgia-Pacific*, the premise of which assumes a voluntary agreement will be reached between a willing licensor and a willing licensee, with validity and in-

fringement of the patent not being disputed. *See* 318 F.Supp. at 1120.

\*21 Despite the longstanding disapproval of relying on settlement agreements to establish reasonable royalty damages, we recently permitted such reliance under certain limited circumstances. *See ResQNet*, 594 F.3d at 870–72 (explaining that a settlement license to the patents-in-suit in a running royalty form was “the most reliable license in [the] record” when compared with other licenses that did not “even mention[ ] the patents-in-suit or show[ ] any other discernable link to the claimed technology”). We permitted consideration of the settlement license on remand, but we cautioned the district court to consider the license in its proper context within the hypothetical negotiation framework to ensure that the reasonable royalty rate reflects “the economic demand for the claimed technology.” *Id.* at 872.

Unlike the license in *ResQNet*, the BenQ settlement agreement is far from being the “most reliable license in [the] record.” 594 F.3d at 872. Indeed, the BenQ settlement agreement appears to be the least reliable license by a wide margin. The BenQ settlement agreement was executed shortly before a trial—a trial in which BenQ would have been at a severe legal and procedural disadvantage given the numerous harsh sanctions imposed on it by the district court. The \$6 million lump sum license fee is six times larger than the next highest amount paid for a license to the patent-in-suit, and ostensibly reflects not the value of the claimed invention but the strong desire to avoid further litigation under the circumstances. LaserDynamics executed twenty-nine licenses for the patent-in-suit in total, the vast majority of which are not settlements of active litigation and do not involve the unique coercive circumstances of the BenQ settlement agreement, and which are therefore far more reliable indicators of what willing parties would agree to in a hypothetical negotiation. Additionally, in light of the changing technological and financial landscape in the market for ODDs, the BenQ settlement, entered in-

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to a full three years after the hypothetical negotiation date, is in many ways not relevant to the hypothetical negotiation analysis. See *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1276–77 (Fed.Cir.1999) (agreeing with the district court that, for two licenses entered into four and five years after the date of first infringement, “the age of the license agreements, in the context of the changing technology and ‘financial landscape’ at issue, made those agreements irrelevant for the hypothetical negotiation analysis). This record stands in stark contrast to that in *ResQNet*, where a lone settlement agreement stood apart from all other licenses in the record as being uniquely relevant and reliable. This case is therefore well outside the limited scope of circumstances under which we deemed the settlement agreement in *ResQNet* admissible and probative. The probative value of the BenQ settlement agreement is dubious in that it has very little relation to demonstrated economic demand for the patented technology, and its probative value is greatly outweighed by the risk of unfair prejudice, confusion of the issues, and misleading the jury. Fed.R.Evid. 403. Accordingly, we conclude that the district court abused its discretion by admitting the BenQ settlement agreement into evidence, and must exclude the agreement from the proceedings on remand.

G. The District Court Erred in Admitting Mr. Murtha's Opinions Concerning a 6% Royalty Rate Per \$41 ODD

\*22 Because we are remanding to the district court for a new trial on damages under the proper 2003 hypothetical negotiation date, we do not reach QCI's argument that the second jury verdict of an \$8.5 million lump sum lacks evidentiary support, so as to entitle QCI to a \$1.2 million judgment on damages as a matter of law. However, for the purposes of remand, we do reach QCI's *Daubert* challenge to Mr. Murtha's methodology in the second trial and find that the district court erred in allowing the jury to hear his testimony concerning a 6% royalty rate derived from the Sony-made \$41 ODDs.

1. Mr. Murtha's Use of the Sony-Made \$41 ODDs

QCI argues that Mr. Murtha's testimony in the second trial was unreliable for using a \$41 per ODD value that was calculated based on a relatively small sample of about 9,000 non-infringing drives made by Sony, not by QSI. *QCI Br.* at 69–70. We disagree.

LaserDynamics contends that the \$41 price of the Sony ODDs was more appropriate than the \$28 mask price used in the first trial with respect to QSI-made ODDs. According to LaserDynamics, since QCI does not track prices and revenues of the ODDs that it buys to incorporate into laptop computers, and does not generally sell stand alone ODDs, the \$41 Sony-made drives that QCI sells as replacement parts better reflect the market value for ODDs independent of the completed laptop computers. QCI counters that the \$41 price was unreliable because it was based on a small sample size of licensed and therefore non-infringing drives, which is irrelevant to the price of the accused drives, and because the record shows that the \$28 mask price of the accused QSI-made drives is always higher than the price to the consumer.

[31] As the district court explained, “[Mr. Murtha's] approach appears to be a reasonable attempt to value [QCI's] drives based on arms-length transactions. Although the jury may ultimately determine that [Mr. Murtha's] approach is unreasonable, the approach is not subject to a *Daubert* challenge.” *LaserDynamics*, No. 2:06-cv-348-TJW-CE (E.D.Tex. Jan. 21, 2011). We conclude that the district court did not abuse its discretion in declining to exclude Mr. Murtha's use of the \$41 Sony-made ODDs on *Daubert* grounds.

2. Mr. Murtha's 6% Royalty Rate Per ODD

QCI contends that Mr. Murtha's opinion that a reasonable royalty in this case would be 6% of each ODD sold within a laptop computer by QCI was unreliable under Federal Rule of Evidence 702 and should have been excluded. We agree.

The first of the fifteen factors in *Geor-*

*gia-Pacific* is “the royalties received by the patentee for the licensing of the patent in suit, proving or tending to prove an established royalty.” 318 F.Supp. at 1120. Actual licenses to the patented technology are highly probative as to what constitutes a reasonable royalty for those patent rights because such actual licenses most clearly reflect the economic value of the patented technology in the marketplace. See *ResQNet*, 594 F.3d at 869 (“[T]he trial court must carefully tie proof of damages to the claimed invention’s footprint in the market place.”).

\*23 When relying on licenses to prove a reasonable royalty, alleging a loose or vague comparability between different technologies or licenses does not suffice. For example, in *Lucent*, where the patentee had relied on various licenses in the same general computer field without proving a relationship to the patented technology or the accused infringing products, we insisted that the “licenses relied upon by the patentee in proving damages [be] sufficiently comparable to the hypothetical license at issue in suit,” and noted that the patentee’s failure to prove comparability “weighs strongly against the jury’s award” relying on the non-comparable licenses. 580 F.3d at 1325, 1332.

Likewise, in *ResQNet*, the patentee’s expert “used licenses with no relationship to the claimed invention to drive the royalty rate up to unjustified double-digit levels,” and which had no “other discernible link to the claimed technology.” 594 F.3d at 870. We rejected this testimony, holding that the district court “must consider licenses that are commensurate with what the defendant has appropriated. If not, a prevailing plaintiff would be free to inflate the reasonable royalty analysis with conveniently selected licenses without an economic or other link to the technology in question.” *Id.* at 872. On remand, we directed that unrelated licenses could not be relied on to increase the reasonable royalty rate above rates that are more clearly linked to the economic demand for the claimed technology. *Id.* at 872–73.

Actual licenses to the patents-in-suit are probative not only of the proper amount of a reasonable royalty, but also of the proper form of the royalty structure. In *Word-tech Systems*, the patentee relied on thirteen patent licenses that it previously granted to third parties. 609 F.3d at 1319. We rejected the patentee’s reliance on eleven of the thirteen licenses for being in the form of a running royalty (whereas the patentee had sought a lump sum payment) and for including royalty rates far lower than the jury returned. *Id.* at 1320–21. The remaining two licenses, although in the form of lump sums, were also rejected for not describing how the lump sums were calculated or the type and volume of products intended to be covered by the licenses. *Id.* at 1320. We ultimately reversed the \$250,000 verdict and remanded for a new trial on damages because “the verdict was clearly not supported by the evidence and based only on speculation or guesswork.” *Id.* at 1319–22 (citation and internal quotation marks omitted).

[32] In this case, the district court denied QCI’s *Daubert* motion and permitted Mr. Murtha to testify concerning his opinion of a 6% running royalty rate during the second trial. However, the district court insisted that LaserDynamics prove that two DVD-related patent licensing programs and the 1997 Licensing Executives Survey relied on by Mr. Murtha (to the exclusion of the many past licenses for the ’981 patent) were sufficiently comparable to the hypothetically negotiated license Mr. Murtha proffered. *LaserDynamics*, 2011 U.S. Dist. LEXIS 42590, at \*8–\*11.

\*24 The district court correctly recognized that LaserDynamics’ reliance on the two DVD-related patent licensing programs and the 1997 Licensing Executives Survey was problematic, but its ruling erroneously permitted continued reliance on this evidence where comparability between it and a hypothetical license to the ’981 Patent was absent. The DVD-related patent licensing programs did not involve the ’981 Patent, and no evidence shows that it even involves a disc discrimination method. A652.

The 1997 licensing survey was even further removed from the patented technology, since it was not even limited to any particular industry, but “was across whatever technologies were being licensed by the people who responded.” A653–54. Like the licenses we rejected in *ResQNet*, this licensing evidence relied upon by Mr. Murtha “simply [has] no place in this case.” 594 F.3d at 871. Relying on this irrelevant evidence to the exclusion of the many licenses expressly for the '981 Patent served no purpose other than to “to increase the reasonable royalty rate above rates more clearly linked to the economic demand for the claimed technology.” *Id.* at 872–73.

Aside from the BenQ settlement agreement discussed above, the licenses to the patents-in-suit were all for lumps sum amounts not exceeding \$1 million. Mr. Murtha's 6% running royalty theory cannot be reconciled with the actual licensing evidence, which is highly probative of the patented invention's economic value in the marketplace, and of the form that a hypothetical license agreement would likely have taken. Although Mr. Murtha conceded that QCI would be aware of LaserDynamics' prior licenses in the hypothetical negotiation, he dismissed the probative value of the licenses because they were entered into between 1998 and 2003, before the August 2006 hypothetical negotiation date. Mr. Murtha reasoned that, by 2006, the DVD market was larger and more established such that the value of the patented technology was better appreciated and LaserDynamics had more bargaining power to insist on a running royalty. Thus, in his view, LaserDynamics' past licenses could not reflect an appropriate royalty for QCI in 2006.

This reasoning is not supported by the record, however, which undisputedly shows that by around 2000, the DVDs and ODD markets were already experiencing tremendous growth such that by 2003 those markets were highly saturated. *LaserDynamics Br.* at 8–9 (“The landscape for the acceptance of the DVD format began to change in about 2000. In a relatively short time span, from around 2001 to

2002, video rental stores transitioned their entire stock from VHS tapes to DVDs. By 2003, nearly every home had a DVD player, and nearly every computer had a DVD drive.” (citations omitted)); *QCI Br.* at 64 (“The increase in demand for optical disc drives was fully anticipated by the industry in 2000, before many of the prior license agreements were entered into.”). Most of the early lump sum licenses that were summarily rejected by Mr. Murtha were thus entered into when the value of the patented technology was readily apparent and demand was already projected to greatly increase. The resetting of the hypothetical negotiation date to 2003, the date of first direct infringement induced by QCI's conduct, further undercuts Mr. Murtha's reasoning that the licenses to the '981 patent from the 1997 to 2001 time frame were too early to be probative. That the Licensing Executives Survey relied upon by Mr. Murtha—which has no meaningful ties to the patented technology—was created in 1997 highlights the inconsistency in Mr. Murtha's selective reasoning. Such strained reasoning is unreliable and cannot be used to ignore LaserDynamics' long history of licensing the '981 Patent.

\*25 In sum, the 6% royalty rate was untethered from the patented technology at issue and the many licenses thereto and, as such, was arbitrary and speculative. *See Uniloc*, 632 F.3d at 1318; *ResQNet*, 594 F.3d at 873. A new trial is required because the jury's verdict was based on an expert opinion that finds no support in the facts in the record. *See Wordtech*, 609 F.3d at 1319–22 (prohibiting jury verdicts to stand if they are “clearly not supported by the evidence” or “based only on speculation or guesswork” (citation omitted)); *see also Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 242, 113 S.Ct. 2578, 125 L.Ed.2d 168 (1993) (“When an expert opinion is not supported by sufficient facts to validate it in the eyes of the law, or when indisputable record facts contradict or otherwise render the opinion unreasonable, it cannot support a jury's verdict.”). On remand, LaserDynamics may not again present its 6% running royalty damages theory.



As a final matter, we do not hold that LaserDynamics' past licenses create an absolute ceiling on the amount of damages to which it may be entitled, *see* 35 U.S.C. § 284, or that its history of lump sum licenses precludes LaserDynamics from obtaining damages in the form of a running royalty. Full consideration of all the *Georgia-Pacific* factors might well justify a departure from the amount or even the form of LaserDynamics' past licensing practices, given the appropriate evidence and reasoning.

#### IV. Conclusion

For the foregoing reasons, we affirm-in-part and re-verse-in-part the district court's judgment. We remand for further proceedings regarding the damages owed by QCI pertaining to the infringing ODDs not purchased by QCI via Philips and Sony/NEC/Optiarc, and for which QCI does not have an implied license to the '981 Patent. On remand, the hypothetical negotiation date shall be set in 2003, the BenQ settlement agreement shall not be admitted into evidence or relied upon at trial, and LaserDynamics shall not again present its 6% running royalty damages theory.

**AFFIRMED-IN-PART, RE-VERSE-IN-PART, and REMANDED.**

Costs

No Costs.

FN1. While LaserDynamics contends that all ODDs performing a disc discrimination method are within the scope of the '981 Patent, Quanta Computer, Inc. ("QCI") disputes that Mr. Kamatani invented the concept of disc discrimination, alleging that "[t]here are numerous other techniques disclosed in the prior art for determining what type of disc is inserted in an optical disc drive." *QCI* Br. at 10; A648. The validity of the '981 Patent is not before us, and so we do not address whether the scope of the invention as alleged by LaserDynamics is accurate other than to consider QCI's non-infringement contentions

below.

FN2. This court has sanctioned the use of the *Georgia-Pacific* factors to frame the reasonable royalty inquiry. Those factors properly tie the reasonable royalty calculation to the facts of the hypothetical negotiation at issue." *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1317 (Fed.Cir.2011).

FN3. Citations to "A—" herein refer to pages of the Joint Appendix filed by the parties.

FN4. *Lucent* was issued two months after the jury verdict but before QCI's new trial motion was filed.

FN5. At oral argument before this court, counsel for LaserDynamics for the first time argued that the district court merely denied QCI's summary judgment motion on these issues, but did not also enter summary judgment against QCI, and that such a supposed denial of summary judgment cannot be appealed to us after a trial where QCI did not take further steps to preserve the issue. *Oral Arg.* at 11:18–13:57. QCI's briefing repeatedly characterized the district court's order as entering summary judgment against QCI, but LaserDynamics made no challenge to this characterization until oral argument. A subsequent motion refining this argument and seeking to dismiss these portions of QCI's appeal for lack of jurisdiction was filed on March 23, 2012.

LaserDynamics' belated argument hinges on an incorrect premise. The district court's order plainly went further than denying QCI's motion and made affirmative rulings on these issues as a matter of law. *See LaserDynamics*, 2009 U.S. Dist. LEXIS 115848, at \*3–5. The dis-

trict court indicated that “for purposes of trial, the court advises the parties of the following *holdings*,” e.g., “the Quanta defendants do not have an implied license with respect to drives that are manufactured by QSI and eventually sold to QCI (or another Quanta entity), notwithstanding the fact that those drives are sold through Philips or Sony/NEC/Optiarc, two of [LaserDynamics'] licensees.” *Id.* Thus, LaserDynamics' citing to *Ortiz v. Jordan*, — U.S. —, —, 131 S.Ct. 884, 889, 178 L.Ed.2d 703 (2011), for the proposition that an appellate court has no jurisdiction over a denial of summary judgment following a trial on the merits is to no avail. Fed.R.Civ.P. 56(f) permits the district court to enter summary judgment in favor of a non-moving party, and LaserDynamics points to nowhere in the record where it objected to any procedural defect in the district court's doing so. On this record, we see no genuine disputes of material fact that would preclude us from reversing the district court on the implied license issue.

C.A.Fed. (Tex.),2012.

LaserDynamics, Inc. v. Quanta Computer, Inc.

--- F.3d ----, 2012 WL 3758093 (C.A.Fed. (Tex.))

END OF DOCUMENT

# **EXHIBIT 2**

1 responsibilities you had with you were the president of  
2 WesternGeco here in America?

03:49:14PM

3 **A.** When I was managing the North American business, I  
4 was in charge of all things that happened in North  
5 America: The people, the operations. Granted we had a  
6 lot of very talented people doing most of the work. It  
7 ultimately fell in my lap if it was successful or not.

8 **Q.** What sort of work does WesternGeco do here in North  
9 America?

03:49:28PM

10 **A.** WesternGeco conducts seismic surveys, and we process  
11 seismic data and then deliver this product to our client.  
12 As we do a good bulk of the work in offshore U.S. and the  
13 Gulf of Mexico, we have our largest processing center in  
14 the world based here in Houston, where we have a lot of  
15 people and a lot of computers and we take this data.

03:49:45PM

16 **Q.** Is WesternGeco's business only here in North America?

17 **A.** No, sir. We're located all over the world.

18 **Q.** And were you personally involved in any worldwide  
19 activities?

03:49:58PM

20 **A.** Yes, I was.

21 **Q.** Can you explain a little bit about what activities  
22 worldwide you had a role in?

03:50:08PM

23 **A.** Well, in my career, I started in the field and worked  
24 on lots of boats and field operations. So I've worked in  
25 30 countries. In addition, when I got to come back to the

*LOCASCIO Continued Direct of THOMAS SCOULIOS*

08:18 1 Q Do they communicate with one another?

2 A They do.

3 Q Is that necessary?

4 A It is, yeah, it's very necessary. It wouldn't work without  
08:18 5 it.

6 Q Does WesternGeco make and did it develop its own equipment  
7 to perform this technology?

8 A We do.

9 Q Does WesternGeco sell -- I mean offer services to oil and  
08:18 10 gas companies using this technology?

11 A We do. We are what we call a vertically integrated  
12 company. We design it, we engineer it, make it, we then use it  
13 and then we offer it for services. So we have the whole chain.

14 Q If I might, if this is WesternGeco -- at the bottom of this  
08:19 15 vertical integration, what part is that?

16 A That is the design engineering.

17 Q And then as you go up the chain, what are the next steps?

18 A Well, you design it. You engineer it. And then you use it  
19 in a survey.

08:19 20 Q So at the top of the chain is performing a service?

21 A Correct.

22 **THE COURT:** Is that typical of the industry, that you  
23 would -- that a geophysical company would be vertically  
24 integrated, or is the model more like the ION model?

08:19 25 **THE WITNESS:** There is both. There is examples of

Mayra Malone, CSR, RMR, CRR  
mayramalone@comcast.net

*LOCASCIO Continued Direct of THOMAS SCOULIOS*

08:19 1 both.

2 BY MR. LoCASCIO:

3 Q At the top, where you perform the surveys, who are you  
4 performing them for?

08:20 5 A We are performing them for oil companies.

6 Q And they are the customers, sir?

7 A Yes.

8 Q I take it they pay for these services?

9 A They do.

08:20 10 Q In the ION Fugro model, do you understand who performs  
11 services for customers?

12 A Fugro does -- sorry, Fugro-Geoteam.

13 Q Are they at the top of the chain?

14 A They would be.

08:20 15 Q What part of it do they do?

16 A They perform the acquisition surveys. They process the  
17 data to some extent.

18 Q Are they paid by oil companies?

19 A They are.

08:21 20 Q Unlike WesternGeco, who designs the equipment and sells it  
21 to Fugro?

22 A In this case, it is ION.

23 Q Where are they in this chain?

24 A They are in the design stage at the bottom. They make the  
08:21 25 equipment, design it.

Mayra Malone, CSR, RMR, CRR  
mayramalone@comcast.net

*LOCASCIO Continued Direct of THOMAS SCOULIOS*

08:21 1 Q Does WesternGeco compete with Fugro?

2 A We do.

3 Q Does WesternGeco compete with ION?

4 A We compete with Fugro as a function of them having ION  
08:21 5 equipment.

6 Q And do you believe that you would be competing with Fugro  
7 without equipment from someone, in this case, ION?

8 A No. Fugro couldn't do what they are doing if they didn't  
9 have equipment.

08:21 10 Q There was a comment yesterday about WesternGeco buying  
11 things from ION. Do you buy the birds that laterally steer  
12 from ION?

13 A We have been buying the orange older -- the 5011 cable  
14 level or device, I believe is what we used to call it. But we  
08:22 15 buy the Compass Bird.

16 Q Do you buy anything that laterally steers from ION?

17 A We do not.

18 Q Do you buy any software or any computers from ION that  
19 laterally steer your birds?

08:22 20 A We do not.

21 Q You mentioned you buy a Compass Bird, the orange one?

22 A Yes.

23 Q What do you mean?

24 A It is a -- we buy -- they have compasses inside them. They  
08:22 25 hang off the bottom of the cable, and they have the wings for

Mayra Malone, CSR, RMR, CRR  
mayramalone@comcast.net

*Cross-Scoulios/By Mr. Thompson*

1 Q. But that doesn't that rarely happens; correct, that  
2 you find out that information?

3 A. Sometimes they tell you directly, sometimes the bids  
4 are open and public, and you can analyze them yourself,  
5 sometimes it's individuals, sometimes it's rumor and  
6 hearsay inside the oil company, and you get different  
7 versions back.

