Aram Systems Ltd. v. NovAtel Inc. et al.

[Indexed as: Aram Systems Ltd. v. NovAtel Inc.]

Court File No. 0601 08106

Alberta Court of Queen's Bench
Macleod J.

Heard: October 1-25 and December 18 and 19, 2007
Judgment rendered: July 23, 2008

Patents — Inventorship — General — Defendant filing U.S. provisional patent application and filing regular applications claiming priority from U.S. provisional application — Plaintiff claiming plaintiff's employee was inventor of subject matter of patent and that defendant derived invention from plaintiff's employee — Proper law with respect to derivation claim is U.S. law — Plaintiff unable to provide clear and convincing evidence that plaintiff's employee conceived of complete and operative invention which he communicated to Defendant — Plaintiff's employee neither inventor nor co-inventor.

Trade secrets and confidential information — General — Plaintiff claiming defendant breached duty of confidence by using confidential information to: develop seismic data acquisition system; obtain patents on that system; and present that system to plaintiff's competitors — Existing non-disclosure agreement informing nature of relationship of parties and extent of duty of confidence — Information in issue not being confidential — Actions of defendant not amounting to misuse.

Limitations — Patents — Defendant filing U.S. provisional patent application and filing regular applications claiming priority from U.S. provisional application — Plaintiff claiming plaintiff's employee is inventor of subject matter of patents and that defendant derived invention from the plaintiff's employee — Date of discoverability of derivation claim occurring on date of publication of patent — Derivation claim not barred by Limitations Act — Limitations Act, R.S.A. 2000, c. L-12.

An employee of the plaintiff met with the defendant with an idea of using a global positioning system ("GPS") for seismic data acquisition. The parties signed a non-disclosure agreement ("NDA") during the meeting. The defendant developed and tested a system, which used GPS for seismic data acquisition. The defendant filed a U.S. provisional patent application on the system and filed regular applications claiming priority from the U.S. provisional application. The plaintiff claimed that the plaintiff's employee was the inventor of the subject matter of the patent application and that the defendant derived the invention from the plaintiff. The plaintiff also claimed that the defendant breached the non-disclosure agreement and their duty of confidence by using confidential information to develop the seismic data acquisition system by: presenting the seismic data acquisition system to the plaintiff's competitors; and by patenting the seismic data acquisition system. The

defendant claimed that the action was barred by the *Limitations Act*, R.S.A. 2000, c. L-12.

Held, the plaintiff's claim should be dismissed.

With respect to the derivation claim, the Court proceeded on the assumption that the proper law is U.S. law and analyzed the issue under U.S. law. A person alleging that the subject of a patent claim was derived from him by the inventor named on the patent must prove: 1) prior conception of the invention; and 2) communication of that conception to the patentee. To be successful in a derivation claim, the plaintiff must show not only that the employee came up with the idea of using GPS technology to collect timing and positioning information for use in seismic data acquisition, but that they had developed a method for doing so. The standard of proof for the derivation claim is "clear and convincing evidence." The plaintiff's employee's ideas did not amount to conception sufficient to satisfy that element of derivation. The concept was not clearly defined and required much more than ordinary skill to reduce to practice. The plaintiff's employee was neither an inventor nor a joint inventor.

On the issue of breach of the duty of confidence, three elements are needed to demonstrate a breach of confidence: 1) the supplying of information having a quality of confidence about it; 2) the communication of the information in circumstances in which an obligation of confidence arose; and 3) the unauthorized use of the information by the confidee to the confidor's detriment. The existence of an NDA may inform the nature of the relationship and the extent of the obligation and the reasonable expectations of the parties. The information communicated by the plaintiff's employee was not confidential. The information communicated was easily ascertainable and no efforts were made to maintain its secrecy. The ideas had already been discussed with other GPS suppliers. None of the actions of the defendant amounted to misuse of the information.

With regard to the *Limitations Act* claim, the date of discoverability of the derivation claim was the date of publication of the patent. The derivation claim was not barred by the *Limitations Act*.

Cases referred to

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Apotex Inc. v. Wellcome Foundation Ltd. (2002), 21 C.P.R. (4th) 499, 219 D.L.R. (4th) 660, [2002] 4 S.C.R. 153, 235 F.T.R. 204*n*, 296 N.R. 130, 118 A.C.W.S. (3d) 436, 2002 SCC 77 — **refd to**

Aram Systems Ltd. v. NovAtel Inc. (2006), 152 A.C.W.S. (3d) 1121, 2006 ABQB 697 — **refd to**

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Cadbury Schweppes Inc. v. FBI Foods Ltd. (1999), 83 C.P.R. (3d) 289, 167 D.L.R. (4th) 577, [1999] 1 S.C.R. 142, 43 B.L.R. (2d) 159, [1999] 5 W.W.R. 751, 191 W.A.C. 161, 59 B.C.L.R. (3d) 1, 235 N.R. 30, 85 A.C.W.S. (3d) 166 — **refd to**