8 You try to understand why so you can  
9 improve and do better.

10 Q. And you look at all those sources of information to  
11 determine why competitors want a job to determine how to  
12 bid in the future?

13 A. We attempt to yes, sir.

14 Q. And all of those reasons and rumor and innuendo and  
15 anything else you would hear would go into the CRM  
16 database to help you try and track your competitors?

17 A. Not all of them, no.

18 Q. Most of them?

19 A. It's got a pretty -- it's relative -- depending on  
20 different groups, it has in some places very low  
21 utilization, in some places higher. It's very individual.  
22 Some of us aren't very good at putting stuff in the CRM.

23 Q. How about when you were regional manager for North  
24 America, was your group rather pretty good about putting  
25 stuff in CRM?

*Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com*



*Cross-Scoulios/By Mr. Thompson*

1 **A.** We weren't the best. So we were -- we would have  
2 used it -- we should have used it a lot more than we did.

3 **Q.** So it seems -- how many different regions are within  
4 WG for the marine seismic area?

12:22:46 5 **A.** Well, marine -- every region has marine in it. So  
6 you have North America, South America. You had Asia. At  
7 the time Asia was -- I don't know if it had been split  
8 into Asia and India or if it was one. You had MEA, which  
9 was Middle East Africa, and then you had Europe and West  
10 Africa.

12:23:05 11 **Q.** And you've already indicated that -- and you had  
12 experience in the North America region; correct?

13 **A.** I did.

14 **Q.** And went on your world tour earlier today. You've  
12:23:12 15 had experience in other regions; correct?

16 **A.** Yes, I've worked, yes, in many countries.

17 **Q.** Which of the five regions, if you could rank them, if  
18 you know, would be the best about keeping track and  
19 keeping up with the CRM database?

12:23:26 20 **A.** It's individuals. Some people are avid users of it.  
21 It's a very difficult database to use. We try to use it.  
22 We encourage people to use it. But, CRM happens to be  
23 something that we should be a lot better at.

12:23:43 24 **Q.** So even within WesternGeco, you yourself, and the  
25 management position, realize the CRM has its limitations?

*Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com*

*Cross-Scoulios/By Mr. Thompson*

1 **A.** If the users don't input everything in, you're not  
2 going to get everything back out.

3 **Q.** And it's only as good as the information that the  
4 people input?

12:23:53

5 **A.** That's correct.

6 **Q.** And much of the information they are including is  
7 based off rumor and innuendo, and as well as press  
8 releases and other sources of information?

12:24:04

9 **A.** Some of the information; correct. But most of the  
10 information at CRM with regards to win or loss job is  
11 simply they change the color if we want it. And if it's  
12 lost, they'll try to indicate the reason why through  
13 discussion.

12:24:21

14 **Q.** Now, going back, you said your understanding was the  
15 reason Furgo was chosen over WG for the Statoil and the  
16 Chukchi Sea was price?

17 **A.** That's correct.

12:24:36

18 **Q.** You had not had any other discussions about any of  
19 the exclusions or exceptions that you-all submitted a  
20 contract as to whether that had any effect?

21 **A.** I did not. I know that we worked for Statoil before  
22 and after, and we continue to work for Statoil today.

12:24:52

23 **Q.** Do you know, at least with regard to that job, do you  
24 know if Statoil, do they have a preference, at least  
25 between your alternative bids, between the Q vessel and

*Johnny C. Sanchez, RMR, CRR - jcsourtreporter@aol.com*

*Cross-Bittleston/By Mr. Burgert*

1 making solid streamers and things like that. So we looked  
2 at the number of different areas. This was one of them.

03:08:58

3 **Q.** And I think you told Mr. Gilman that others before  
4 you had looked at ways to move streamers laterally; is  
5 that right?

03:09:15

6 **A.** Of course, because the streamers are moved laterally  
7 by monowings, They existed before. In fact, the first  
8 time people started to move cables sideways like this was  
9 the second world war for minesweepers. So you know, the  
10 history of devices that pull cables sideways is a very  
11 long history.

12 **Q.** So any statement that you invented lateral steering  
13 is just wrong?

03:09:28

14 **A.** Yes. I am not the inventor of laterally steering.  
15 I'm an inventor of a global control system.

16 **Q.** And the global control system is software in a  
17 computer, isn't it?

03:09:44

18 **A.** It's rather more than that. There's many components  
19 of what I call an overall control system. It's the  
20 methods by which you're going to do it. It's the  
21 measurements you're going to need to do it and the other  
22 devices. But it depends on your terminology, I think, and  
23 how you -- what you encompass in that statement.

03:09:59

24 **Q.** All right. Well, one of the -- and the reason I  
25 asked that is because, in response to one of Mr. Gilman's

*Johnny C. Sanchez, RMR, CRR - jcsourtreporter@aol.com*

1 times you were told that?

2 **A.** Yes.

3 **Q.** I want to talk to you for a few minutes, sir, about  
4 whether there's some other equipment you could use to do  
5 this work, other than ION's. Okay?

01:54:28PM

6 **A.** Okay.

7 **Q.** Today, does Fugro use -- withdrawn. Today Fugro  
8 doesn't use lateral steering recognized from any  
9 manufacturer other than ION; right?

01:54:44PM

10 **A.** That's correct.

11 **Q.** And the jury's heard a couple of different ways one  
12 could try to steer streamers, move right through that.  
13 You're not wear of anybody in the industry using ropes to  
14 perform lateral steering, are you?

01:54:59PM

15 **A.** I'm not aware of that.

16 **Q.** You're not aware of anybody in the industry using  
17 steerable tail buoys, are you?

18 **A.** I'm not aware of that.

19 **Q.** There's something called the E bird; right?

01:55:12PM

20 **A.** Correct.

21 **Q.** Is that from a company called Comberg?

22 **A.** That's also correct.

23 **Q.** And the E bird was not compatible with your  
24 streamers; correct?

01:55:25PM

25 **A.** That's correct.

1 Q. And so, at the time you decided to go with ION's  
2 equipment or even in the years that followed, the E bird  
3 was not an option or an alternative to you because it was  
4 not compatible with your streamers; correct?

01:55:40PM

5 A. Correct.

6 Q. And as of 2012, five years after you started using  
7 DigiFIN, the E bird was still not compatible with your  
8 system; correct?

01:55:57PM

9 A. I believe they have one prototype unit, which is  
10 supposed to be compatible with our sections now.

11 Q. Six, five and a half years later, after you started  
12 using ION's equipment?

13 A. Yeah.

01:56:09PM

14 Q. And even today, it's not commercially available, it's  
15 just a prototype?

16 A. No, but remember the E bird system hasn't been in the  
17 market for so long. It's a fairly new product.

18 Q. So back in 2008, when you started buying and using  
19 ION's equipment on your fleet the E bird wasn't even  
20 available at the time?

01:56:24PM

21 A. That's correct.

22 Q. And it's only more recently become available because  
23 it's never been acceptable to you because it doesn't work  
24 on your streamers?

01:56:33PM

25 A. That's correct.

1 Q. There's a company called Nautilus. Do you know who  
2 they are?

3 A. The company is called Sercel.

4 Q. Thank you. Sercel makes your streamers?

01:56:43PM 5 A. That's correct.

6 Q. They have something called the Nautilus; right?

7 A. That's correct.

8 Q. And that also came out after ION launched DigiFIN;  
9 true?

01:56:54PM 10 A. Yes.

11 Q. And there was actually a point unlike E bird where  
12 you did a test on the Nautilus; right?

13 A. That's correct.

14 Q. And you decided to stop pursuing Nautilus because it  
01:57:08PM 15 didn't work very well on your tests; correct?

16 A. We never really got to test it because we ran into  
17 some fishing nets and basically that -- that ruined the  
18 test for us.

19 Q. Sir, you did evaluate Nautilus as a potential device;  
01:57:20PM 20 correct?

21 A. Yes, that's correct.

22 Q. And you consider that evaluation to be a complete  
23 failure; correct?

24 A. We never really got to evaluate it. It was some  
01:57:38PM 25 flaws with the design that we identified straight away.

1 It sort of deferred us from continuing with that device  
2 until it was properly fixed.

3 Q. You found flaws in the Nautilus device that rendered  
4 it unacceptable in your view?

01:57:54PM 5 A. That's correct.

6 Q. And as far as you know today you still don't know --  
7 withdrawn. You still don't today use it; right?

8 A. We don't use it today, but we believe those issues  
9 has been rectified.

01:58:05PM 10 Q. But you haven't actually done another test since the  
11 one that was a failure?

12 A. That's correct.

13 Q. There were in 2008, no alternatives for you, other  
14 than ION to offer lateral steering; correct?

01:58:25PM 15 A. Nautilus was available in 2008. So it was available  
16 although it was, it wasn't so -- it was sort of preferred  
17 product.

18 Q. It wasn't preferred because of this failure you had  
19 trying it? Is that why you're saying that?

01:58:50PM 20 A. That's correct.

21 Q. It tore up the streamers; right?

22 A. That was the end result. But do you blame that on  
23 the Nautilus unit or the fishnets, yeah?

24 Q. At the time you blamed it on Nautilus, correct?

01:59:03PM 25 A. Yeah. We thought that the Nautilus with the fishing

*Cross-By/By Mr. Torgerson*

1 that fair?

2 **A.** Yes.

3 **Q.** Now, there was also a discussion -- you can take that  
4 down, Mr. Carlock. If we could switch to the ELMO,  
08:02:00 5 please.

6 There was a discussion yesterday with  
7 Mr. LoCascio about different lateral steering control  
8 devices. A few months after the initial tested on the  
9 Atlantic of DigiFIN Fugro also go test of DigiFin, Furgo  
08:02:15 10 also tested the Nautilus device that's manufactured by  
11 Sercel; right?

12 **A.** A few months.

13 **Q.** What was the timeframe? You tell me, what was the  
14 timeframe?

08:02:25 15 **A.** I think it tested DigiFIN in December 2007, and that  
16 that it tested Nautilus in January 2009, I think.

17 **Q.** A year later, perhaps?

18 **A.** I think so, maybe, yeah.

19 **Q.** Okay. And in connection with that -- that was aboard  
08:02:39 20 the NATUNA vessel?

21 **A.** That's correct.

22 **Q.** And that Nautilus test didn't work because of the  
23 issue with the fishing gear; correct?

24 **A.** We basically never got to the point where we could  
08:02:50 25 test Nautilus because we caught the fishing gear while we

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*Cross-By/By Mr. Torgerson*

1 were deploying the streamers, and so we couldn't really  
2 test the lateral benefits of it or that sort of technical  
3 ability. So we just saw had an wanted effect that the way  
4 that it caught the fishing nets.

08:03:09

5 **Q.** Mr. By, today, who are the four largest players in  
6 the towed marine seismic market by way of contractors?

7 **A.** That would be CCGV, Veritas, PGS, WesternGeco, and  
8 then you have Fugro or Palorkus that's number 4. That's a  
9 close race.

08:03:37

10 **Q.** Since you're here let's talk about Fugro. What kind  
11 of device does CCGV, which was resulted from the merger of  
12 CGG and Veritas, what type of lateral steering device do  
13 they utilize?

08:03:55

14 **A.** I don't know with certainty that. I know they have  
15 Nautilus on board but I also believe they have DigiFINs.

16 **Q.** What about PGS?

17 **A.** I believe again it's not absolute -- I don't have any  
18 evidence for it, but it's from my understanding that they  
19 have used the DigiFIN and that they are also now using  
20 this eBird system.

08:04:17

21 **Q.** And eBird is manufactured by yet another company  
22 called Kongsberg?

23 **A.** That's correct.

08:04:26

24 **Q.** And WesternGeco we know was has its Q-FIN device;  
25 right?

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*Cross-By/By Mr. Torgerson*

1 **A.** Yes, but I know very little about WesternGeco.

2 **Q.** And Fugro uses DigiFIN, clearly?

3 **A.** That's correct.

08:04:47

4 **Q.** So as we sit here today, there are one, two, three,  
5 four devices that can accomplish lateral steering in the  
6 towed marine seismic market. Would you agree with that?

7 **A.** Yes.

08:05:01

8 **Q.** And you would agree with me that CGG Veritas -- well,  
9 let me back up. Nautilus is manufactured by a company  
10 called Sercel?

11 **A.** That's correct.

12 **Q.** And Sercel is wholly owned by CGG Veritas?

13 **A.** I believe so, yes.

08:05:10

14 **Q.** All right. So you would agree with me, that  
15 WesternGeco's largest competition in the market, in the  
16 form of CGGV and PGS is utilizing at least two other  
17 devices than DigiFIN to compete against WesternGeco in the  
18 lateral steering market; fair?

19 **A.** That's fair.

08:05:24

20 **Q.** So it appears that CGG Veritas and PGS have accepted  
21 an alternative product that can accomplish lateral  
22 steering; fair?

23 **A.** Yes.

08:05:45

24 **Q.** All right. Can we switch back, if we could, and I'll  
25 mark this as ION Demonstrative 3. I think that's right.

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*Cross-By/By Mr. Torgerson*

1 device and a DigiBird device; is that fair?

2 **A.** That's fair.

3 **Q.** Okay. Briefly we had also talked -- we just talked  
4 about Sercel that makes this Nautilus device. They also  
5 make solid streamers; correct?

08:07:29

6 **A.** That's correct.

7 **Q.** And those streamers are called Sentinel?

8 **A.** That's correct.

9 **Q.** And are those the streamers that Fugro uses?

08:07:38

10 **A.** Yes.

11 **Q.** So when we talk about assembling these different  
12 pieces parts, you use ORCA; right?

13 **A.** Correct.

14 **Q.** And ORCA is manufactured out of Edinburgh, Scotland  
15 by Concept Systems?

08:07:52

16 **A.** Yes.

17 **Q.** And the lateral controller and the DigiFIN are also  
18 manufactured by ION or provided by ION?

19 **A.** That's correct.

08:08:01

20 **Q.** And the streamers that you use, those are provided  
21 throughout your entire fleet by Sercel; right?

22 **MR. LOCASCIO:** Your Honor, given the alignment  
23 of the parties, ION and Fugro and they have the same  
24 interest, we object to leading the witness.

08:08:18

25 **MR. TORGERSON:** It's not my witness. I'm also

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*Direct-Walker/By Mr. LoCascio*

1 technology to others?

2 **A.** We don't.

3 **Q.** Why not?

4 **A.** Because we use our technology to provide services,

08:23:17 5 and we're constantly trying to make better services and  
6 improve the industry overall. And if we -- we want to do  
7 what we do, and we encourage others to do what they want  
8 to do and innovate and do different things.

9 **Q.** And is that part of your culture of inventing is

08:23:38 10 investing in your technology and then using it with your  
11 customers?

12 **A.** Exactly, yes.

13 **Q.** Is it valuable to have the benefits of that

14 investment so you can differentiate yourself in the  
08:23:48 15 marketplace?

16 **A.** Yeah. That's what we want to do is make money from  
17 providing better services or more valuable services to our  
18 customers so they've got a better quality of product, and  
19 they -- because, you know, these surveys, they may only  
08:24:05 20 cost millions, but the companies are making saving through  
21 better optimized billions. In Jack with BP, I remember  
22 once, said, you know, this 3D seismic will save us  
23 billions, because that's -- that's very highly geared.

24 **Q.** Prior to the launch of Q-Marine, how did companies

08:24:28 25 differentiate themselves? Was it just sort of a price

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*Direct-Walker/By Mr. LoCascio*

1 Q. With more than a hundred tenders a year, how do you  
2 keep track of them all?

3 A. Several hundred, I said.

4 We put them into a database called CRM.

08:39:32 5 Q. What does C --

6 A. Customer relationship -- sorry.

7 Q. What does CRM stand for?

8 A. Customer relationship management. It's not specific  
9 to us. I mean, it's used in a lot of industries. It's an  
10 approach. And Schlumberger uses it for all -- we use it  
11 for all Schlumberger bids.

08:39:44

12 Q. How did CRM or customer relation management get its  
13 start at WesternGeco?

08:39:58

14 A. Well, actually, I started it a good long time ago  
15 because what you have to have -- we started with a vessel  
16 schedule, where you live or die by the vessel schedule.  
17 And that vessel schedule is our vessels, of course, but  
18 it's also the competitor vessels.

08:40:13

19 When you lose a bid, which of course, we  
20 do, then it goes to one of your competitors, and we want  
21 to know where or when. So having a schedule put in helps.

08:40:30

22 So I did that, and then I linked the  
23 module that's we used to cost the survey, because it's a  
24 lot of parameters. It's a quite complicated thing, and  
25 you pull up statistical databases and all the rest of it.

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*Direct-Walker/By Mr. LoCascio*

1 the competitor wins, we don't know which one they've  
2 selected because the customer hasn't chosen. But what we  
3 do know is when we look, when we win it, we do our best to  
4 find out what the price is and the customers will usually  
08:45:01 5 tell us, they're quite pleased to tell us if we lost  
6 something on price, and we know what the scope was, so we  
7 know the price and the scope and that gives us an idea of  
8 what people are charging per vessel month and we're  
9 watching that very closely.

08:45:17 10 **Q.** Where else do you get information that finds its way  
11 into the CRM -- about what your competitors are doing?

12 **A.** So we get it directly from the customer. We may get  
13 it from public bidder, so it's a small, like 10 percent of  
14 the country -- of the world, where the bids are opened in  
08:45:36 15 public, even when it's a western oil company ExxonMobile  
16 or Chevron, they're all public, and they're all published  
17 so that you know the price and usually the duration for  
18 the specification of work.

19 So that is very clear and then we'll have  
08:45:54 20 a clear idea and we'll put that in that data.

21 **Q.** Is there a standard policy about entering data in a  
22 timely fashion?

23 **A.** Oh, yeah. I want it to be put in very clearly in a  
24 timely fashion and example for marine Sam Gracon who is my  
08:46:12 25 marine sales manager, which she just changed roles, she

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*Direct-Walker/By Mr. LoCascio*

1 will be phoning people up and nagging them if there wasn't  
2 something, and she was -- or she is very obsessed about it  
3 being accurate. So if we're not certain if we don't think  
4 it's reliable, it doesn't go in there.

08:46:27

5 So I wouldn't -- to be honest I wouldn't  
6 say it's complete, its incomplete, but I trust what's in  
7 there and that is what I'm -- I need to use in my  
8 business.

08:46:39

9 Q. Have you ever seen a print out of some piece of the  
10 CRM?

11 A. I did see a -- yeah, I think you had that in the  
12 office, yeah. That's not what I use.

13 Q. You don't carry the -- this is Plaintiff's 547, you  
14 don't haul this around with you like this?

08:46:54

15 A. No, I don't even haul it around. I think that's an  
16 Excel. I don't haul it around in Excel either.

17 THE COURT: Could you tell us what you do?

18 THE WITNESS: Yes, absolutely.

19 THE COURT: You put that on the screen?

08:47:03

20 THE WITNESS: I look at it on the screen. It's  
21 a Web application, so I can log in from anywhere, it's  
22 obviously secure, log in from anywhere I am in the world,  
23 get on to the application, then I can search by  
24 opportunity.

08:47:17

25 And then we've got something called

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*Direct-Walker/By Mr. LoCascio*

1 Q. You can actually select what level of the employees  
2 you want to include?

3 A. Yeah. One-by-one, yes.

09:53:43

4 Q. And what's the result of the data? If we could go to  
5 the next slide, Dave.

6 For this question about value and steerable  
7 streamers, what were the results for your approximate  
8 market?

09:53:54

9 A. So you can see for our approximate market, this is --  
10 the question was asked was: Do you see -- how do you  
11 value where 10 is actually the, you know, gang busters and  
12 1 is I don't care. And you can see this is the mean of  
13 the medians, so two average responses. And we can see  
14 it's around eight for those six categories of value in  
15 steerable streamers.

09:54:21

16 Deployment is a little bit lower, which we  
17 would expect, because we charge a lump -- a fixed sum for  
18 deployment. So the customer -- it takes us a day or three  
19 days. The customer isn't paying. He doesn't really care.  
20 He wants it done quickly.

09:54:37

21 Q. Okay. Thank you, Mr. Walker.

22 I want to talk to you a little bit about the  
23 damage to WesternGeco from ION introducing DigiFIN into the  
24 marketplace and its use by Fugro.

09:54:53

25 First of all, who are WesternGeco's main

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*Direct-Walker/By Mr. LoCascio*

1 competitors?

2 **A.** Our main competitors are Fugro CGV and PGS.

3 **Q.** And what companies are currently competing against  
4 WesternGeco Q-FIN lateral steering, using ION's DigiFIN  
09:55:10 5 equipment?

6 **A.** Fugro had it on I think all their fleet, and CVG and  
7 PGS have some.

8 **Q.** What was the lateral steering market like before  
9 DigiFIN entered the market?

09:55:23 10 **A.** So lateral steering market was stable, it was  
11 constantly growing. We obviously had a hundred percent of  
12 it, but it was growing year on year.

13 **Q.** And what happened after DigiFIN entered the market?

14 **A.** Well, then we started losing jobs and the premium  
09:55:47 15 which I discussed that we could get in the marketplace,  
16 evaporated very quickly.

17 **Q.** Was there a decrease in your market share as a result  
18 of ION's introduction to this technology?

19 **A.** Yes. We started losing jobs with lateral steering.

09:56:04 20 **Q.** There are -- I think 200 or so jobs, 25 of those are  
21 jobs where WesternGeco is seeking its lost profits for the  
22 infringement. Did WesternGeco bid on all those jobs?

23 **A.** Yes, we did.

24 **Q.** Did you have the capability of actually doing the  
09:56:23 25 work on all those jobs if you had gotten them?

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*Direct-Walker/By Mr. LoCascio*

1 **A.** Yes, we did.

2 **Q.** How so?

09:56:42

3 **A.** Well, after DigiFIN was introduced, we -- and we  
4 started losing market share, as you've said, then we -- we  
5 had in 2009, we had some empty slots on the vessel  
6 schedule. So that's the vessel is there willing to do  
7 work, but we couldn't find a project for it. So they were  
8 tied up at the dock cite, not for a long time, but that is  
9 time that we would have used in doing these projects.

09:57:00

10 **Q.** Have you looked specifically at those 25 jobs to see  
11 if there was a ship that would be able to have done that  
12 work, if it wasn't for the infringement?

13 **A.** There was in some cases. We couldn't have done all  
14 of them, we could have done some of them, yes.

09:57:13

15 **Q.** You couldn't have done all the hundreds, but you  
16 could have done the 25?

17 **A.** Just with the slots we might have done, but we had  
18 extra capacity we could have used anyway.

09:57:29

19 **Q.** So you had some you could have the boats you had.  
20 What's the excess capacity?

21 **A.** We had -- we built six vessels. And the last two of  
22 those we held back. We held back for -- one for 13 months  
23 and the other one for 15 months. So we could have brought  
24 them out earlier, and we didn't because of the loss of  
25 market share. So we didn't have the -- we didn't have the

09:57:48

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*Direct-Walker/By Mr. LoCascio*

1 work for them to do.

2 **Q.** Which ships are those?

3 **A.** That was the TAZMAN and the COOK.

4 **Q.** Were there any other ships you could have used to do  
5 this work?

09:57:59

6 **A.** Yes. We had three 8 streamer Q-marine vessels, so 8  
7 for Fugro. I talked about earlier, Fugro started that  
8 with an 8 streamer, a lateral steering boat. So it's  
9 perfectly saleable in the market today.

09:58:17

10 We had three of those vessels, the TOPAZ,  
11 THE SEARCHER and the PRIDE, that were equipped with  
12 Q-Marine, and we actually derigged them. So we could have  
13 just kept those operating. We turned them into source  
14 boats.

09:58:32

15 **Q.** A source boat is the same type of boat, but it only  
16 has the airgun?

17 **A.** It only has the airgun, but when we're doing  
18 undershoot projects or we're doing azimuth, then we need  
19 source boat for some of that time as well.

09:58:42

20 **Q.** When you're in a situation where you have a job and  
21 you need to be there, but you don't have a ship, are there  
22 other ways you can solve that?

23 **A.** Well, we could if we wanted to charter a vessel and  
24 put our equipment on it. And very often the customer may  
25 be -- the timing may be critical, it may not be critical.

09:58:57

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*Cross-Walker/By Mr. Torgerson*

1 **A.** You mean what is the driver?

2 **Q.** Let me restate it.

3 **A.** Yes.

4 **Q.** That was a long question. I want to be compact for  
5 you on this.

10:36:05

6 At no time has WesternGeco attempted to  
7 allocate any portion of revenue attributable to a single  
8 aspect of Q-Marine; for example, lateral steering?

9 **A.** We only -- we have a kilometer rate that includes  
10 whatever is there, yes.

10:36:19

11 **Q.** So there's the premium -- likewise, the premium price  
12 that you charge to your customers, say, for example, X  
13 times over conventional, that would be as a result of the  
14 combined suite of all the different technical aspects of  
15 Q-Marine, not just lateral steering?

10:36:37

16 **A.** We can separate out the CMS, because that's on the  
17 whole fleet, and we've never succeeded in sort of selling  
18 that as an add-on to the conventional.

19 **Q.** Remind us of CMS again.

20 **A.** That's the source -- I'm sorry. That's the source  
21 component. So that's -- in marketing terms, it's added to  
22 Q-Marine, but it isn't really linked to it.

10:36:50

23 **Q.** Okay.

24 **A.** It was preexisting. So that we know we haven't been  
25 able to sell despite trying.

10:37:04

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*Cross-Walker/By Mr. Torgerson*

1 We know that, of the remaining three  
2 elements, lateral steering is the one that's asked for.

3 Q. And yet even though it's the one that's asked for,  
4 there is no attempt within WesternGeco to break out and  
10:37:20 5 say, This particular survey was won because of lateral  
6 steering?

7 A. If it says lateral steering on the tender and we won  
8 the project, then that's our assumption.

9 Q. Would you also agree, then, if you lost a survey to  
10:37:35 10 another company, like Fugro, we've heard several examples  
11 today with Mr. LoCascio, that somewhere within  
12 WesternGeco's records, there would be an indication that  
13 you lost a survey because of lateral steering?

14 A. We would know lateral steering -- lateral steering  
10:37:52 15 was a requirement and we lost it, then we would know that  
16 would be -- that would mean that another company that won  
17 it had lateral steering and they had got through that  
18 technical barrier I was talking, and then it's into that  
19 triangle.

10:38:10 20 Q. Well, we'll get into the specifics of the CRM  
21 database in a moment, Mr. Walker.

22 But would you expect if, in connection  
23 with a monitoring of a competitive tender situation, that  
24 if WesternGeco lost a survey bid because of a competitor  
10:38:24 25 using lateral steering, you would expect someone to make

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*Cross-Walker/By Mr. Torgerson*

1 an entry in that database that says, We lost because of  
2 lateral steering?

10:38:43

3 **A.** It would depend on -- the CRM is used by all of  
4 Schlumberger. So we've got thousands of technologies, so  
5 we couldn't have a tick box that would tell us that. It  
6 would be either in the comments or it would be in the  
7 system, maybe in one of the e-mails.

10:38:58

8 **Q.** Would you expect to see any kind of record that  
9 specifically says, Mr. Walker, WesternGeco lost this  
10 Tellow survey, for example, to Fugro because of lateral  
11 steering? Would you expect to see that some sort of  
12 record at WesternGeco?

10:39:16

13 **A.** Not necessarily. Because we have -- if there's more  
14 than one -- if lateral steering is a specification and  
15 there's more than one that are qualified that meet that  
16 specification, then the reason, once you may be one of the  
17 others on the triangle; but without the specification --  
18 oh, my apologies I hit the mike -- without the -- meeting  
19 the specification, we'd be the only people.

10:39:36

20 **Q.** Well, let's look.

21 MR. TORGERSON: If we could go back to the  
22 EIMO, please.

23 BY MR. TORGERSON:

10:39:52

24 **Q.** Under Demonstrative 6 -- do you still have your  
25 demonstratives up there with you, sir?

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*Cross-Walker/By Mr. Torgerson*

1 information in or we see it from some public source.

2 So if, for example, a customer says  
3 something to us, then we would regard that as useful  
4 information. We wouldn't regard that as hearsay.

10:45:05 5 Q. So you know, Mr. Scoulios here in the courtroom?

6 A. Yeah.

7 Q. And he used to be -- work in North America region for  
8 sales and was responsible for tendering?

9 A. Yeah.

10:45:17 10 Q. And we know that he actually helped put together  
11 WesternGeco's bid for the Chukchi survey for -- against  
12 Fugro for Statoil up off the coast of Alaska?

13 A. Yes. I think so.

14 Q. And if he stated that the CRM database was founded at  
10:45:35 15 least in part on rumor and hearsay, you would think that  
16 would not be an accurate description?

17 A. I would -- I'm still asking what exactly rumor and  
18 hearsay means. We try to qualify everything that goes  
19 into it. Now, there may be something that is just a

10:45:53 20 customer's opinion, and if that counts as rumor, then it  
21 would be rumor.

22 Q. Fair. Would you agree that some groups -- agree or  
23 disagree is the same, would you agree or disagree that  
24 different sales groups have varying utilizations of  
10:46:10 25 actually putting information into the CRM database?

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*Cross-Walker/By Mr. Torgerson*

1 adopting it straight off and Shell adopting it for the  
2 survey, and in the Far East Chevron adopted it and Total  
3 adopted it, but not everyone adopted it in the first two  
4 years.

10:59:53

5 Q. At the outset, Mr. Walker, you would agree with me  
6 that some companies made it clear to you or to  
7 WesternGeco, that they would never pay more for this  
8 single sensor technology?

11:00:06

9 A. They'd never pay more for Q-Marine. That was the  
10 statement made by a couple in the early days, yes.

11 Q. Who was the couple in the early days?

12 A. Chevron and ExxonMobil were.

11:00:23

13 Q. Now, there's a word, I don't know if it's been used  
14 today, but it's been used in the past in this trial about  
15 commoditization?

16 A. Yes.

17 Q. What does commoditization mean to you, sir?

11:00:39

18 A. So, commoditization means the flattening of the  
19 equalization of technical operational consideration, so  
20 that really all that's left is people fighting on price,  
21 so spreading uniformity of specification.

22 Q. Some of these oil companies attempted to commoditize  
23 Q-Marine by pushing down the price; right?

11:01:00

24 A. Well, most oil companies will push down on price,  
25 they're big projects, yeah.

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*Cross-Walker/By Mr. Torgerson*

1 you recall that testimony?

2 **A.** I do.

3 **Q.** If you look at the ION Exhibit 178, this is an  
4 e-mail, if you'd look at the top portion, Mr. Carlock, so  
5 we get our context.

11:02:32

6 This is an e-mail from John Paul Herman on  
7 November 11th, 2009. Who is Mr. Herman?

8 **A.** He was the account manager for Anadarko and other  
9 customers in Europe for Europe, Africa.

11:02:51

10 **Q.** And you're copied on this e-mail?

11 **A.** I am, yes.

12 **Q.** And it's about feedback from jubilee partner meeting  
13 Q-Marine. Do you recall this discussion?

14 **A.** I recall the meeting. I joined it remotely.

11:03:08

15 **Q.** What was the jubilee?

16 **A.** The jubilee was a project. That's the name of the  
17 project, and Cos (phonetic) Moss was the operator, and  
18 Anadarko and other companies -- I'm afraid I can't

19 remember who -- were partners, and we had operated the

11:03:33

20 project for Cos Moss ^ ? and there had been a lot of  
21 internal decent as it later emerge between the members of  
22 that partnership about the survey design that Cos Moss ^ ?  
23 had run with.

24 They wanted to get a particular data set,  
25 and the way you design a survey will cause you to get a

11:03:55

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*Cross-Walker/By Mr. Torgerson*

1 certain data set.

2 **Q.** Do you recall that Anadarko was critical of the  
3 Q-Marine technology in connection with this discussion?

4 **A.** In this discussion they were critical of what they'd  
5 seen on this particular project.

11:04:12

6 **Q.** Let's look at number 2, specifically, Mr. Carlock,  
7 and can we blow that you?

8 Let's reset it, if we can. And just focus  
9 on that Paragraph 2. "They found the jubilee survey to

11:04:33

10 have been slow, problematic and expensive and gave them a  
11 finished product that they felt was no better than a  
12 conventional shoot." Do you agree or disagree with that  
13 assessment by Anadarko.

14 **A.** I agree that's what they said.

11:04:47

15 **Q.** And if you go down to number six, "Excessive feather  
16 busted their budget, Cosmos had not factored in feather  
17 over 15 percent, that was included. The 35 to 40 percent  
18 infill was more than they expected. They are also

19 concerned about using this data with so much feather and  
20 infill for 4D." Do you recall that being discussed?

11:05:11

21 **A.** It was -- I mentioned it was a survey designed and we  
22 had told Cosmos that we didn't think what they wanted to  
23 do was the right way to shoot it and it turned to be the  
24 case.

11:05:26

25 **Q.** All right. If we can pull back out to the larger

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*Cross-Walker/By Mr. Torgerson*

1 documents, Mr. Carlock, and focus on these last few points  
2 here at the bottom.

3 General Q-Marine and technology comments.

11:05:43

4 "Number one, Q-Marine document's and advertising does not  
5 live up to expectation with Anadarko." Number 2, "Anadarko  
6 has yet to see an uplift with Q-Marine over conventional on  
7 their few proprietary projects."

11:06:03

8 Number 3. "Anadarko prefers not to use  
9 Q-Marine on their proprietary work. They don't believe it  
10 would be better than conventional."

11 And number 4, "Anadarko does not see  
12 anything wrong with Q-Marine and if it was priced equally  
13 with conventional, would not have a problem with Q-Marine,  
14 they just don't see the uplift."

11:06:19

15 Now, the term uplift, would you agree that  
16 that's a synonymous with premium?

17 **A.** It is synonymous with premium, yeah.

18 **Q.** And do you recall Anadarko tapping on these comments  
19 about its perception of Q in November 2009?

11:06:35

20 **A.** They didn't have a lot of experience, and I remember  
21 all five of those comments. If you look at five as well.

22 **Q.** Sure. Let's look at five. Made a comment that the  
23 conventional WAZ, that's white azimuth?

24 **A.** Azimuth.

11:06:49

25 **Q.** Data.

*Johnny C. Sanchez, RMR, CRR - jcsreporter@aol.com*

*Cross-Walker/By Mr. Torgerson*

1 **A.** Originally they wanted to know what we'd done. They  
2 were saying, Wait a minute. We want to see this black  
3 box. Tell us what you're doing.

11:20:27

4 And when we sat down with them and  
5 explained what we were doing, then the whole thing went  
6 away. It was a bit of drama.

7 **Q.** Has WesternGeco released -- agreed to release that  
8 data as you sit here today?

11:20:45

9 **A.** No, we haven't. It's the measurements. It's not  
10 data. It's noise.

11 **Q.** Okay. And this was an issue, this refusal to release  
12 the raw sensor measurements? At least back historically,  
13 in the 2001 timeframe, that was a concern expressed to you  
14 by Chevron?

11:21:02

15 **A.** Yes.

16 **Q.** Exxon?

17 **A.** Yeah.

18 **Q.** Total?

19 **A.** Total raised it.

11:21:07

20 **Q.** Kerr-McGee?

21 **A.** Kerr-McGee said they wanted it and we had a  
22 discussion and it was a storm in a teacup.

23 **Q.** You think you resolved it favorably?

24 **A.** Yes.

11:21:21

25 **Q.** Now, if you keep reading on this document, right

*Johnny C. Sanchez, RMR, CRR - jcsreporter@aol.com*

*Torgerson Cross of Robin Walker*

12:56

1 BY MR. TORGERSON:

2 Q It says: Upscaled Q-Fin currently in testing, available  
3 2009.

4 So this was for the 2008 SEG?

12:57

5 A Yes.

6 Q Do you remember what city the 2008 SEG was?

7 A It might have been here actually.

8 Q Was it Las Vegas?

12:57

9 A Maybe it was Las Vegas. After 20 of them, you tend to  
10 forget.

11 Q I have never been to one of those. I don't get to go to  
12 those.

13 But just for purposes real quick, the SEG is the  
14 American trade show and the EAG is the European trade show?

12:57

15 A Yes.

16 Q The EAG is usually in June and the SEG is usually in the  
17 fall?

18 A Yes.

12:57

19 Q All right. And here we see at the bottom: WG response to  
20 DigiFIN and Nautilus. Any client who claims our leadership is  
21 being eroded, needs to see this and read our frequently asked  
22 questions.

23 A Yes.

12:58

24 Q Would you agree with me, Mr. Walker, that WesternGeco was  
25 marketing this potential increased steerage of the Q-Fin 2 to

*Torgerson Cross of Robin Walker*

12:58 1 respond to the market reaction to DigiFIN and Nautilus?

2 A Yes.

3 Q And you would agree with me that you were, consistent with  
4 what we discussed before lunch, trying to make something new to

12:58 5 Q-Fin that would differentiate it technologically from the rest  
6 of the competitive field?

7 A Yes.

8 Q And clearly you are touting your leadership in the industry  
9 at that stage, fair?

12:58 10 A We had a lot of experience and we wanted to lead on the  
11 experience.

12 Q All of that experience, in fairness, was a monopoly. You  
13 were the only one in the field until late 2007, right?

14 A It had originally been a monopoly. It wasn't at this  
15 stage.

12:58 16 Q And the reaction from WesternGeco at that point was to say:  
17 We have been working in anticipation of this new device. We  
18 are going to give it some new capabilities and tout those  
19 capabilities?

12:59 20 A We were trying to extend leadership, yes.

21 **MR. TORGERSON:** If we could go to the Elmo, Ms. Loewe.

22 BY MR. TORGERSON:

23 Q We talked about some reasons for losing bids in this  
24 industry. And can we all agree that probably the number one

12:59 25 reason for losing bids is price?

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*Torgerson Cross of Robin Walker*

13:00 1 those to me before as lateral steering, broadband data and  
2 solid streamer, correct?

3 A They are not related, but those are three big drivers at  
4 present.

13:01 5 Q Fair. And I'm not implying that they are related. I'm  
6 just saying those are sort of the three large ticks that you  
7 look in the box and say you will typically see three primary  
8 drivers, solid streamer, lateral steering and broadband data,  
9 right?

13:01 10 A So the solid streamer is about noise attenuation generally,  
11 yes.

12 Q Until 2010, specifically with regard to the TASMAN vessel,  
13 WesternGeco did not have solid streamer capability on any  
14 Q-Marine vessel?

13:01 15 A No. We delayed its rollout because TASMAN was delayed.

16 Q Why weren't solid streamers put on the other Q vessels  
17 before 2010?

18 A Because they were already equipped.

19 Q And they had gel filled streamers?

13:01 20 A They had a fluid filled streamer.

21 Q What was the fluid?

22 A Isopar, Isopar N. My apologies. If I'm going a bit fast,  
23 I will slow down.

24 Q One of the reasons for not replacing the fluid filled  
13:02 25 streamers with solid streamers is you wanted to age those out

*Torgerson Cross of Robin Walker*

13:03 1 A I would disagree and state that I'm not an engineer, so I'm  
2 not sure. But I can't see how it would be that different  
3 because it is a gel, a streamer is a gel, a reversible gel.

4 Q Fair. And you would agree with me that until 2010 with the  
13:04 5 TASMAN -- and what month in 2010 did the TASMAN come out with a  
6 solid streamer?

7 A We came out in April 2010.

8 Q So before April 2010, as it relates to Q-Marine vessels  
9 being bid on projects, you would agree with me that WesternGeco  
13:04 10 could only meet two of the technical qualifications and not all  
11 three?

12 A It would depend upon why the solid streamer was required.  
13 Because if the solid streamer was a way of reducing the  
14 noise -- which it is, it's a big selling point -- then we did  
13:04 15 that perfectly well with the single sensor approach.

16 Q You would agree with me that some oil companies, just like  
17 you have testified about with lateral steering having primary  
18 importance, some oil companies had primary importance of solid  
19 streamers?

13:05 20 A I have seen it expressed as a preference. I don't think we  
21 have ever lost a job because we don't have solid streamer. It  
22 is expressed as a preference because of noise generally.

23 Q And we have seen in connection -- we will get to the  
24 specific document in a moment -- with regard to the Statoil  
13:05 25 survey and the Chukchi that was lost to Fugro, that WesternGeco

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*Torgerson Cross of Robin Walker*

13:07 1 to place Q-Fin devices on its solid streamers non-Q boats  
2 before 2010?

3 A There was a discussion and people looked about whether it  
4 would be worthwhile from the point of view of engineering the

13:07 5 coupling because a lot of sections have particular coupling and  
6 particular requirements and then you go through the other end.

7 Q But to be clear, it was never actually done?

8 A No. And I don't think it was tested.

9 Q So if there was a demand for a streamer with lateral  
13:07 10 steering capability, WesternGeco never really investigated  
11 putting Q-Fins on its non-Q vessels?

12 A No. We -- it was just on the Q streamer. It was designed  
13 to work with the Q streamer.

14 Q How many vessels are in WesternGeco's fleet today?

13:08 15 A 16 -- 15.

16 Q And how many of those are seismic vessels?

17 A Sorry. Those -- I thought you meant -- those are 15  
18 3D seismic vessels.

19 Q All right.

13:08 20 A We have an additional five or six vessels that we use for  
21 source of command.

22 Q And of those 15 3D capable vessels, how many are equipped  
23 with Q?

24 A 11.

13:08 25 Q And of those 11 that have Q, how many have Q solid

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*Torgerson Cross of Robin Walker*

13:08 1 streamers?

2 A Seven.

3 Q What are some other reasons for losing bids? We can talk  
4 about -- we've talked about technical qualifications. What are

13:08 5 some non-technical reasons or perhaps business reasons why bids  
6 are won or lost, based on your experience?

7 A We have -- we talk about whether we have -- we have  
8 contractual discussions and relationship, and operational  
9 experience is very important.

13:09 10 Q Especially in a given area that might have peculiar  
11 specific physical characteristics, like riptides or things of  
12 that nature?

13 A Yes. Obviously I mean lack of operational experience from  
14 operational experience.

13:09 15 Q What about age of vessels?

16 A Age of vessels, if they are not purpose built for seismic  
17 is a question mark with one oil company at the moment.

18 Q Who is that?

19 A Total.

13:09 20 Q Operational experience, I could also add -- for example, I  
21 believe you also mentioned business experience, like the  
22 history of the companies together?

23 A Yes.

24 Q That's important, right?

13:09 25 A Hope so.

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*Torgerson Cross of Robin Walker*

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21 believe you also mentioned business experience, like the  
22 history of the companies together?

23 A Yes.

24 Q That's important, right?

13:09 25 A Hope so.

*Torgerson Cross of Robin Walker*

13:10 1 Q What else am I missing on the different reasons that a  
2 company might lose a seismic bid?

3 A We talked about contracts, which is a part of the  
4 negotiation. And other than that, I don't -- I can't think of  
13:10 5 anything else.

6 Q You feel like this is a pretty comprehensive list?

7 A I would think so, yeah.

8 Q Now, you would agree with me that you often don't know why  
9 a particular bid was won or lost, correct?

13:10 10 A If we have met the key technical specifications, we will  
11 always try and find out. We will usually find out on price,  
12 where were we on price. Usually find out on availability and  
13 who won. We usually get, with Total, a clear message on vessel  
14 age, so they signal that very loudly.

13:10 15 Q You had agree -- go ahead. I'm sorry.

16 A So we have that mix.

17 Q You would agree with me, Mr. Walker, that information is  
18 actually rarely available to WesternGeco or even its  
19 competitors because oil companies decline to say the reason why  
13:11 20 bids are won or lost?

21 A It is rarely available in a concise, clear, transparent  
22 manner.

23 Q And specifically when you approach them, if an oil company  
24 says, Well, here is the reason why you lost the bid, you would  
13:11 25 agree with me that you can't believe them?

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*Torgerson Cross of Robin Walker*

13:11 1 A We will believe them if -- in general we will believe them  
2 what they -- what they will tell us. There may be something  
3 else that they don't tell us. We can't possibly know what they  
4 don't tell us, but we will believe the words coming out of  
13:11 5 their mouth. Of course we will.

6 Q You are going to believe the words that come out of their  
7 mouth?

8 A We are going to take them that they are not necessarily out  
9 and out lying to us. We may have a view that they are watching  
13:12 10 what they say carefully.

11 Q Mr. Walker, do you remember having your deposition taken in  
12 this case in September of 2011?

13 A I do, yes.

14 Q Do you remember being asked that very often you don't know  
13:12 15 firsthand from a client or a customer what their rationale  
16 might be as to selecting Contractor A versus Contractor C, D or  
17 F? Do you remember that question being posed to you?

18 A Yes. I personally don't necessarily know.

19 Q And at the time you said, in response to that specific  
13:12 20 question: No, we don't, we don't necessarily know, right?

21 A Yes.

22 Q And you continued: And if we asked them, I don't want to  
23 sit having made notes and say, I believe what they say.

24 In September 2011, Mr. Walker, you told me you  
13:13 25 can't believe what they say when they do tell you a reason,

*Torgerson Cross of Robin Walker*

13:50 1 from the market, right?

2 A Yeah.

3 Q Nobody has this, right?

4 A Not at the moment.

13:50 5 Q Okay. And you would agree with me that this is, in a  
6 sense, oversampling, a -- a 2012 version of what the industry  
7 has called oversampling before?

8 A Yes. So what we are hoping is, by having this very fine  
9 sampling that we will -- we have ideas on how to process this  
10 data, and our customers have ideas on how to process the data.

13:50 10  
11 If you talk about oversampling, we would say six  
12 and a quarter by six and a quarter is correct sampling.

13 Q Okay. Are you familiar with PGS's HD3D offering back in  
14 the mid 2000s?

13:51 15 A Yes.

16 Q Was that an approach to oversampling?

17 A That was still undersampled, because they were -- that was  
18 a branded approach to streamers 50 meters apart.

13:51 19 Q Now you would agree with me, Mr. Walker, that at the end of  
20 the day, based on what we have talked about for reasons for  
21 losing bids and that you might not necessarily be able to  
22 believe the oil companies when they tell you why, you would  
23 admit, would you not, that you don't ultimately know the reason  
24 why oil companies select another company other than WesternGeco  
13:51 25 for a particular survey?

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*Torgerson Cross of Robin Walker*

13:51 1 A We some- -- well, sometimes we know. We talked about the  
2 10 percent where it's clear.

3 We know if we've met the technical, the must-have  
4 technical specs written in the tender.

13:52 5 We know if we've not met the technical  
6 requirements, for example on broadband. If we haven't got a  
7 broadband offering, that is -- then that would be very clear.  
8 We don't win all of them.

9 Q And is WesternGeco taking the position in this lawsuit that  
10 every survey bid that it lost between today and before, that  
11 had a preference for lateral streamer steering, was because of  
12 ION's DigiFIN or some other competing technology related to  
13 lateral steering?

14 A No. It's a very small proportion of them.

13:52 15 Q And in fact, you don't know the reasons from these  
16 companies?

17 A What they are saying is there were -- as I understand it --  
18 200-something projects, and we're just looking at the 25 where  
19 lateral steering was required.

13:53 20 And if there had not been anyone else in the  
21 market to provide lateral steering, then we're saying we would  
22 have won those projects.

23 Q And that lateral steering, that might be a dominant  
24 component or it might be a smaller component. You just don't  
13:53 25 know how those companies are weighting those decisions, right?

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*Torgerson Cross of Robin Walker*

13:53 1 A What we are saying, looking at it, is we believe those  
2 are -- that is a technological barrier. From what we have seen  
3 in the tender documents, what we have seen as a requirement,  
4 lateral steering is a must-have, and other qualifications are  
13:53 5 nice to have. The weighting will be on the nice-to-haves and  
6 not on the must-haves.

7 Q Do you recall, when I took your deposition in  
8 September 2011, Mr. Walker, I asked you that very question?

9 And you answered, in talking about the  
13:53 10 components, and you admitted that you don't know the reasons  
11 and the weights that oil companies provide to lateral steering.

12 A I said -- no. I said, in general, we would -- if it's --  
13 let me clarify.

14 In general, if it's not written in the tender as  
13:54 15 a requirement as a must-have, then if there are multiple  
16 requirements, that is one of them. And we can't say what the  
17 weighting is at this distance.

18 If it's a definite requirement in the tender,  
19 then we say that is a priority.

13:54 20 Q So with regard to these 25 surveys that you are claiming  
21 lost profits on, can you confirm for me that every single one  
22 of those surveys took place more than 12 miles outside the  
23 coast of the United States?

24 A If that is relevant to the extent, yes, as far as I know.

13:54 25 Q You can confirm that every one of these surveys of these

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*Thompson Cross of Robin Walker*

13:54 1 lists of lost profits, 25, they all occurred more than 12 miles  
2 outside the U.S., yes?

3 A They -- offshore?

4 Q Yes.

13:55 5 A No, you said outside the U.S.

6 Offshore, the coast.

7 Q Off the coast. 12 miles off the coast of the  
8 United States, yes.

9 A Yes.

13:55 10 **MR. TORGERSON:** I pass the witness.

11 **CROSS-EXAMINATION**

12 BY MR. THOMPSON:

13 Q Good afternoon, Mr. Walker.

14 A Good afternoon.

13:55 15 Q We haven't had a chance to meet. My name is James

16 Thompson. I'm representing Fugro-Geoteam.

17 You will be happy to know that Mr. Torgerson has  
18 covered most of my areas of inquiry, so we will be quicker.

19 I want to follow back up, if we could, and go

13:55 20 back and talk a little bit more about the Statoil job.

21 A Yes.

22 Q If I understood your testimony correctly, you indicated  
23 that Statoil was one of the early adopters of streamer  
24 steering, correct?

13:55 25 A Yes.

*Thompson Cross of Robin Walker*

15:04 1 But you testified that you believed customers  
2 today are wanting lateral steering the most of those -- of the  
3 technology in the suite, correct?

4 A That's what they are saying in their tenders and in their  
15:04 5 communication to us at these trade shows.

6 Q Okay. And we talked a little bit -- do you know, has  
7 WesternGeco ever attempted to allocate any of the Q-Marine  
8 revenue broken down by these discrete components of Q-Marine?

9 A No. We just have a kilometer rate.

15:05 10 Q And would you agree with me -- and you have actually said  
11 that would be impossible to do, to break out the valuation of  
12 the different technologies?

13 A Yes. Because if I give you one kilometer rate, then that's  
14 it. It's -- I -- I can't make a value judgment about what you  
15:05 15 find important.

16 Q And actually, do you remember, sir, at your deposition, you  
17 actually said that would be impossible to do?

18 A Yes.

19 Q Okay. And so it would be impossible for WesternGeco to  
15:05 20 break out by percentage of total survey revenue the value of  
21 lateral steering?

22 A We tried to do -- at one stage internally, we messed around  
23 with sort of a Chinese menu where we just stuck numbers on it,  
24 but it didn't go anywhere, and I don't think we ever sent it as  
15:05 25 a proposal.

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*Direct-Morton/By Ms. Tsou*

1 Q. What's the next slide the show?

2 A. Well, I know this has been shown before, but this is  
3 a live case of a seismic vessel without steering on the  
4 left. And they turn the cable -- or they turn the  
5 steering on, and 20 minutes later it was well behaved.

10:29:18

6 This kind of steering is very important  
7 for some of the jobs I did because we brought the cable up  
8 into the wave base, above the wave base.

9 Q. So it's not just a matter of putting the streamers  
10 close together if you don't have something to keep them  
11 separated?

10:29:38

12 A. Oh, no. You can see some of those streamers are very  
13 close together, but you have huge gaps. And if you were  
14 to shoot with that, it makes odd holes in the picture,  
15 and -- if the left is what you shoot with. So they either  
16 have to be fixed with infill or whatever, but you really  
17 don't want the picture -- you don't want the data that was  
18 acquired by the boat on the left.

10:29:52

19 Q. Is avoiding the kind of tangle risk we see on the  
20 left important for an oil company?

10:30:15

21 A. Yes, ma'am, indirectly. It may not cost me directly  
22 to untangle all that stuff, but it will cost the oil  
23 company maybe loss of the weather window.

24 In the North Sea, you have, I don't know,  
25 something like that May to October, they will shoot. And

10:30:32

*Johnny C. Sanchez, RMR, CRR - jcsourtreporter@aol.com*

*Direct-Morton/By Ms. Tsou*

1 after October, the waves are so high nobody wants to be  
2 out on a boat, and you can't acquire data anyway. So if  
3 you had a tangle on that block -- and I've had this  
4 several times in my career where blocks are about to  
5 expire and you've got to go shoot. If you miss the  
6 weather window because of a tangle and you don't acquire  
7 the data, you've just lost the business opportunity that  
8 you needed to -- because you don't have the data.

10:30:48

9 **Q.** Did you see any support in the documents you reviewed  
10 from this case for this opinion?

10:31:06

11 **A.** For what?

12 **Q.** Did you see any documents in the case that support  
13 your opinion?

14 **A.** Oh, yes, ma'am.

10:31:15

15 **Q.** Let's turn together to PTX 214.

16 Can you tell us what this document is?

17 **A.** Yes, ma'am. This is -- looks like either internal or  
18 external -- I think it's external -- sales presentation by  
19 I/O or ION.

10:31:39

20 **Q.** And let's turn to 211.

21 **A.** Yes, ma'am.

22 **Q.** What are we seeing here?

23 **A.** Well, this is -- the slide is basically saying that  
24 you're going to get better resolution. It talks about --  
25 it uses it in terms of cross-line bin size.

10:31:56

*Johnny C. Sanchez, RMR, CRR - jcscourtreporter@aol.com*

*Kaplan Direct of Raymond Sims*

15:09 1 A Well, as I indicated, I was asked to determine the harm  
2 suffered by WesternGeco. And based on my analysis, the  
3 conclusion I reached was that WesternGeco has suffered lost  
4 profits of \$159.1 million as a result of the assumed  
15:09 5 infringement by the parties, by ION and Fugro.

6 And for those surveys that are -- use the DigiFIN  
7 products, the infringing DigiFIN product systems for which we  
8 are not claiming lost profits, they would be entitled to a  
9 reasonable royalty of \$101.9 million.

15:09 10 Q Are these overlapping damages or separate damages to be  
11 considered in addition to one another?

12 A They are separate.

13 Q Did you do an analysis of --

14 A In other words, they are added.

15:09 15 Q All right. So the total damages to which you are  
16 testifying is \$261 million in this case?

17 A That's correct.

18 Q All right. Let's start with the lost profits analysis.

19 A Okay.

15:10 20 Q And what are lost profits?

21 A Well, lost profits are the profits that -- that the  
22 defendant in this case -- I'm sorry, the plaintiff in this  
23 case, WesternGeco, was prevented from making because of the  
24 infringement in this case, the infringing DigiFIN systems, that  
15:10 25 were in the marketplace and being used by WesternGeco's

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*Kaplan Direct of Raymond Sims*

15:10 1 competitors.

2 So if ION's infringing DigiFIN system had not  
3 been on the market and had not been used by WesternGeco's  
4 competitors to compete against WesternGeco for some of those  
15:10 5 surveys for which it was used, WesternGeco would have won those  
6 surveys, would have earned those revenues and then earned the  
7 profits on those revenues from those surveys.

8 Q And have you determined, from the review of the  
9 documents and the testimony, how many surveys are involved  
15:10 10 total that are part of the damages analysis in this case?

11 A Yes. Through -- throughout March of 2012, which was the  
12 period for which we had data, there were 207 total surveys that  
13 I identified that had -- that used the DigiFIN -- infringing  
14 DigiFIN systems.

15:11 15 And the total revenues that were generated from  
16 those surveys, based on the information that I had, were  
17 \$3 billion. And I concluded that WesternGeco would have won 25  
18 of those surveys, and the revenue on those 25 surveys was  
19 \$319.3 million.

15:11 20 The cost that WesternGeco would have incurred in  
21 order to conduct those surveys would have been about  
22 \$160.3 million. And, therefore, their profit that they would  
23 have earned had they done those surveys, so it's profits that  
24 they lost, would be -- would have been \$159.1 million.

15:11 25 Q Now, we're going to discuss this a little bit further. But

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15:16 1 accordance with their regular market share, but you have not  
2 assigned those into the lost profits category?

3 A That's correct. I have not.

4 Q All right. Well, what are the factors that go into a lost  
15:16 5 profits analysis in a patent case?

6 A In order to determine lost profits, what we have to do is  
7 reconstruct the market. We want to know what would have  
8 happened but for the infringement, or in this case but for the  
9 presence of the DigiFIN systems in the marketplace.

10 So we take DigiFIN out and we say, What would the  
11 market have looked like, and how -- who would have made the  
12 sales? Who would have conducted those surveys that were  
13 otherwise conducted using DigiFIN?

14 And so typically, when we do a reconstruction,  
15:16 15 there are four factors that were actually set forth in a court  
16 case and typically used in litigation to identify or to help us  
17 reconstruct the market. First is: Is there a demand for the  
18 patented product?

19 The second is: Are there any available  
15:17 20 acceptable noninfringing alternatives?

21 The third is: Does the patent owner, in this  
22 case, WesternGeco, have the capacity to satisfy additional  
23 demand?

24 And then finally: Is the data available to be  
15:17 25 able to quantify the profits that the patent owner would have

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15:17 1 made but for the infringement?

2 And so that's what I have done in this case.

3 Q All right. Well, let's look at that first bullet point,  
4 the demand for the patented product.

15:17 5 And have you listened to the testimony and  
6 reviewed the documents and reached some conclusions about that?

7 A Yes, I have.

8 Q All right. What we've done is we have taken a sample of  
9 some of the documents that you've reviewed, and many of which  
10 have already been discussed explicitly by witnesses in trial,  
11 have we not?

12 A Yes. I mean, I have gone through a number of -- a lot  
13 of -- like I said, hundreds of thousands of documents and  
14 identified a number of them that reflect demand.

15:18 15 Some of them have actually been displayed here  
16 today in some of these other deposition videos, so you may have  
17 seen them already, but I will try to go through them quickly in  
18 that event.

19 Q And before we get to them, have you also seen the responses  
15:18 20 to discovery by ION and Fugro in the case?

21 A Yes.

22 Q All right. And is this ION's amended response to  
23 WesternGeco's Interrogatory Number 10?

24 A Yes, it is.

15:18 25 Q Okay. And rather than read the whole thing out loud, do

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15:33 1 revenue for all of their surveys.

2 Q Now, in addition to Fugro and some others, was WesternGeco  
3 also in that market, and did its business operations reflect a  
4 demand?

15:33 5 A Well, yes. I mean, WesternGeco created the market. They  
6 were there long before DigiFIN.

7 And I have here sales from 2006 through 2011.

8 And during that time period, service revenue from their

9 Q-Marine, which is their lateral steering, was \$2.7 billion.

15:33 10 So WesternGeco alone conducted surveys and generated revenue of  
11 \$2.7 billion over this time period using their lateral  
12 steering.

13 Q If we're talking about the first bullet point, that is: Is  
14 there a demand for the patented product? What was your  
15 conclusion?

15:34 16 A My conclusion is that there is definitely a demand. There  
17 is a very strong demand for -- for the patented technology.

18 Q So we see a multibillion-dollar industry?

19 A Yes.

15:34 20 Q All right. Now, that's the first factor.

21 I think the second factor that you mentioned in  
22 your set of bullet points was the availability of noninfringing  
23 alternatives.

24 A Correct.

15:34 25 Q And did you also --

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15:34 1 A Availability of acceptable noninfringing alternatives.

2 Q Right. And did you also make an inquiry and analysis into  
3 that?

4 A I did.

15:34 5 Q Okay. And what is an acceptable noninfringing alternative?

6 A Well, an acceptable noninfringing alternative would be a  
7 lateral steering system that provides the same benefits as the  
8 patented lateral steering system that doesn't use the patents.  
9 So it is something that someone else could use and not infringe  
10 the patents.

15:34

11 And, of course, it would have to provide the same  
12 benefits. It would have to work. It would have to be  
13 acceptable not only to the contractor but also to the customers  
14 and it would have to be available during the appropriate time  
15 period.

15:35

16 Q You have heard, I assume, some of the testimony about the  
17 Nautilus bird, an eBird bird?

18 A I have.

19 Q Or eBird. Why don't we take a look at what Fugro and ION  
20 determined about the availability of those potential  
21 alternatives?

15:35

22 A Okay.

23 Q What did Fugro have to say about this in 2009?

24 A Well, in 2009, they were doing a CAPEX application to get  
25 funds to buy DigiFINs, additional DigiFIN systems. And they

15:35

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15:35 1 indicated on that document that there were no alternatives.

2 Q And that's in June of 2009?

3 A That's in June of 2009. And also in 2009, ION sent to  
4 Fugro a customer satisfaction survey. Fugro was a customer of  
15:36 5 ION. And one of the questions in that survey was: If DigiFIN  
6 was no longer available, what would you replace it with?

7 And the comment -- the response was: Good  
8 question. There are no real alternatives around at this time.

9 Q And that was Mr. By?

15:36 10 A That was Morten By -- his name is highlighted -- who  
11 responded to the questionnaire.

12 Q Those are Plaintiff Trial Exhibit 313 and 920, both of  
13 which are Fugro documents; is that right?

14 A That's correct.

15:36 15 Q Now, did Mr. By also get deposed just a few weeks ago  
16 before he testified in this case?

17 A Yes, he did.

18 Q And was he asked in particular about the eBird unit?

19 A I believe he was asked about both, but yes.

15:36 20 Q Let's start with eBird.

21 A Okay. At his deposition, he was asked about the eBird and  
22 asked whether Fugro had ever purchased eBird units and his  
23 answer was no. And he indicated that there was an issue with  
24 the connector with eBird, with using eBird on Fugro's  
15:37 25 streamers. And he said it is not commercially available to fit

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15:37 1 the Sentinel stream, which is the streamer that Fugro uses.

2 So as late as -- I think it's July 12 of 2012,  
3 the eBird wouldn't -- wouldn't work -- even if it were  
4 commercially acceptable, it wouldn't work on the streamers used  
15:37 5 by Fugro.

6 Q Now, do we have any information about what ION really  
7 thought about this potential competing bird?

8 A Yes.

9 Q And what information is that?

15:37 10 A Well, here we have an email, and I believe it's a business  
11 plan, one dated October, late October of 2009 and it is talking  
12 about Kongsberg, which is the manufacturer or developer of  
13 eBird. And it indicates that they were doing some tests and  
14 there were not any good comments. The test period was  
15:38 15 shortened significantly and they destroyed the cable that was  
16 being used for testing. And obviously destroying the cables is  
17 not a good thing because the cables cost a lot of money.

18 Q And did ION learn about any defects in the eBird around  
19 that time?

15:38 20 A Well, the bottom document, it is important for a couple  
21 reasons. Number one, if you look in the middle there, it says  
22 they have no high-level control system. It only offered  
23 drivers for contractors to develop their own control system,  
24 which means they have got the bird but they don't have the  
15:38 25 lateral control system. It has to be developed by the

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15:38 1 customer. So it is really not an option unless you have got  
2 your own lateral control system.

3 And then they go on to say they tested 12 of the  
4 devices and had nothing good to say about them and they  
15:38 5 acknowledged that the device caused damage to the cable from  
6 twisting, so they weren't very good.

7 Q All right. That was two years ago. Did ION have any more  
8 to say about this in late 2011 when one of their people were  
9 deposed in this case?

15:39 10 A Well, Mr. Gentle indicated that even at the end of 2011, it  
11 still was not commercially available. It is not commercially  
12 proven and it's not commercially available. And to his  
13 knowledge, it had never been employed on a commercial survey.  
14 And this is the 27th of October 2011.

15:39 15 Q Now, when somebody introduces what they hope is a  
16 competing, noninfringing alternative, does the industry  
17 suddenly rush to it or is there some time while people try to  
18 test it and find out if it works and perhaps overcome whatever  
19 skepticism there may be?

15:39 20 A No. I mean, as you've seen -- as you heard Mr. Walker talk  
21 about it, even when they introduced the Q-Marine system with  
22 their lateral steering, when DigiFIN was introduced, they had  
23 to do testing, they have to convince the customers that it  
24 worked, they had to show them data. And so it takes time to  
15:40 25 establish yourself in the market.

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15:40 1 More importantly, in order to win a survey and  
2 bid a product on a survey, you to have it and if you don't have  
3 it in October of 2011, the surveys that you are bidding for in  
4 October of 2011 are going to take place in the summer or fall  
15:40 5 of 2012. So if it is not on the market in 2011, you have  
6 pretty much lost the 2012 survey season for a lot of the areas.

7 Q Has any information come your way to the effect that the  
8 eBird would be an available noninfringing alternative even as  
9 of today?

15:40 10 A No. Not during this time period, no.

11 Q Why don't we talk about Nautilus for a second because  
12 that's also something that was mentioned.

13 A Okay.

14 Q Once again, did one of ION's directors, Mr. Gentle, have  
15 anything to say about that in late 2011?

16 A Yes. He indicated that, again -- his recollection was that  
17 at the beginning of 2010, Nautilus was still not seen as  
18 commercially viable. In other words, they hadn't been tested  
19 and shown to be commercially viable or acceptable in the  
15:41 20 marketplace.

21 Q What did Fugro have to say -- assuming just for a moment  
22 that Fugro might have been evaluating the possibility of  
23 changing its mind about the then decision that there were no  
24 alternatives, what did Mr. By have to say about Nautilus when  
15:41 25 he was deposed just three weeks ago?

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15:41 1 A Well, remember that ION was looking at it from the  
2 perspective as a competing product. Fugro would have been  
3 looking at it from the perspective of something to use instead  
4 of DigiFIN. They actually testified -- tested the Nautilus  
15:41 5 device. And what happened was that the Nautilus device  
6 destroyed some of their streamers. They went back to Sercel,  
7 the manufacturer, and demanded their money back.

8 Mr. By indicated the test was a complete failure  
9 and that they never bought a Nautilus device as a result of  
15:42 10 that. And that is consistent with the prior testimony from ION  
11 which indicated that, you know, as of 2010, it still wasn't  
12 proven in the marketplace.

13 Q There was some discussion in the courtroom by Mr. By that  
14 this had something to do with some stray fishing nets. I'm not  
15:42 15 sure if you were here for that testimony.

16 A I was.

17 Q But does this indicate to you that that mishap, whatever it  
18 was, was something that Fugro considered to be a problem or a  
19 fault with the device rather than just some sort of stray or  
15:42 20 random accident?

21 A Well, I mean, he said it was a complete failure and they  
22 are not buying any Nautilus units as a result. So I would say  
23 they didn't want to risk using the Nautilus product because  
24 they didn't think it worked properly.

15:43 25 Q And they also demanded that Sercel give them their money

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15:43 1 back --

2 A Yes.

3 Q -- or reimburse them for the streamers the Nautilus had  
4 destroyed?

15:43 5 A Correct. And the word they used -- well, the question they  
6 asked was that the Nautilus had destroyed, and Mr. By said yes.  
7 He didn't say the Nautilus had destroyed. He just said the  
8 implication was that they did destroy them.

9 Q Any further information about Nautilus from Fugro's files?

15:43 10 A Yes. There is an email, an internal Fugro email and this  
11 is communicating a discussion that someone at Fugro had with  
12 someone who works for CGGVeritas, which owns Sercel, which was  
13 testing the Nautilus. And this is dated late May of 2010 and  
14 it indicates that there were failed Nautilus birds. And he  
15:44 15 said, "If you hear rumors in the industry that the Nautilus  
16 birds are revolutionary and fantastic, disregard them. It  
17 doesn't work. The modules failed."

18 So as late as May 17, 2010, the Nautilus still  
19 wasn't -- hadn't shown that it was acceptable in the  
15:44 20 marketplace.

21 Q I'm not sure if you were here for the deposition testimony  
22 earlier today from Mr. Cunkelman and perhaps one other  
23 individual at ION, but both of them said, as I recall -- you  
24 tell me if this is true -- that CGGVeritas buys DigiFIN from  
15:44 25 them?

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15:44 1 A They certainly have bought DigiFIN from them, yes, over the  
2 years, yes.

3 Q Do you have any information that they are actually buying,  
4 instead of that, Nautilus because they think that is a better  
15:44 5 or acceptable noninfringing alternative?

6 A Well, they may be today. I don't -- but my damages period  
7 doesn't cover today.

8 Q Right. So did you reach a conclusion as to the second  
9 issue or requirement in your lost profits analysis?

15:45 10 A Yes. I concluded that during this period, there were no  
11 acceptable noninfringing alternatives that would have been  
12 available in the marketplace and that the only lateral steering  
13 device that would have been available in the market would have  
14 been WesternGeco's Q-Marine systems.

15:45 15 Q In doing your lost profits analysis, we are talking about  
16 just the 25 surveys; is that right?

17 A Right.

18 Q Not the other 182 surveys?

19 A Right.

15:45 20 Q The third factor that you identified as being an important  
21 part of the analysis was capacity; is that right?

22 A Correct.

23 Q And why don't you explain that briefly to the jury?

24 A Well, I mean, it is one thing that there are these surveys  
15:45 25 that are available to people who want steerable streamers but

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15:45 1 if WesternGeco didn't have the capacity to conduct those  
2 surveys, then they couldn't have done them and couldn't have  
3 generated the revenue and they wouldn't have earned the  
4 profits. I'm not sure who would have done them, but they would  
15:46 5 have to have the capacity.

6 So what I did was I looked at the information,  
7 talked to people at WesternGeco, identified -- looked at their  
8 fleet and determined whether they had capacity available. Not  
9 necessarily that they actually had the capacity but they had  
15:46 10 capacity available to conduct those surveys.

11 And, for example, you heard Mr. Walker testify  
12 that during this time period, WesternGeco, because of the  
13 competition from DigiFIN, had actually delayed some boats from  
14 being delivered and had derigged some boats. So those are  
15:46 15 things that if DigiFIN hadn't been on the market and the  
16 demand -- they were getting the demand, they were getting the  
17 surveys. Those are the things that they likely would not have  
18 done and they would have been able to plan for it.

19 Q What is derigging?

15:46 20 A Derigging is taking the equipment, the Q equipment off a  
21 vessel that already had it on. So, for example, there were  
22 three boats that had Q-Marine systems equipment on them and  
23 they took that equipment off those boats and they converted  
24 those boats to source boats.

15:47 25 Q And did you make a detailed investigation as to the amount

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15:47 1 of capacity required to do these extra surveys?

2 A Yes.

3 Q And did you determine whether or not WesternGeco had the  
4 capacity available?

15:47 5 A Yes, I did. Based on the information in the record, the  
6 length of the surveys, the number of days, the duration of the  
7 surveys, I determined that they would need 54 months of  
8 capacity, of vessel capacity, in order to conduct those surveys  
9 over this time period.

15:47 10 I also determined, based on looking at the  
11 available capacity, the actual capacity of the Q fleet, the  
12 actual capacity of other boats that WesternGeco had, would have  
13 had 59 months of capacity, at least. And that's without even  
14 doing some other things that they could have done.

15:48 15 So, for example, I think if you go to the next  
16 slide, one of the things they would have done, as Mr. Walker  
17 testified earlier, was that they had deferred the delivery of  
18 the COOK and the TASMAN. They were originally scheduled to be  
19 delivered in 2009 and they deferred them until mid-2010 because  
15:48 20 they didn't have a need for them. So they could have taken  
21 those boats when they were originally scheduled.

22 Now, one of those boats, the COOK, was outfitted  
23 with Q equipment that had been taken from the PRIDE, SEARCHER,  
24 and the TOPAZ. So they took Q equipment off of it and stored  
15:48 25 some of it and put the rest of it on the COOK. So if they had

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15:48 1 accelerated the COOK and the TASMAN, they would have to have  
2 purchased another set of Q equipment. They would have had to  
3 equip the COOK with Q equipment, and that would have cost them  
4 \$36 million of capital expenditure.

15:49 5 And over the course of the damages period, the  
6 depreciation on that Q equipment would have been about  
7 19.2 million, so it would have cost them money to get this  
8 capacity, but it was there ready to be taken advantage of.

9 Now, in addition to that, I just mentioned that  
15:49 10 they took the Q equipment off of the PRIDE, the SEARCHER and  
11 the TOPAZ and used some of that equipment to put on the COOK.  
12 Well, what I'm suggesting is they wouldn't have done that and  
13 what Mr. Walker has suggested is they wouldn't have done that.  
14 They would have left those three vessels as Q vessels. And  
15:49 15 during that time period, those vessels had 31 months of  
16 capacity. The COOK and the TASMAN would have had 28 months of  
17 capacity. That's the 59 months of capacity that they could  
18 have had.

19 Now, that doesn't include the fact that that's  
15:50 20 only 31 months for the PRIDE, SEARCHER, and TOPAZ out of about  
21 three years that they would have been doing Q surveys. They  
22 could have done -- there is another 77 months during that  
23 three-year time period that they could have done Q surveys but  
24 they were doing other things. They were doing source -- they  
15:50 25 were being used as source boats.

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15:50 1 Well, what Mr. Walker indicated is that they can  
2 charter source boats. In fact, they had chartered boats. And  
3 during this time period, they terminated some of those charters  
4 because they didn't need them anymore. So they could have  
15:50 5 chartered those boats and if they needed another month or  
6 another two months or another four months, they could have  
7 chartered source vessels and used the PRIDE, SEARCHER and TOPAZ  
8 as Q vessels to do Q surveys. That would have had a cost of a  
9 million and a half dollars a month to charter the source vessel  
15:51 10 and I don't believe they would have had to do that because they  
11 had capacity to do the surveys without that, but they had  
12 additional capacity available if they needed it.

13 Q I don't know if you recall the last question that  
14 Mr. LoCascio asked Mr. Walker, and that is --

15:51 15 A My memory is not that good.

16 Q And that is: When people are infringing and you are in a  
17 recession, when does it hurt the most?

18 And he said: In a recession, the reason is you  
19 have got all this slack time and slack capacity.

15:51 20 Is that right?

21 A That's correct. I mean, if you have got the capacity and  
22 other people -- if there is a recession and you have got a lot  
23 of excess capacity and other people are doing the surveys that  
24 you should be doing, it's costing you money.

15:51 25 Q One of the things you haven't calculated, I assume, in your

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1 think where we were is that the \$319 million in revenue is  
2 not some kind of premium pricing that WesternGeco might  
3 have wanted to charge, but the assessment of the actual  
4 revenue on those surveys.

07:57:45

5 The Fugro survey is their actual numbers,  
6 the other surveys that were lost to other infringers or  
7 competitors are the best numbers from the intelligence  
8 that everybody's gathered at the company; is that right?

9 **A.** Correct.

07:57:57

10 **Q.** All right. So how did you go about determining that  
11 there were 25 lost surveys out of 207 total surveys, that  
12 were using DigiFIN systems?

13 **A.** Well, we looked at all those surveys and tried to  
14 identify what the requirements were for those surveys.

07:58:19

15 And as I indicated yesterday, what I did was I concluded  
16 that if there was a requirement for lateral steering,  
17 either the survey required it or the customer required it,  
18 that if WesternGeco was the only provider that could  
19 provide lateral steering, that since there was a

07:58:40

20 requirement for lateral steering, WesternGeco would have  
21 made those sales.

22 So what I did was go through those 207  
23 surveys, and I identified 25 surveys, where I concluded  
24 and I confirmed with Mr. Walker, that there was a  
25 requirement for lateral steering. And so, those are the

07:58:53

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*Direct-Sims/By Mr. Kaplan*

1 25 surveys that I have calculated lost profits on. And  
2 there are basically three different categories. The first  
3 one is 4D surveys for three oil companies, Statoil, Total  
4 and BP. The second is Apache surveys that were done by  
5 Fugro, and the third is sort of a catchall, which is other  
6 surveys that required lateral steering.

07:59:14

7 **Q.** And what is the timeframe in which these 25 surveys  
8 fall?

9 **A.** Well, the first survey was started literally like New  
10 Year's Eve of 2008, and the last one went into 2012. So  
11 they're spread out over that time period.

07:59:32

12 **Q.** Now, Mr. Walker testified to another survey that I  
13 think he called Total Holland, or the Pistolet survey?

14 **A.** Yes, I heard that for the first time when he  
15 testified here the other day.

07:59:50

16 **Q.** The \$64 million survey?

17 **A.** Correct.

18 **Q.** Is that included in your analysis?

19 **A.** It is not. We only included surveys based on the  
20 information that we had and the information we had was  
21 through March of 2012.

08:00:00

22 **Q.** All right. And that's a survey that's actually  
23 either being done or about to be completed by Fugro as  
24 best you know, is that right?

08:00:12

25 **A.** That's my understanding from Mr. Walker's testimony,

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*Direct-Sims/By Mr. Kaplan*

1 steerable streamers are required. A method for steering  
2 of the streamers will be considered as a prerequisite.

08:16:19

3 **Q.** All right. So going through the Apache surveys, your  
4 conclusion was that you could safely assess these as being  
5 surveys that required the patented technology?

6 **A.** Correct.

08:16:32

7 **Q.** And had WesternGeco been the only company in the  
8 market able to offer its patented technology, what was  
9 your conclusion as to whether or not these surveys would  
10 have been won by WesternGeco as opposed to Fugro?

11 **A.** My conclusion is that's why here, that they would  
12 have been won by WesternGeco. If there's no one else with  
13 lateral steering, then WesternGeco would have won the  
14 surveys.

08:16:46

15 **Q.** Well, let's go to the third bucket that makes up the  
16 25 surveys that you assessed.

17 **A.** Okay.

18 **Q.** And what is Slide 46?

08:16:58

19 **A.** Well, Slide 46 is I think a list of -- I think  
20 there's 10 here maybe that -- additional surveys that  
21 we've identified that indicated that there was a  
22 requirement for lateral steering. In one source or  
23 perhaps many sources indicated that there was a request or  
24 a requirement for lateral steering devices to conduct  
25 those surveys.

08:17:13

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*Direct-Sims/By Mr. Kaplan*

1 discussion with Mr. Walker, indicates that although -- and  
2 they said steerable would be required, but he indicated  
3 that steerable would definitely be needed for that type of  
4 a survey.

08:25:05 5 Q. All right. And that's Plaintiff's Trial Exhibit 650,  
6 that's from Fugro's copy of the tender; is that right?

7 A. That's correct.

8 Q. All right.

9 A. Maybe I should reiterate, make it clear, that all of  
08:25:20 10 these surveys were conducted using the DigiFIN lateral  
11 steering. So they did, in fact, use lateral steering for  
12 all of these surveys.

13 Q. All right. Let's look at Statoil Alaska. This is  
14 the Chukchi Seas; is that right?

08:25:36 15 A. Yes.

16 Q. Okay.

17 A. And we've heard some testimony about this from  
18 Mr. Scoulios and from Mr. Walker, and they indicated that  
19 based on the conditions that lateral steering would be  
08:25:47 20 required. They also indicate -- Mr. Walker indicated that  
21 he was working with Statoil to try to convince them that  
22 they should use fan mode, that would be preferred, which  
23 of course, requires lateral steering.

24 Ultimately, as Mr. Stiver testified, they  
08:26:09 25 did use fan mode -- "they" being Fugro did use fan mode to

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*Direct-Sims/By Mr. Kaplan*

1 incorporation of DigiFIN units?

2 **A.** Correct. That's a document we saw earlier indicating  
3 that DigiFIN allows them to do fan mode.

08:31:36

4 **Q.** All right. So we've now looked at the three buckets  
5 of surveys that make up the 25 surveys that you talked  
6 about.

7 MR. KAPLAN: If we can turn to Slide 33 for  
8 just a second.

9 BY MR. KAPLAN:

08:31:44

10 **Q.** And those are the three buckets or the three groups  
11 of surveys that make up the 25; is that right?

12 **A.** That's correct.

13 MR. KAPLAN: And let's now go to Slide 58.

14 BY MR. KAPLAN:

08:31:56

15 **Q.** How did you go about determining what WesternGeco's  
16 lost profits would be as you assessed them in this case?

17 **A.** Okay. The lost profits are basically the revenue  
18 that you lost, minus the cost that you would have incurred

08:32:15

19 to make those sales or generate that revenue, or in this  
20 case, conduct the surveys. And the difference between

21 those is the lost profits. That's the profits that

22 WesternGeco would have earned had it conducted those  
23 surveys.

08:32:28

24 **Q.** So if we start with the revenue side, the revenue  
25 that you calculated on those 25 surveys was how much?

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*Direct-Sims/By Mr. Kaplan*

1 **A.** \$319 million. I don't know if you noticed; but on  
2 each of those slides where we had the individual surveys,  
3 there was a revenue number. And that came either from the  
4 Fugro records or from the CRM database.

08:32:44

5 **Q.** And then moving to the next slide, the next factor is  
6 how much it cost you to get that revenue; right?

7 **A.** Correct. And again, what we're looking at the  
8 incremental cost, how much would it have cost to conduct  
9 an additional 25 surveys over that four-year time period.

08:33:03

10 So you don't take into account all of the fixed costs that  
11 have already been incurred because they're not going to be  
12 incurred again.

13 **Q.** And if we go to the next slide, you begin to assess  
14 the cost; is that right?

08:33:17

15 **A.** Correct. So the operating cost of performing 25 more  
16 surveys, and I say 2009 because the first survey started,  
17 like, literally the last day of 2008, we wanted to  
18 identify those costs that varied directly with the number  
19 of surveys. So as I said, it doesn't include the

08:33:40

20 president's salary; it doesn't include, you know, the home  
21 office. There's a lot of fixed costs that are already  
22 paid for that you wouldn't have to incur again. So we  
23 only take into account those costs that would be

08:33:58

24 additional costs that WesternGeco would have incurred had  
25 it conducted those 25 surveys.

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*Direct-Sims/By Mr. Kaplan*

1 And based on their actual financial  
2 records, looking at their actual Q-Marine division  
3 financial records, looking at the costs over that time  
4 period, I determined what those costs were, and that was  
5 \$141 million over that time period for those 25 surveys.

08:34:12

6 Q. But you also added another figure in case there was a  
7 need for additional ship capacity?

8 A. Well, I added another 19.2 million. If you recall,  
9 when we discussed capacity, I indicated that, rather than  
10 defer the delivery of the TASMAN and the COOK, they would  
11 have had them delivered as originally scheduled, and  
12 rather than derig the PRIDER SEARCHER and TOPAZ, they  
13 would have left them with Q equipment, which means they  
14 would have had to buy new Q equipment for the COOK. And  
15 that Q equipment would have cost money, and this  
16 19.2 million is the depreciation on that equipment over  
17 this time period.

08:34:31

08:34:49

18 MR. KAPLAN: Let's go back to Slide 29 for a  
19 moment, please, Dave.

08:35:00

20 BY MR. KAPLAN:

21 Q. That's the figure that you talked about yesterday  
22 afternoon, is that right, when you were discussing  
23 capacity?

24 A. Correct. The 19.2 million.

08:35:10

25 Q. Okay. All right.

*Johnny C. Sanchez, RMR, CRR - jcsourtreporter@aol.com*

*Direct-Sims/By Mr. Kaplan*

1 **A.** I haven't included it in my calculation. That's  
2 correct.

3 **Q.** We don't have the final information?

4 **A.** Correct.

08:36:25

5 **Q.** All right. So in summary, if we're looking at the  
6 lost profits surveys, we see that 15 were done by Fugro,  
7 10 were done by other companies; is that right?

8 **A.** That's correct.

08:36:42

9 **Q.** And in apportioning that \$159.1 million, how much of  
10 that is lost profits that is directly attributable to the  
11 surveys done by Fugro?

12 **A.** 65.7 million.

13 **Q.** And how much of it is to the surveys done by the  
14 others using ION's infringing DigiFIN's equipment?

08:37:00

15 **A.** 93.4 million. And the reason that number is bigger  
16 than Fugro is because the Fugro jobs tended to be a little  
17 smaller, shorter duration; whereas the other 10 were  
18 bigger, longer duration surveys. So the revenues from  
19 those surveys were greater than the Fugro ones.

08:37:18

20 **Q.** But all of these surveys were performed with what  
21 you've been asked to assume is infringing technology from  
22 ION?

23 **A.** Correct. They were all -- they were all performed  
24 using the DigiFIN systems.

08:37:27

25 **Q.** All right. Now, you said there was a second

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*Direct-Sims/By Mr. Kaplan*

1 total quantifiable benefits, the 260 million is  
2 65.9 percent.

09:03:24

3 **Q.** So they got a lot bigger bang from the buck  
4 purchasing these infringing systems, than they did in the  
5 other part of the business?

6 **A.** Correct. They're overall profit margins were lower  
7 than the value that the DigiFINs contributed.

8 **Q.** All right. Let's go to Slide 94 then.

9 **A.** Okay.

09:03:41

10 **Q.** What does this show?

11 **A.** Well, now we're moving on to ION. So what we just  
12 determined was that the benefit, the premium that was  
13 generated for Fugro, was 65.9 percent of those total  
14 quantifiable benefits as a premium.

09:03:59

15 So now we have to figure out how to share  
16 that. Now we're moving on to ION, and we're trying to  
17 figure out with a --

18 **Q.** Sorry.

09:04:09

19 **A.** Now we're moving on to ION and we have to figure out  
20 what the value of the patent and dimension is to ION. So  
21 what we're doing here, since they don't do surveys, is  
22 we're looking at their profits on selling the DigiFIN  
23 systems as compared with other products.

24 **Q.** Do you need to take a drink?

09:04:25

25 **A.** No. That's all right. So we know that from their

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*Direct-Sims/By Mr. Kaplan*

1 records, that the profit margins on their DigiFIN systems  
2 are 54 percent. The profit margins on the rest of their  
3 business, rest of this division are 27.4 percent. So when  
4 they sell DigiFINs, just the DigiFIN systems alone, they  
5 have a premium profit of 26.6 percent.

09:04:47

6 **Q.** Now, you chose 54 percent as their profit margin. Do  
7 you recall Mr. Moffat's deposition where he testified that  
8 their margins there were typically 60 or 70 percent?

9 **A.** Yeah. I'm not sure what he was referring to. It may  
10 have been gross profit. I don't recall. But based on the  
11 actual documents that we had, I calculated them to be 54.

09:05:07

12 **Q.** Okay. And from that you determined what -- what is  
13 premium profit?

14 **A.** Well, if their normal profit margins are 27.4 percent  
15 and they're only at 54 percent on the DigiFINs, that means  
16 they're getting a premium profit on the DigiFIN sales.

09:05:27

17 **Q.** And so, what did you do with that number?

18 **A.** Well, I figured out how much that was in dollars. So  
19 this is focused on the DigiFIN systems that were sold to  
20 customers other than Fugro, because we've already dealt  
21 with Fugro, so the total sales of DigiFIN birds and  
22 lateral controller, which is the DigiFIN system, for those  
23 customers -- those other customers was \$42.3 million.

09:05:45

24 So that means their premium profit on  
25 those sales, 26.6 percent, was \$11.3 million. Their total

09:06:06

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*Direct-Sims/By Mr. Kaplan*

1 profit was about twice that, but the premium profit on  
2 just the sales of the DigiFIN systems alone, was  
3 \$11.3 million.

09:06:25

4 **Q.** And if we can return to Slide 14, please. Now, in  
5 other words, you're not looking at all the ION sales  
6 because according to Slide 14, the numbers you had,  
7 whether they are about \$63 million worth of sales of the  
8 DigiFIN units, including the lateral controller?

09:06:43

9 **A.** Correct. And actually I note here that this schedule  
10 actually calculates that 54 percent.

11 **Q.** Right.

12 **A.** But...

13 **Q.** A little too small to read on the slide?

14 **A.** It is pretty small.

09:06:50

15 **Q.** All right. Let's return, please, to Slide 95.

16 **A.** Okay.

17 **Q.** What you did here is you only took the sales to the  
18 nonFugro entities?

19 **A.** Correct.

09:06:59

20 **Q.** All right. And that's roughly two-thirds of that  
21 \$63 million?

22 **A.** Correct.

23 **Q.** All right. And on those sales only, you calculated a  
24 premium profit?

09:07:09

25 **A.** Correct. \$11.3 million.

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*Direct-Sims/By Mr. Kaplan*

1 Q. All right.

2 A. But that's just on the DigiFIN systems alone.

3 Now, if we move to the next slide, there  
4 was -- there's information in the record that indicates  
09:07:22 5 that, in fact, I think we've heard some testimony that when  
6 ION sells its DigiFIN systems, it expects pull through  
7 sales. It expects to generate sales on other products.

8 And, of course, when it makes sales on other  
9 products, it generates profits on those other products.

09:07:41 10 And based on an analysis that was done by Mr. Gunderson who  
11 was ION's damages expert, I determined that the amount of  
12 those pull through sales was -- would have been  
13 67.8 million based on the sales of the DigiFIN systems that  
14 we looked at on the prior page.

09:08:06 15 Q. Now what are convoy?

16 A. Well, that's those pull through sales. That's sales  
17 of additional products that ION sold because they sold the  
18 DigiFIN systems.

19 Q. For example, yesterday, in one of the depositions  
09:08:18 20 that was played, Mr. Cunkleman's deposition, the term  
21 "pull through" was used quite a bit, and perhaps  
22 "bundling"?

23 A. Yes.

24 Q. Is that what we're talking about here?

09:08:27 25 A. Yes.

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*Direct-Sims/By Mr. Kaplan*

1 Q. What does that mean?

2 A. Well, it means that when you sell one product, when  
3 the people buy that product, they buy something else as  
4 well. And if you hadn't sold the first product they  
5 wouldn't have bought the second product.

09:08:41

6 So this \$67.8 million in revenue was  
7 generated because they sold the infringing DigiFIN systems  
8 and so, the profits from these sales is premium profit  
9 that they wouldn't have earned had they not sold the  
10 DigiFIN systems.

09:08:58

11 So I calculated the profit on those sales  
12 at their normal profit margins of 27.4 percent, and  
13 determined that they would have earned an additional  
14 \$18.6 million in profits. Then I add that to the  
15 11.3 million in premium profits that they earned on the  
16 DigiFIN systems alone. And so, the total premium profits  
17 that were earned by ION, as a result of selling the  
18 DigiFIN systems, was \$29.9 million. So had they not  
19 sold -- well, had they not sold the DigiFIN systems, their  
20 profits would have been lower by the 29.9 million, plus  
21 the other about 11 million in normal profits. So they  
22 would have been lower by about \$40 million, \$41 million.

09:09:14

09:09:33

23 Q. The other sales and profits that they get from  
24 essentially having this flagship DigiFIN, which pulls  
25 through or puts into the bundle the other products?

09:09:54

*Johnny C. Sanchez, RMR, CRR - jcsreporter@aol.com*

*Direct-Sims/By Mr. Kaplan*

1 Q. They'd walk into the negotiation at the time  
2 understanding that; is that right?

3 A. Correct.

09:34:07

4 Q. Okay. And what did you assess as the value of the  
5 Zajac contribution?

09:34:24

6 A. Well, based on the expectation of how much it  
7 improves for the 4 -- it's really related to 4D surveys --  
8 there was an expectation of 5 to 6 percent uplift in  
9 revenues. ION and Fugro would have better bargaining  
10 positions in this case because it's just an improvement

09:34:41

11 patent; it doesn't enable anything. And so, I concluded  
12 that the value of Zajac would be about 15 percent of the  
13 value of the Bittleston patents, and based on the  
14 Bittleston patent, that would be about 5 percent of the  
15 quantifiable benefit, but only of 4D surveys. So it's  
16 only applied to the benefits from 4D surveys, not all  
17 surveys, just 4D surveys.

18 Q. And if we look at the next slide, these are the final  
19 reasonable roy --

09:34:59

20 THE COURT: Go ahead.

21 BY MR. KAPLAN:

22 Q. -- the final reasonable royalties that you believe  
23 should be assessed against ION and against Fugro?

09:35:10

24 A. Correct. So for ION, the total revenues from the  
25 DigiFIN systems were 42.3 million. And that's only sales

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*Direct-Sims/By Mr. Kaplan*

1 to the non-Fugro, to customers other than Fugro. And so,  
2 the royalty rate of 35.3 percent applied to those sales of  
3 42.3 million would be \$14.9 million.

09:35:32

4 For Fugro, as it relates to the Bittleston  
5 patents, there were \$260.2 million in the quantifiable  
6 benefits contributed by the patents to those surveys that  
7 used the DigiFINs. The royalty rate was 33 percent of  
8 those benefits. And so, the reasonable royalty would be  
9 85.9 million.

09:35:54

10 And then for the Zajac patent, the  
11 quantifiable benefits, the portion of that 260.2 that  
12 relates to 4D surveys alone, is \$6.2 million. Applying  
13 that 5 percent royalty to the \$6.2 million results in a  
14 royalty of just over \$300,000, about .3 million.

09:36:13

15 **Q.** And that number is assessed only against Fugro?

16 **A.** Correct.

17 **Q.** And so, if we look at the total then, to recap the  
18 lost profits figures and the reasonable royalty figures,  
19 what do we have?

09:36:26

20 **A.** Well, lost profits on those Fugro surveys, you recall  
21 were 65.7 million. The lost profits on the non-Fugro  
22 surveys, those other customers, was 93.4 million. So the  
23 total is 159.1 million.

09:36:49

24 The reasonable royalty for Fugro was  
25 86.2 million. You saw that on the prior slide. And the

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*Cross-Sims/By Mr. Burgert*

1 correct?

2 **A.** Correct.

3 **Q.** And that would include helping find the damages  
4 documents out of these 7 million pages; right?

09:45:22 5 **A.** Well, helping -- I mean -- we, yes, I guess that  
6 would be correct, yes.

7 **Q.** And another thing I think you told Mr. Kaplan is that  
8 you asked the WesternGeco lawyers to get specific  
9 information from ION or Fugro through deposition  
10 questioning?

11 **A.** There was some of that, yes.

12 **Q.** And did the WesternGeco lawyers restrict you in any  
13 way from what you could ask, in terms of information?

14 **A.** Not that I know of. Not that I'm aware of.

09:45:53 15 **Q.** Did they tell you there was anything in terms of the  
16 information you requested that they couldn't get for you?

17 **A.** I can't think of any specific instances, no.

18 **Q.** Did you ask them to depose any of the oil companies  
19 to find out what the oil companies said about their  
20 requirement for steerable streamers?

09:46:16

21 **A.** I don't think I asked them to depose someone. It  
22 wasn't my place to ask them to depose someone. I asked  
23 them, you know, where we could get information about those  
24 revenues.

09:46:31 25 **Q.** Okay. And one of the things you relied on heavily --

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*Cross-Sims/By Mr. Burgert*

1 Q. Now, much of the data in the CRM database comes from  
2 reports that are gathered by WesternGeco people, from  
3 either conversations or publications or things like that;  
4 correct?

09:49:14

5 A. Well, you said much of it. I think the bulk of the  
6 data comes from their contact with people in the --  
7 relevant people in the industry, talking to customers,  
8 seeing what's happening. I wouldn't say on the ground. I  
9 would say on the sea, you know, their contacts and things  
10 like that. But I think there is some information that  
11 comes from some of those other sources that you've just  
12 described.

09:49:33

13 Q. Right. And to get the best output, you need the best  
14 input in any calculation; correct?

09:49:45

15 A. Yes. You want to use the best information that's  
16 available, correct.

17 Q. Okay. And in part of this two-plus year study  
18 million-dollar plus work, didn't you consider it part of  
19 your job to try to get the best information?

09:50:02

20 A. Within the constraints that we have in the context of  
21 a litigation, yes.

22 Q. Okay. Well, that's exactly my point. You know or  
23 don't you know, the constraints of litigation?

24 A. I do know that there are constraints, yes.

09:50:19

25 Q. And, in fact, you told your client, WesternGeco,

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*Cross-Sims/By Mr. Burgert*

1 Q. So it's within your realm of knowledge, after 30  
2 years in this business, and doing all these reports, that  
3 it is possible to get testimony from third parties?

4 A. Oh, sure.

09:52:56

5 Q. Right?

6 A. It is possible under certain circumstances, I think,  
7 yes. I don't know what those circumstances are, and I  
8 don't know what the limitations are because that's part of  
9 the legal part of the process. But I do know that it is  
10 possible in some circumstances to get third party  
11 depositions.

09:53:08

12 Q. And in this case, you didn't even investigate with  
13 your client, WesternGeco, whether they could subpoena an  
14 oil company to give a deposition about what they felt was  
15 important in this early?

09:53:20

16 A. No, I didn't -- I didn't investigate in the way you  
17 just said, but I tried to determine whether that  
18 information was available and I was told that it was not.

19 Q. Oh, okay. Well, let's explore that a bit. You asked  
20 if it was available and told that them that it was not?

09:53:38

21 A. Other than the information that was produced as the  
22 part of the litigation.

23 Q. So if, in fact, WesternGeco could have subpoenaed an  
24 oil company, they told you they weren't going to do it,  
25 use what we're giving you?

09:53:51

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*Cross-Sims/By Mr. Burgert*

1 the cost, but first they have to meet my main criteria,  
2 which is they have three bedrooms.

3 And in this case, based on what I've done,  
4 is looked at those surveys that have that primary criteria  
10:07:05 5 which is a requirement for lateral steering.

6 Then there's a decision made by the  
7 contractor -- by oil company, as to which contractor  
8 satisfies requirement, but then the decision is made based  
9 on other things.

10:07:20 10 **Q.** And your assumption there is lateral steering is the  
11 primary driver?

12 **A.** My assumption is that they require lateral steering,  
13 and they can't do the survey, or don't want to do the  
14 survey without it. And that's based on the information  
10:07:32 15 that I went through on my direct.

16 **Q.** Did you see any studies where the tender required  
17 lateral steering, that the contract ultimately went to  
18 someone who didn't have lateral steering?

19 **A.** I can't think of any examples.

10:07:57 20 **Q.** Okay.

21 **A.** But it certainly wasn't included in my lost profits  
22 calculations. So none of those surveys went to someone  
23 who didn't use lateral steering.

24 **Q.** No, I understand that. It's just that you've a read  
10:08:12 25 the testimony in the depositions, I take it, that it's

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*Cross-Sims/By Mr. Burgert*

1 very difficult to figure out from an oil company what  
2 drives their decision; right?

3 **A.** Yeah, I think I've heard that, yes.

10:08:26

4 **Q.** And, in fact, you've read testimony, I think,  
5 probably from the deposition of Mr. Walker, where he says,  
6 Even if they tell you the reason they picked you, you  
7 can't trust them because they might not be telling you the  
8 truth?

9 **A.** Well --

10:08:35

10 **Q.** Would you agree with that?

11 **A.** I think the oil companies would like to keep as much  
12 of their decision making process close to the vest as  
13 possible. That's not surprising. But, again, we were  
14 looking at not -- those other factors we were looking at  
15 the requirement for lateral steering and only -- we only  
16 looked at those 25 out of 207, where lateral steering was  
17 required.

10:08:49

18 **Q.** Before DigiFIN came to market in 2007, were there  
19 tenders that required lateral steering?

10:09:10

20 **A.** I -- well, if you mean tenders that went to all  
21 contractors, I'm not sure that I've seen any. If you mean  
22 tenders that might have gone to WesternGeco as a direct  
23 bidder, I think that's probably likely.

10:09:31

24 In fact, I think Mr. Walker may have  
25 testified to that. But it wouldn't surprise me if there

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*Cross-Sims/By Mr. Burgert*

1 Now, obviously, when they do a spread  
2 there's a lot of other things that take place and  
3 including the depth, the DigiBird, which I think is the  
4 depth control and ORCA is a navigation system.

10:12:35

5 So I understand that those are all part of  
6 the overall system.

7 **Q.** Do you know what the PCS is?

10:12:49

8 **A.** I believe that's the positioning control system  
9 and -- I'm not sure if that's part -- that's where lateral  
10 control system -- I'm not sure if it's interchange or if  
11 it's part of the same thing or what.

12 **Q.** Did you ever include that as part of your DigiFIN  
13 system?

10:13:00

14 **A.** If it's the lateral control system, then I would say  
15 yes.

16 **Q.** But you don't know if that's the lateral controller  
17 or not?

18 **A.** I've seen testimony that says it's the same and I  
19 don't know from personal experience whether it is or not.

10:13:10

20 **Q.** Now, the 93 -- or I'm sorry -- the \$65.7 million in  
21 lost profits for these Fugro surveys, is that money ION  
22 should pay?

23 **A.** Well, it's money that someone should pay.

24 **Q.** You don't know?

10:13:29

25 **A.** ION sold the systems, and Fugro used them to compete

*Johnny C. Sanchez, RMR, CRR - jcsreporter@aol.com*

*Cross-Sims/By Mr. Burgert*

1 with WesternGeco. So between the two of them, I believe  
2 that's what should be paid to WesternGeco for those  
3 surveys. It's not -- it's not my purview to say who  
4 should pay, but that's the damages that WesternGeco  
5 suffered.

10:13:48

6 **Q.** Well, how about the nonFugro surveys, those 10 lost  
7 profits for \$93.4 million, should Fugro pay for those?

8 **A.** No. Because Fugro it wasn't involved in those.

9 **Q.** Do you think all that's on ION?

10:14:03

10 **A.** Correct. They're the ones that sold those and  
11 supplied those DigiFIN systems to those contractors, and  
12 so they are the ones that caused the loss of sales and the  
13 loss of profits to WesternGeco.

14 **Q.** Now, you understand, don't you, that surveys done in  
15 the open sea 12 miles offshore U.S. are not infringing  
16 surveys; right? You've been told that?

10:14:24

17 **A.** Well, I'm not an infringement expert. I know that  
18 there's an issue as to where the surveys are conducted as  
19 to whether they infringe certain claims. But my  
20 assumption is that there is infringement by the supply of  
21 those DigiFIN systems, and that's what I've assumed in my  
22 calculations.

10:14:40

23 **Q.** So your assumption is that the supply of the systems  
24 from the United States, regardless of where title passes,  
25 where they go, anything, that's infringement?

10:14:55

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*Cross-Sims/By Mr. Burgert*

1 Q. When you calculated the damages based on sales to  
2 third-party surveyors, you relied mainly on the CRM  
3 database and discussions with WesternGeco personnel; is  
4 that right?

10:16:33 5 A. I wouldn't say mainly; but I did rely on that  
6 information, yes.

7 Q. What else did you rely on?

8 A. I relied on information, testimony from people at ION  
9 as to which boats had DigiFIN systems, what surveys and  
10:16:54 10 when they had them.

11 I used the CRM database to identify when  
12 those boats were used in certain surveys.

13 So, yes, I did rely on CRM, but that's not  
14 the only thing I relied on.

10:17:05 15 Q. No, I didn't really ask that question. I asked about  
16 the revenues these nonparty surveyors earned from doing  
17 the surveys using the ION system.

18 A. Right.

19 Q. Tell me your source for the revenue numbers.

10:17:18 20 A. Just the revenue number alone?

21 Q. Right.

22 A. That was from the CRM database.

23 Q. Now, the CRM database is something we've heard about  
24 that was compiled -- or is continuously being compiled by  
10:17:36 25 the folks at WesternGeco.

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*Cross-Sims/By Mr. Burgert*

1 And one of the things that you were able  
2 to do when you received all of the document production is  
3 compare the actual Fugro revenue to what the CRM said the  
4 Fugro revenue was; correct?

10:17:55

5 **A.** Correct.

6 **Q.** And at least for one of those surveys, I think that  
7 the CRM was off by over \$80 million, wasn't it?

10:18:13

8 **A.** I don't remember. I know that there were a number of  
9 surveys, obviously, that Fugro provided information for,  
10 and that some of them, the information in the CRM database  
11 was higher, and most of them, I think about a third were  
12 higher and rest of them were lower. And on -- overall, it  
13 turned out to be just about right on.

10:18:34

14 **Q.** And when you say "just about right on," you're  
15 talking what?

16 **A.** I'm talking about \$1.4 billion.

17 **Q.** No. I think we're talking past each other.

10:18:48

18 When you compared the Fugro numbers that  
19 were produced showing their actual revenues and compared  
20 that to the CRM database, which is what WesternGeco uses  
21 to put in wherever it gets its numbers about the  
22 revenues --

23 **A.** Right.

24 **Q.** -- the numbers were different; right?

10:18:58

25 **A.** The numbers were different; but again, if you look at

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*Cross-Sims/By Mr. Burgert*

1 the total -- some were higher; some were lower. But if  
2 you look at the total, it was almost -- it was very close.

3 Q. And what is very close? It's over a million dollars;  
4 right?

10:19:13 5 A. A million dollars on over a hundred million dollars,  
6 yes. Over a billion dollars.

7 Q. Well, you know, a million here, a million there,  
8 we're talking real money; right?

9 A. It's less than 1 percent. And it was actually -- the  
10:19:24 10 actual Fugro revenues were higher by over a million --  
11 about a million dollars. So the numbers that we used from  
12 the CRM database, had we used them, would have been lower  
13 than what actually -- what Fugro actually realized.

14 Q. My point, though, is the numbers in the CRM database  
10:19:43 15 were in some cases far different from the actual numbers.  
16 They just averaged out to be about a million for Fugro;  
17 right?

18 A. Correct.

19 Q. And you don't have any information from the other oil  
10:19:55 20 companies that you could compare to what the CRM database  
21 says their revenues were, so you relied on CRM?

22 A. Correct. And because the Fugro -- you know, the  
23 information from Fugro -- for the Fugro cases indicated  
24 that, for all of those surveys the difference was very  
10:20:09 25 small. So based on the fact that those other surveys --

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*Cross-Sims/By Mr. Burgert*

1 non-Q vessels?

2 **A.** I don't remember that.

3 **Q.** Now, how many Q-Marine vessels did WesternGeco have  
4 during this damages period that you calculated?

10:32:30 5 **A.** Well, it changed over -- it increased over time; but  
6 I think at the outset, they had about seven, maybe eight.

7 **Q.** How many do they have today?

8 **A.** I believe they have 11.

9 **Q.** So over the period of time that you calculated  
10:32:57 10 damages, their capacity in terms of Q vessels increased --  
11 didn't double, but it went up by what, 40 percent or so?

12 **A.** In round numbers.

13 **Q.** And these new vessels that they added were vessels  
14 that were much larger; they could pull more streamers.

10:33:18 15 Weren't they?

16 **A.** Two of them were; maybe three of them were.

17 **Q.** All right. And the vessels that they decommissioned  
18 were older vessels that could tow far fewer streamers;  
19 right?

10:33:29 20 **A.** Well, and I'm not sure what you mean by "far fewer."  
21 Some were 8 versus 10 or 12.

22 **Q.** Is that what you think the new ones tow?

23 **A.** I think most of them are 10 or 12.

24 **Q.** And you've heard the testimony that more streamers is  
10:33:48 25 better; right?

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*Cross-Sims/By Mr. Burgert*

1 **A.** I think it depends on the survey, but generally  
2 speaking, the more you have, the more you can cover.

3 **Q.** And the retirement of these vessels that you document  
4 on one of your slides, those were the older ones, weren't  
5 they?

10:34:04

6 **A.** Three of them were the older ones, yes.

7 **Q.** That towed fewer streamers, that were less  
8 sufficient?

9 **A.** There were eight-streamer.

10:34:16

10 **Q.** They were less efficient than new vessels; right?

11 **A.** Less efficient in what way?

12 **Q.** In fuel consumption.

13 **A.** I don't know for a fact. I mean, they continued to  
14 use them. So I don't think -- they didn't retire the  
15 vessels. They just took the Q rigging off the vessels.

10:34:31

16 **Q.** Right. And they --

17 **A.** They continued to use the vessels.

18 **Q.** They used them as source vessels; right?

19 **A.** I believe they used them as source vessels, yes.

10:34:41

20 **Q.** And that's because they needed source vessels, I take  
21 it?

22 **A.** Well, they always need source vessels, but they  
23 decided to use those rather than charter vessels based on  
24 the demand for the various types of vessels.

10:35:00

25 **Q.** I'm going to walk through some of the evidence that

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*Cross-Sims/By Mr. Burgert*

1 right?

2 **A.** Yeah. I mean, a lot of them are in the same area.

3 **Q.** In the water?

4 **A.** Well, they're in the water, but a lot of them are in

10:37:00 5 the same area; but yes. Generally speaking they take

6 place all over the world.

7 **Q.** Okay. And in order to mobilize, to do a survey, you

8 have to have a vessel in the area where the oil company

9 wants to survey; right?

10:37:11 10 **A.** You have to have one there when they wanted the

11 survey or roundabout that time. I mean, there's some

12 flexibility sometimes, but you have to get a boat to that

13 area, yes.

14 **Q.** And part of -- and in fact, a significant part of a

10:37:24 15 person or a -- a person -- of a company bidding to do one

16 of these surveys involves vessel availability, where that

17 vessel might be, how long it might take to get to the

18 survey area, that sort of thing; right?

19 **A.** Sure.

10:37:40 20 **Q.** Did you do any analysis looking at where the

21 WesternGeco vessels were at the time these bids came in,

22 or these tenders came in?

23 **A.** We did look at schedules that showed where vessels

24 were, what -- when they had capacity. But in talking to

10:37:59 25 Mr. Walker, he indicated that they would have planned

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*Cross-Sims/By Mr. Burgert*

1 differently had they -- the competition from DigiFIN not  
2 been there and they were planning 4D surveys.

3 In other words, they would have, if  
4 necessary, deployed their boats differently and more  
10:38:20 5 efficiently had they known that the demand was going to be  
6 there and only they could satisfy it.

7 So it's kind of like if -- you know, if I  
8 have a two-car family and my wife has five errands that  
9 she wants to run, well, she could take her car and go and  
10:38:39 10 do all five of them and come back, and it would take her  
11 quite a bit longer than if we used both cars and she did  
12 three and I did two, and I did three and she did two.

13 So -- and they would plan their fleet  
14 differently. Number one, the fleet would be different,  
10:38:52 15 would have been different because it would have had more Q  
16 vessels available; and, number two, they would have  
17 planned it differently, to be more efficient, given the  
18 surveys that were available at the time.

19 Q. And you remember the testimony from Mr. Walker that  
10:39:07 20 they only had 5 percent capacity; right? We've talked  
21 about that.

22 A. Yeah. I don't remember the 5 percent number, but I  
23 did go through with Mr. Walker -- I did our own analysis  
24 of capacity availability, and then I went through with  
10:39:19 25 Mr. Walker. And he actually determined that they had more

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*Cross-Sims/By Mr. Burgert*

1 capacity available, almost double than what I came to. So  
2 I felt comfortable with my numbers.

10:40:03

3 **Q.** Do you remember seeing any evidence that WesternGeco  
4 was -- WesternGeco decided not to respond to tenders  
5 because it didn't have vessels available?

10:40:22

6 **A.** I do. And, again, at the time, under the  
7 circumstances in which they were competing, having to  
8 compete with DigiFIN, the competitors who had DigiFIN,  
9 having that out there and having reduced their capacity  
10 because of that, sometimes in the real world, what  
11 actually happened, they didn't have a ship available, so  
12 they didn't bid.

10:40:34

13 Now, again, had the DigiFINs not been  
14 there, that would have been different. They would have  
15 had boats faster; they would have had more boats with Q,  
16 Q-Marine.

10:40:50

17 **Q.** And that's based upon your talks with Mr. Walker, who  
18 says, in retrospect, that's what they would have done?

10:41:07

19 **A.** Well, in retrospect, they -- you know, what we're  
20 talking about is what would have happened had DigiFIN not  
21 come on to the market. And had DigiFIN not come on the  
22 market, the situation back at the time when they were  
23 making these decisions to defer and to decommission and  
24 derig boats, the environment would have been different,  
25 and those decisions wouldn't have been made because they

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*Cross-Sims/By Mr. Burgert*

1 wouldn't have needed those boats.

2 **Q.** Even knowing they increased their Q boat capacity by  
3 40 percent during the infringement period?

4 **A.** Well, that's -- you're right. And that's because --  
10:41:21 5 even -- even in those circumstances, they recognized that  
6 there was a shift towards lateral steering and Q vessels;  
7 and so, they continued to grow the Q vessels over that  
8 time period.

9 **Q.** Right. Let's look at your Slide 14.

10:41:37 10 Now, this is the one where it says "ION  
11 sales reflect demand."

12 **A.** Yes.

13 MR. BURGERT: Can you zoom in, please, first of  
14 all, on this part right up here, the spreadsheet. Slide  
10:41:59 15 over just a little bit.

16 BY MR. BURGERT:

17 **Q.** This is referring to the DigiFIN units sold, and you  
18 list them across the top. And then the DigiFIN revenue.

19 So that would be what ION got paid for the  
10:42:12 20 DigiFIN; right?

21 **A.** Well, actually, the next line is the discount, so  
22 they actually got paid the net revenue, which is what I  
23 used.

24 **Q.** The net revenue right here?

10:42:21 25 **A.** Correct.

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*Cross-Sims/By Mr. Burgert*

1 not sure again, this is not to scale, but it's flattening  
2 off, it's levelling off, it's not going up.

3 Q. In fact, the revenues went down, didn't they?

10:48:48

4 A. The revenues went down, but the cumulative revenue is  
5 continuing to go up. That's what this chart shows. It's  
6 cumulative revenue. That's why the number is  
7 63.3 million.

10:49:16

8 Q. Let's look at the next slide, Slide 15 that you were  
9 shown. And this talks about the 2007 surveys using  
10 DigiFIN systems generating \$3 billion in revenue, and  
11 you've taken these numbers from the WesternGeco CRM;  
12 right?

13 A. No.

14 Q. Where did they come from?

10:49:35

15 A. Well, some of them came from the CRM and some of them  
16 came from Fugro.

17 Q. If they didn't come from Fugro, is it safe to say  
18 they came from the CRM?

19 A. Yes. They either came from the CRM or Fugro.

10:49:50

20 Q. And likewise here, we can see the revenue from  
21 surveys starts in 2008 with 138 million?

22 A. Uh-huh.

10:50:14

23 Q. And it goes up, and goes up further, and it goes up  
24 to a billion in 2011, and then during the period you  
25 studied in 2012, it is down to 646 million; correct?

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*Cross-Sims/By Mr. Burgert*

1 have any specific evidence that it's being used. It  
2 wouldn't surprise me if it's being used now.

3 Q. You reviewed Dave Gentle's deposition; right?

4 A. Yes.

10:52:41 5 Q. In fact, you quoted from it several points. Did you  
6 read where Mr. Gentle testified that Nautilus has  
7 15 percent of the market?

8 A. If he said it in his deposition then I saw it, yeah.  
9 He's talking about today.

10:52:55 10 Q. Well, his deposition was in October of 2011.

11 A. Okay.

12 Q. He would have been talking about then.

13 A. Okay.

14 Q. Has Nautilus or the company making Nautilus been sued  
10:53:09 15 for infringement of these patents?

16 A. Well, I don't think they've been sued yet, but I  
17 think they've been accused. In other words, WesternGeco  
18 has accused them of infringement.

19 Q. Have you seen that letter?

10:53:20 20 A. I haven't seen it, no.

21 Q. How do you know that's what happened?

22 A. Because I've been told. In fact, I may have heard it  
23 here. I don't know.

24 Q. You may have heard it here?

10:53:29 25 A. I know I've heard it in the past. I may have heard

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*Cross-Sims/By Mr. Burgert*

1 Q. So that is simply on the fin and the lateral  
2 controller?

3 A. Well, that particular chart was just the fins, but  
4 Mr. Gentle testified that the profit margin on the lateral  
5 controller was consistent with the fins.

11:02:11

6 Q. And then you've got the profit margin on the rest,  
7 27.4, we've talked about that number.

8 A. Correct.

9 Q. And then you talked about premium profit on DigiFIN  
10 systems alone as 26.6 percent?

11:02:24

11 A. Correct.

12 Q. This is just a subtraction?

13 A. Correct.

14 Q. Next, you talk about Convoyed products, and I'd like  
15 to talk to you a bit about that, if you could show us 96,  
16 please.

11:02:39

17 Here you talk about sales of Convoyed  
18 products and you come up with a number of \$67.8 million;  
19 right?

20 A. Correct.

11:02:56

21 Q. And where did you get that number?

22 A. I got that number from an analysis that was presented  
23 in a report by Mr. Gunderson, ION's expert, as it relates  
24 to pull through sales. I mean, there were documents in  
25 the evidence that indicated pull through sales and

11:03:13

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*Cross-Sims/By Mr. Burgert*

1 expectations for certain products, Mr. Gunderson's  
2 analysis included more products.

3 Q. So this number, the 67.8 million is a number that  
4 Mr. Gunderson, our expert came up with, you relied on it,  
11:03:34 5 and you think it's accurate, or you wouldn't be presenting  
6 it here today; correct?

7 A. I calculated it based on the numbers that were in his  
8 report.

9 Q. All right.

10 A. Yes.  
11:03:42

11 Q. And do you remember what three items went into his  
12 determination of that number?

13 A. DigiRange, DigiShot, and I forget the third.

14 Q. But there were three proposed transactions that you  
11:03:59 15 used?

16 A. You mean the three sales? The individual sales you  
17 mean, the customers? Is that what you're saying?

18 Q. They weren't sales, were they? They were proposals?

19 A. Correct.

11:04:08 20 Q. And they were proposals that didn't go through?

21 A. Correct.

22 Q. And Mr. Gunderson used those for completely different  
23 purpose than to show Convoyed sales, didn't he?

24 A. No. He was showing, in fact, that's what his report  
11:04:24 25 said, was that when they sold -- when the sales of the

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*Cross-Sims/By Mr. Burgert*

1 other products that for every dollar of DigiFIN products  
2 that were sold, it would be \$1.68 of these other products  
3 that were sold.

11:16:35

4 **Q.** And you came up with that number based upon the three  
5 proposals addressed in Mr. Gunderson's report?

6 **A.** Correct.

7 **Q.** And you extrapolated the proposed purchases from  
8 those three deals to the world of DigiFINs that had been  
9 sold?

11:16:52

10 **A.** Correct.

11 **Q.** Right? So you assumed that those proposals would be  
12 typical of what you would consider Convoyed sales because  
13 if they're not typical, you can't apply them across the  
14 board; right?

11:17:06

15 **A.** I considered that they would be representative, in  
16 other words, they would cover the spectrum of what would  
17 be expected by ION.

18 **Q.** So let me make sure I understand.

11:17:24

19                   Instead of looking at actual sales that  
20 had taken place and looking at invoices and purchase  
21 orders to see what items were bought along with DigiFIN,  
22 you looked at these three proposals that didn't go through  
23 as they were originally made, and did you average --

24 **A.** Yeah.

11:17:40

25 **Q.** -- the deal to come up with your \$1.68?

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*Cross-Sims/By Mr. Burgert*

1 **A.** I did. And let me be clear on why I didn't do what  
2 you just suggested, which is look at the DigiFIN sales and  
3 look at all the other products. Because what I'm in --  
4 I'm not interested in necessarily the relationship between  
5 all those other products and DigiFIN, that what actually  
6 happened. Because we don't know. Some of those other  
7 products may have been sold independent of the DigiFIN.  
8 And just because they were sold on the same invoice, they  
9 still may have been sold independently.

11:17:55

11:18:10

10 But in Mr. Gunderson's report, he  
11 represented that, for those proposals, this is where they  
12 were selling other products because of the sale of the  
13 DigiFIN. So that's what I used as -- as to come up with  
14 \$1.68 and not the other data, which may have included  
15 sales that shouldn't have been included. I think that  
16 number would be much higher than \$1.68 if I did what you  
17 were suggesting.

11:18:29

18 **Q.** Okay. Well, I'm glad you didn't do it then.

19 But let's focus on the \$1.68. And that  
20 only relates to the three. We've established that; right?

11:18:43

21 **A.** It was calculated based on those three; correct.

22 **Q.** Exactly. And you calculated that, and the \$1.68 is  
23 non-DigiFIN products; correct?

24 **A.** Correct.

11:19:04

25 **Q.** And that's the amount of non-DigiFIN products that

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*Cross-Sims/By Mr. Burgert*

1 might have been 10 percent, 15 percent.

2 **Q.** When did Q-Marine first commercially deploy on solid  
3 streamers?

11:28:08

4 **A.** The actual deployment, I believe, was April of 2010;  
5 but it was deferred because the first deployment was going  
6 to be the TASMAR, which was a new vessel, and that vessel  
7 was delayed or deferred, as we've talked about earlier,  
8 because of the market conditions.

11:28:28

9 So instead of taking delivery in 2009,  
10 late March of 2009, when it was originally scheduled, they  
11 deferred the delivery until April of 2010. And when that  
12 boat came on, that's when they -- it was equipped with  
13 4D -- I'm sorry -- with solid streamers.

11:28:48

14 **Q.** So is it fair to say that, before that 2010 date, the  
15 Q-Marine system did not offer a solid streamer?

16 **A.** In the actual world as it developed, yes, that's  
17 true.

18 **Q.** And you reviewed a number of the tender documents  
19 that required solid streamers before 2010; correct?

11:29:08

20 **A.** There were tender documents. Some say they required;  
21 some say they preferred. I don't remember all the dates,  
22 but there may have been some before 2010.

11:29:31

23 **Q.** And if they were required as part of the bid, then  
24 WesternGeco would be disqualified from those because they  
25 didn't have solid streamers; right?

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*Burgert Cross of Raymond Sims*

12:23 1 share.

2 He says: DigiFIN has captured about the third of  
3 the market, appears to list 15 percent of the market for  
4 Nautilus, 35 percent for DigiFIN and 50 percent for Q.

12:23 5 Do you believe that was an accurate market share  
6 around January of 2010?

7 Yes, I think listing 15 percent for Nautilus and  
8 50 percent for Q --

9 A I'm sorry. I can't read this. It is like a blank piece of  
10 paper.

12:24 11 Q Mr. Gentle was saying: It appears to list 15 percent of  
12 the market for Nautilus, 35 percent for DigiFIN, 50 percent for  
13 Q.

14 Do you believe that was an accurate market share  
12:24 15 around January of 2010?

16 The answer is: Yes, I think this was 15 percent  
17 for Nautilus, 50 percent for Q and 35 percent for DigiFIN. I  
18 think that this is -- it's about right.

19 Now, do you have any empirical data to dispute  
12:24 20 that?

21 A I don't know what he was referring to. There was a  
22 document that was being referred to there, but I don't have any  
23 information to either corroborate that or dispute it. But I do  
24 have other information that indicates that Nautilus was not  
12:25 25 commercially viable at that time, so I'm not sure how they

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*Burgert Cross of Raymond Sims*

12:25 1 could have gotten 15 percent.

2 Q Okay. I want you to engage in a little exercise with me.

3 Do you have a calculator with you?

4 A Do I?

12:25 5 Q Yes, sir.

6 A No, I -- well, I mean, I do, but not with me here.

7 Q You didn't bring a calculator with you?

8 A I do not. I can do it with a piece of paper and a pencil.

9 **THE COURT:** I have a not terribly new generation

12:25 10 calculator.

11 **MR. BURGERT:** Well, I've got one.

12 BY MR. BURGERT:

13 Q The calculation I want to go over is this. We looked at

14 this slide before lunch. It is the one that talks about

12:26 15 convoyed products. And for the purposes of this exercise --

16 and I know you disagree with this strongly -- but I want to

17 assume that we don't have convoyed sales. Okay? And so the

18 profit from convoyed sales is gone and the premium profit that

19 you calculated is \$11.3 million, which would make the total

12:26 20 premium profit 11.3.

21 So if we take out convoyed sales, which I know

22 you disagree with, I'm right that this total premium profit

23 would be 11.3, correct?

24 A Well, based on your math, yes.

12:26 25 Q Well, tell me where my math is wrong.

*Thompson Cross of Raymond Sims*

12:39 1 Q Okay. So we have got a -- the revenue here, and I did some  
2 quick math. It is \$30,900,000 of revenue on these three  
3 Statoil surveys, and we're basically -- the jury is to believe  
4 that is an appropriate amount to be included in lost profits  
12:39 5 because of your assumption about Statoil, correct?

6 A Well, it is not -- there is evidence in the record that I  
7 pointed to, but I concluded that for those 4D surveys, they  
8 required lateral steering. If you want to call it an  
9 assumption, I guess you can, but it is based on what I have  
12:39 10 heard and what I've seen in the record.

11 Q And you would agree -- in fact, you talked a lot about --  
12 we're not going to go back into it, but you had access to the  
13 CRM database. The jury has heard a lot about it.

14 A I did.

12:39 15 Q And that it was actually a huge source of information for  
16 your report, right?

17 A I don't know that I would say it was a huge source, but it  
18 was one of many sources.

19 Q One of many sources.

12:40 20 A It is a huge database, if that is what you mean.

21 Q And it is unwieldy.

22 A It is.

23 Q It was actually introduced, I believe, as Plaintiff's 547.  
24 But we have taken a portion out here, I want to show you.

12:40 25 **MR. THOMPSON:** Can we pull up that slide, Keith?

*Thompson Cross of Raymond Sims*

12:52 1 ION 269. It was a WesternGeco document. You will have to  
2 forgive my handwriting. The ION number was 269. This is the  
3 corresponding Fugro number.

4 A I couldn't really see it.

12:52 5 **MR. THOMPSON:** Can we bring up ION 269 on the screen,  
6 please?

7 BY MR. THOMPSON:

8 Q Do you see that this is a WesternGeco three-year plan from  
9 2001 to 2004?

12:52 10 A I do.

11 Q Do you know if you ever considered this document in your  
12 analysis?

13 A I don't remember whether I did or not.

14 Q If we could go to Bates ending 7113, please. If we could  
15 go down to the second to the last paragraph.

16 A Uh-huh.

17 Q Could we highlight where it starts "WesternGeco is the  
18 dominant player"?

19 You see here in the business plan beginning  
12:53 20 between 2001 and 2004, WG internally said that while they are  
21 the dominant player, there is an assumption they cannot hold on  
22 to the current market share.

23 Did you consider in your analysis that internally  
24 within WG there was already an expected inability to hold on to  
12:53 25 the market share?

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*Thompson Cross of Raymond Sims*

12:53 1 A Well, sure. They didn't expect to hold on to their overall  
2 market share, but they certainly expected to hold on to their  
3 proprietary market share, which was the market for lateral  
4 steering, because they were the only ones that could provide  
12:53 5 that particular product.

6 So overall the market share might decline, but  
7 their market share in the lateral steering market, which is  
8 what that chart that you put up of mine represented, they would  
9 have expected to maintain that 100 percent share.

12:54 10 Q Let's talk about that for a moment.

11 A Okay.

12 Q You were here for Mr. Walker's testimony?

13 A Yes, I was.

14 Q Did you -- and you heard the testimony and the jury has  
12:54 15 seen the document several time -- we won't go back through  
16 it -- about the chart, that WG internally knew there was going  
17 to be a pricing decline relating to Q before 2008?

18 A Are you talking about the one with the three?

19 Q Yes, sir.

12:54 20 A Yeah. I'm not sure that that's what that document showed,  
21 but they recognized that there is a life cycle of products, and  
22 they are trying to continually innovate and develop new  
23 products.

24 Q You would agree with me Mr. Walker is in a better position  
12:54 25 to speak on that document than you are?

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*Thompson Cross of Raymond Sims*

14:13 1 Q Did you review the CRM database to see if there were any  
2 comments about whether or not WG bid on the ENI Togo job?

3 A I did look at the CRM database. I don't recall what it  
4 said, at least as I sit here, from memory.

14:14 5 Q So at least today, with the evidence before this jury, you  
6 can't even testify for sure whether WG bid on this job?

7 A No. I believe it did bid on the job.

8 Q But you don't have any evidence that you are going to  
9 present to the jury other than you believe that they did.

14:14 10 A My recollection is that all of the projects that we  
11 included in our lost profits were jobs for which WesternGeco  
12 bid.

13 Q Do you know why that evidence wasn't shown in your  
14 PowerPoint presentation?

14:14 15 A No. I mean, it wasn't part of my presentation. I was  
16 identifying jobs that required lateral steering. And so the  
17 likelihood is that WesternGeco would have won those jobs.

18 **MR. THOMPSON:** Now, if we can go back to the Elmo,  
19 please, Ms. Loewe. Thank you.

14:14 20 BY MR. THOMPSON:

21 Q So, again, I understand your opinion is it is fine. But if  
22 others -- because WG has not presented evidence they even bid.  
23 Do you not feel that this isn't an appropriate lost profits  
24 survey? That would be \$15,475,820.

14:15 25 A I believe that was the revenue from that survey.

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*Thompson Cross of Raymond Sims*

14:22 1 correct?

2 A Not necessarily. Obviously ION and Fugro wouldn't have it,  
3 but that doesn't mean to say that WesternGeco would have it  
4 either if they lost.

14:22 5 Q Do you recall -- the last one I want to talk to you on lost  
6 profits about -- do you recall one of the Apache surveys -- it  
7 is actually the most recent one, called the Apache Kenya. It's  
8 a 2012 survey?

9 A I do.

14:22 10 Q And you are also claiming that as a lost profits survey  
11 against Fugro in asking for damages from WG, correct?

12 A Correct.

13 Q Okay. Sir, if WG -- let's back up. I think we already  
14 established this one. Your opinion is, even if WG doesn't bid,  
14:23 15 that's okay for your lost profits analysis?

16 A I don't think the fact that they bid or did not bid should  
17 have an impact. However, I believe that I only included  
18 contracts for which they did bid.

19 Q How do you win a bid that you don't even bid on?

14:23 20 A Well, it depends on why you didn't bid. If you didn't bid  
21 because at that particular time your capacity was constrained  
22 because you had adjusted your capacity to take into account the  
23 competition from infringing products, then I think it would be  
24 appropriate, given the fact that you would have bid, given that  
14:23 25 it needed lateral steering. However, I don't believe I've

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*Redirect-Sims/By Mr. Kaplan*

1 Q. All right. Let's look at the exhibit that  
2 Mr. Thompson showed you, but only partially. Fugro  
3 Exhibit FD 279. And let's go back to the very beginning  
4 of the e-mail stream, way back at the back. If I can lay  
5 this down flat get it focused appropriately.

08:17:45

6 This is an e-mail from Apache. Do you see  
7 that?

8 A. Yes.

9 Q. Okay. And if we look on the next page up, we can see  
10 than it went to Paul Young, who's the vice-president of  
11 Fugro Geoteam?

08:17:59

12 A. Correct.

13 Q. And on this job, you see what it says about the kind  
14 of acquisition and processing that was going to be done on  
15 this job?

08:18:17

16 A. Results through fresnel zone binning, the process,  
17 yes.

18 Q. And do you remember Mr. Walker's testimony about  
19 fresnel zone binning?

08:18:31

20 A. That it requires fan mode? Yes.

21 Q. And is fan mode something that you don't get without  
22 lateral steering systems?

23 A. It is not something -- it is something you need for  
24 lateral steering to do.

08:18:45

25 Q. They are critical and essential to providing this

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*Recross-Sims/By Mr. Thompson*

1 database is based on information that they get from  
2 customers or from their contacts in the industry at that  
3 time.

08:43:16

4 Q. So you weren't here for Mr. Scoulios's testimony;  
5 correct?

6 A. I was, yes.

7 Q. And we'll just have to decide who remembers whether  
8 he used the words "rumor" and "innuendo" that get included  
9 in the CRM; right?

08:43:28

10 A. I guess, yes.

11 Q. Now, isn't it also true that the exact type of the  
12 information, maybe not from this document, but from this  
13 seismic scuttlebutt, WG document, is the type of  
14 information that gets uploaded by the salespeople into the  
15 CRM database?

08:43:46

16 A. I'm not sure if that's true or not.

17 As I said, I think there may be some  
18 pieces of the information from sources like that that  
19 would get in there if they thought they were relevant; but  
20 predominantly, it's based on, you know, information that  
21 they believe is reliable from reliable sources.

08:44:00

22 Q. And so, the type of information here that we looked  
23 at regarding the Trader West anchor 3D, not 4D survey  
24 which you have in your report, this is the exact type of  
25 information WG is going to rely on to track their competitors

08:44:15

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*Recross-Sims/By Mr. Thompson*

1 and put in their CRM database that somehow now you're  
2 discounting it as rumor and innuendo? Is that what I  
3 heard this morning?

08:44:32

4 **A.** I'm not discounting it as rumor and innuendo. I  
5 mean, this is a -- this is what they called this, whatever  
6 this document is. That doesn't mean to say it's rumor.  
7 It means that's the information that they've received in  
8 the marketplace --

9 **Q.** Last --

08:44:40

10 **A.** -- is the cause.

11 **Q.** Last issue. I want to go back very quickly and talk  
12 about fresnel zone binning.

13 **A.** Okay.

14 **Q.** That's between Apache and Fugro; correct?

08:44:51

15 **A.** What do you mean?

16 **Q.** Well, you know, because you've looked at it as part  
17 of your analysis in this case, that there's actually a  
18 patent for fresnel zone binning, and there's a license  
19 agreement that is between Fugro and Apache; correct?

08:45:05

20 **A.** I believe Apache has a license on fresnel zone  
21 binning.

22 **Q.** Does WG have the ability to offer fresnel zone  
23 binning? Do they have a license do it?

08:45:19

24 **A.** I believe they do offer it, but I don't know if -- I  
25 don't think they have a license from Apache. I don't

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*Direct-Moffat/By Mr. Wade*

1 surveys, acquiring surveys, providing acquisition  
2 technology, processing seismic data, and then interpreting  
3 that seismic data afterwards.

4 Q. Those are the four columns we see across the slide?

10:16:10

5 A. They are.

6 Q. And below that, we see three green shapes.

7 What do those represent?

8 A. Well, these represent the three key business units

9 within ION. And the first one at top on the left-hand

10:16:25

10 side is a marine imaging systems division, and that's

11 really what I'm accountable for today. And they build

12 marine acquisition technology and provide planning and

13 software services.

14 Q. So the technology at issue in this case is developed

10:16:43

15 within the marine imaging systems division?

16 A. That's correct.

17 Q. All right. Briefly tell us what the other two

18 divisions are.

19 A. The GX Technology Group you see there in the middle,

10:16:53

20 they were acquired by ION or I/O in 2004, a very similar

21 time to when they acquired Concept Systems. They are a

22 seismic processing company. So they take the seismic data

23 that's been acquired, either in a land or a marine survey,

24 and they process it to build the image.

10:17:12

25 Q. Does ION own any survey vessels?

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*Direct-Moffat/By Mr. Wade*

1 **A.** No, they don't.

2 **Q.** ION is a provider of survey equipment?

3 **A.** It's a provider of survey equipment and its  
4 technology and services.

10:17:23 5 **Q.** All right. Let's look at Slide 3, entitled  
6 "Evolution of ION's Marine Imaging Systems."

7 **A.** Okay. This is the group that I'm responsible for,  
8 and this tries to give a sense of the history. And  
9 Input/Output as the company was known then was started  
10:17:42 10 more than 40 years ago, back in 1968.

11 In 1968 they were a land technology  
12 company. They decided at some point to change the  
13 strategy and get into the marine seismic technology  
14 business. And to do that, they spent \$120 million  
10:18:03 15 purchasing Western Geophysical's exploration products  
16 group. And that was in 1995.

17 And with the acquisition, they got a lot  
18 of IP. I think almost a hundred patents were acquired.

19 **Q.** And Western Physical Exploration products group, is  
10:18:18 20 that from the Western Geophysical that was later combined  
21 with Geco-Prakla to form WesternGeco?

22 **A.** That's correct. That was their technology group.

23 **Q.** And then you have another evolution of the company in  
24 1998 with DigiCOURSE.

10:18:32 25 What's that?

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*Direct-Olivier/By Mr. Torgerson*

1 products in the marine seismic specs?

2 **A.** Yes, sir.

3 **Q.** Tell us briefly about that.

4 **A.** After the launch of our product we called the 5011

10:22:15

5 DijBird in the '90s, we were honored by the Seismic

6 Geophysical Society, award called the Distinguished

7 Achievement Award in 1994, for our contribution to the

8 industry.

9 And it was a very proud moment for

10:22:29

10 everyone in the firm, and it was greatly related to the

11 work that we've done in our optical compass work and our

12 towed depth platform.

13 **Q.** We've heard something about the DigiBIRD and we've

14 even seen it. Did you have a role in developing that

10:22:45

15 product?

16 **A.** Yes, sir.

17 **Q.** What role?

18 **A.** Well, I was hired in 1988, and joined the company.

19 And at that time, the product offerings for depth keeping

10:22:57

20 were very primitive. There were a few products on the

21 market, but no one had really established a commercial

22 viable solution.

23 So my management asked me to develop a

24 project, make a proposal for a replacement depth keeping

10:23:13

25 for the industry, and to integrate a compass solution as

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*Direct-Olivier/By Mr. Torgerson*

1 well, to steer the cable.

2 So as a very young engineer, a quantity of  
3 one, I was a first mechanical engineer hired in this  
4 little company. I was a young man. Quite an intimidating  
10:23:30 5 project, but quite exciting.

6 I put together a proposal on how to solve  
7 the problem, I brought it to the owner of the company and  
8 he was grateful and willing to proceed. And I spent the  
9 next 18 months designing and developing and testing the  
10:23:44 10 product known as DigiBIRD today.

11 **Q.** You mentioned that there were some other older  
12 product offerings. Is this one similar to that?

13 **A.** Yes, sir. That's what I am referring to. That is --  
14 was typical of the industry in the early '80s, mid '80s.

10:23:59 15 **Q.** What is this that we're looking at?

16 **A.** That is a competitor's product. It's called an  
17 RCL 2. It's a depth device. It was made by Centron in  
18 Houston, and that was kind of state-of-the-art when I  
19 entered the business.

10:24:12 20 **Q.** And what were some of the immediate criticisms you  
21 had of a device like this?

22 **A.** Well, first of all, there is a compass in it. It is  
23 made out of metal, so it doesn't work very well. Too much  
24 metal near the compass doesn't work.

10:24:27 25 Secondly, it's made out of steel that is

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*Direct-Ledet/By Mr. Torgerson*

1 techniques that were put in place, to your recollection,  
2 during the 1990s, to avoid disbanding gel meant?

11:04:54

3 **A.** You know, some of the approaches you might consider  
4 them to be rather primitive, cables, ropes, chains, not  
5 only at the front of the cable, but perhaps down the  
6 length of the cable to keep a certain separation. And  
7 while that technique may have worked in certain  
8 applications by not allowing the streamers to separate  
9 beyond a certain distance, as you would expect, it did

11:05:12

10 nothing from preventing -- you know, to prevent those  
11 cables from getting closer and potentially entangling.

12 **Q.** Sort of like where you tow a car and you have a rope  
13 between the two vehicles you might have a maximum value,  
14 but it doesn't stop the back car from hitting the front  
15 car?

11:05:27

16 **A.** Correct.

17 **Q.** All right. What were some of the specific devices  
18 that you recall being discussed at the time?

11:05:37

19 **A.** We had -- at one point we talked to a company in the  
20 UK, that had developed some technology to have a steerable  
21 tail buoy. And so, you know, this was something that  
22 would be something that would be on the end of the  
23 streamer cable. And it would, you know, at a minimum,  
24 help steer the ends of the cable.

11:05:55

25 **Q.** And were there considerations within DigiCOURSE at

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*Direct-Ledet/By Mr. Torgerson*

1 the time about other applications for such a steerable  
2 buoy?

3 **A.** Yeah, it would be potentially useful at the front of  
4 the streamers as well. Either on the power veins to help  
11:06:10 5 spread out and change dynamically the positions, and maybe  
6 even at the front of each streamer as well.

7 **Q.** Let's turn to DigiCOURSE's specific work on these  
8 issues. When do you first recall this becoming a project  
9 within DigiCOURSE?

10 **A.** In the -- in terms of an official project, around the  
11 '92, '93 timeframe.

12 **Q.** And specifically, what was the solution that you were  
13 considering?

14 **A.** We were looking at what we had referred to as a wrap  
11:06:44 15 device. So we were bringing out a next generation suite  
16 of positioning products that included compasses, acoustic  
17 positioning devices, as well as a combination depth and  
18 lateral controller that would actually install around the  
19 circumference of the streamer cable.

11:07:05 20 **Q.** And what were you calling this project in this  
21 timeframe?

22 **A.** NGP, next generation positioning, next generation  
23 streamer positioning.

24 **Q.** Now, in addition to your project management role, did  
11:07:19 25 you play a role in some of the early design input or

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*Torgerson Direct of Kenneth Williamson*

15:44 1 So that was one of the -- that is one of the  
2 arguments they used, and I guess it was probably a serious  
3 concern they had with respect to actually having data recorded  
4 on their block that wasn't -- that they didn't have control of.

15:44 5 Q So, Mr. Williamson, in your experience, did this hard-line  
6 refusal to release that data cause a backlash in the industry  
7 during the time that Q-Marine was having difficulty getting  
8 traction anyway?

9 A Yes. Absolutely. Certainly.

15:45 10 Q Did you discuss that with Robin Walker?

11 A Absolutely.

12 Q Did you have an agreement with him? Were you of like  
13 minds?

14 A No. No.

15:45 15 Q What was his position?

16 A I think there was some precedent -- I don't know about  
17 precedent, but some examples of some downhole tools where there  
18 were internal -- there were some downhole examples where some  
19 of the raw information was retained, some engineering-type  
20 information.

15:45 21 So it wasn't -- so there were some examples from  
22 the downhole world in Schlumberger that that was the case. In  
23 fact, that actually led to a discussion on the saying, well,  
24 maybe a better way to approach this was, rather than say this  
15:46 25 is raw data that you are never going to get, maybe there's a

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*Torgerson Direct of Nils Lunde*

08:19 1 Q Okay.

2 A I knew there were conversations around it but...

3 Q Let's say Polarcus here. Were you aware that ION sells  
4 equipment to WesternGeco also?

08:20 5 A Yes, very much so.

6 Q So if ION is an equipment manufacturer that sells stuff in  
7 the market to a variety of different contractors, that wouldn't  
8 make ION's relationship with Fugro any different than ION's  
9 relationship with WesternGeco, would it?

08:20 10 A No.

11 **MR. TORGERSON:** All right. I would mark that as  
12 Williamson Demonstrative 3.

13 No further questions.

14 **THE COURT:** Ms. Tsou, anything?

08:20 15 **MS. TSOU:** No questions, Your Honor.

16 **THE COURT:** Okay. You may step down. Thank you, sir.

17 May the witness be excused?

18 **MR. TORGERSON:** The witness may be excused, yes.

19 **MR. BURGERT:** The next witness is Mr. Nils Lunde by  
08:20 20 video deposition.

21 **NILS LUNDE, HAVING BEEN DULY SWORN, TESTIFIED BY VIDEOTAPED**

22 **DEPOSITION AS FOLLOWS:**

23 **DIRECT EXAMINATION**

24 **NORWEGIAN JUDGE:** Then we will proceed. It will be so  
08:21 25 that I will take your personal data into the court book, and

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*Burgert Direct of Bob Peebler*

15:11 1 third-party navigation system on seismic vessels?

2 A Yes. It is on the majority of vessels. Even -- yeah, it  
3 would be on the majority of vessels. Even some of the  
4 competitors who have an equipment side of their business to  
15:11 5 sell also have our software.

6 An exception to that would be WesternGeco, who  
7 has rolled their own. That's what I call it. In that case,  
8 they have their own software, but they also use our DigiBIRDS,  
9 which they figured out how to make it work some way. So I  
15:11 10 think that is a good example of where the software is designed  
11 for people to use it, but our equipment is also designed for  
12 people to integrate into other people's software.

13 Q That's a good little detour to take right now. WesternGeco  
14 is a big customer of ION's; is that right?

15:11 15 A Yeah. They have been a good customer for a long time.

16 Q If you think that one of your vendors has ripped you off  
17 for over \$100 million, do you keep buying from that vendor?

18 A I wouldn't. I wouldn't.

19 Q I wouldn't either.

15:12 20 Is WesternGeco still buying equipment from you?

21 A Yes.

22 Q On the open source technology that we were discussing is --  
23 your concept organization, the one that does the software in  
24 Edinburgh, do they provide other navigation systems with the  
15:12 25 method to tie in to our DigiFIN if they need to?

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13:33

1

P R O C E E D I N G S

2

*(Jury not present)*

3

**THE COURT:** Good morning. Welcome back.

4

**MR. LOCASCIO:** We are pleased to inform the Court that

07:30

5

over the weekend, WesternGeco and Fugro have reached a

6

settlement, and we filed a stipulated dismissal with the Court.

7

**THE COURT:** Very well. Thank you.

8

**MR. PIERCE:** Mr. Winspear is still under subpoena by

9

ION. So you may be seeing the two of us here now and then as

07:31

10

they decide how they're going to --

11

**THE COURT:** Okay. I offer congratulations and thanks.

12

I do think it was the right thing to do.

13

**MR. BURGERT:** Your Honor, ION would request a copy of

14

the settlement agreement so that we can see how that fits into

07:31

15

the charge and the damages questions that will be submitted to

16

the jury.

17

**MR. LOCASCIO:** My response to that would be it is a

18

confidential settlement agreement, and we don't believe ION

19

needs a copy. And to the extent Mr. Burgert has a question

07:31

20

about perhaps a couple of the things, I might be able to

21

address that right here, which is with respect to the 271(b)

22

and (c) claims against ION, given that the 271(a) case against

23

Fugro has been dismissed, the (b) and (c) claims against ION

24

will be dismissed as well. They don't continue on.

07:31

25

With respect to the damages as it was presented

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07:31 1 already during the case, there were damages that related to  
2 Fugro sales. There were damages that related to non-Fugro  
3 sales. WesternGeco's case as it continues will only be with  
4 respect to the non-Fugro sales, Your Honor.

07:32 5 So I don't know if that addresses  
6 Mr. Burgert's --

7 **THE COURT:** Are we concerned at all with the  
8 possibility of joint and several liability and, therefore, a  
9 need to know?

07:32 10 **MR. LOCASCIO:** No, we're not, given that the only  
11 claims that were made against ION are claims unrelated to sales  
12 to Fugro.

13 **MR. BURGERT:** Your Honor, I think we are still  
14 entitled to see the basis of it, see the agreements they made,  
07:32 15 see whether there is any non-cooperation agreement, whether  
16 there are any obligations on the part of Fugro to not provide  
17 documents that have been requested should some come up.

18 If nothing more, I think the Court needs to  
19 review it in camera to see if it has any effect on the way that  
07:32 20 the case proceeds.

21 **THE COURT:** I will take it under advisement. Normally  
22 I don't disclose settlements made by one party to all parties.

23 What are we going to tell the jury?

24 **MR. BURGERT:** That was my next point, Your Honor. I  
07:33 25 would ask that the jury simply be informed that Fugro is no