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KSR International Co. v. Teleflex Inc., 127 S. Ct. 1727 (2007) — **refd to**
Murphy Oil Co. v. Predator Corp. (2006), 44 C.C.L.T. (3d) 58, [2007] 3 W.W.R. 255, 67 Alta. L.R. (4th) 325, 408 A.R. 98, 153 A.C.W.S. (3d) 244, 2006 ABQB 680 — **refd to**
Pharand Ski Corp. v. Alberta (1991), 37 C.P.R. (3d) 288, 5 B.L.R. (2d) 53, 7 C.C.L.T. (2d) 225, 80 Alta. L.R. (2d) 216, 116 A.R. 326, 27 A.C.W.S. (3d) 324 [supp. reasons 37 C.P.R. (3d) 288 at p. 333, 81 Alta. L.R. (2d) 304, 122 A.R. 81, 28 A.C.W.S. (3d) 643; supp. reasons 37 C.P.R. (3d) 532, [1992] 1 W.W.R. 501, 83 Alta. L.R. (2d) 152, 122 A.R. 395] — **refd to**
Phillips v. AWH Corp., 415 F.3d 1303 (2005) — **refd to**
Sousa v. Mayo (2005), 21 C.P.C. (6th) 133, 56 Alta. L.R. (4th) 395, 389 A.R. 63, 144 A.C.W.S. (3d) 554, 2005 ABQB 845 — **refd to**
Stenada Marketing Ltd. v. Nazareno (1990), 33 C.P.R. (3d) 367, 23 A.C.W.S. (3d) 203 — **refd to**
Sun Gro Horticulture Canada Ltd. v. Abe's Door Service Ltd. (2006), 273 D.L.R. (4th) 295, 53 C.L.R. (3d) 170, 384 W.A.C. 282, 63 Alta. L.R. (4th) 1, 397 A.R. 282, 152 A.C.W.S. (3d) 515, 2006 ABCA 243 — **refd to**
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Visagie v. TVX Gold Inc. (1998), 42 B.L.R. (2d) 53, 83 A.C.W.S. (3d) 100; affd 187 D.L.R. (4th) 193, 6 B.L.R. (3d) 1, 49 O.R. (3d) 198, 132 O.A.C. 231, 97 A.C.W.S. (3d) 124 — **refd to**

Statutes referred to

Limitations Act, R.S.A. 2000, c. L-12
s. 1(e), definition "injury"
s. 3(1), (5)(a)
United States Code, 35 U.S.C. (*Patents*)

ACTION seeking a declaration that the plaintiff's employee was the inventor of a patent application, and, *inter alia*, CLAIM for breach of an NDA and duty of confidence.

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Timothy S. Ellam, and *Kara L. Smyth*, for defendants/plaintiffs by counterclaim, NovAtel Inc. and Patrick C. Fenton.

MACLEOD J.:—

Introduction

[1] Seismic data acquisition is used in the exploration for hydrocarbons. The ability to acquire precise seismic data has improved

over the years and for those trained in the interpretation of seismic data, a lot can be learned about subterranean structures by sending and receiving shockwaves at strategic points on the earth's surface. To ensure accurate data, it is important to have precise positioning and timing measurements for the "shots" and the Geophones which receive the signals back from beneath the earth's surface. The precise location of each of the Geo-phones as well as the location of the "shot" is important. Also important is the precise timing of the shot and the receipt of the signals by the Geo-phones.

[2] The most accurate information on positioning and timing can be achieved by a Global Positioning System ("GPS") using signals from approximately thirty satellites. These systems have improved to the point that accurate positioning can be determined within centimetres and timing within microseconds. While the utility of GPS to the seismic industry would appear obvious, until recently its use has been primarily related to timing. Seismic data acquisition is a very competitive industry and there is considerable pressure to keep prices down. Seismic data acquisition requires precise knowledge of time and position and GPS devices capable of precise measurement have historically been too expensive. Furthermore, power is a scarce commodity in seismic data acquisition because the Geophones are often positioned for long periods of time and the interruption of power is not an option. Moreover, satellite signals, by the time they reach the earth, are extremely weak and any foliage on the terrain which is being studied can interrupt or contaminate the signal.

[3] On July 17, 2003, the Defendant Patrick C. Fenton, a NovAtel Inc. ("NovAtel") executive, filed a United States Provisional Patent Application for a seismic acquisition system utilizing GPS for both timing and positioning. A regular patent application with respect to the invention was filed on July 15, 2004. Fenton has assigned all his rights to NovAtel and on October 3, 2006, U.S. Patent 7117094 with respect to this invention was issued by the U.S. Patent Office in the name of NovAtel.

[4] The Plaintiffs, David Heidebrecht and Aram Systems Ltd. ("Aram"), the assignee of Heidebrecht's rights, maintain that the invention is really Heidebrecht's and, thus, all of the rights to it properly belong to Aram. It is alleged that during meetings held between representatives of Aram and NovAtel in June 2003, confidential

information was imparted to NovAtel which Fenton and NovAtel wrongfully appropriated for their own purposes.

[5] The Plaintiff claims that the Defendants have breached the Non-Disclosure Agreement ("NDA") which was entered into during the course of a meeting on June 18, 2003. The Plaintiff claims unauthorized use of confidential information. It also claims that the Defendants wrongfully derived their patent from Heidebrecht and seeks declaratory and other relief related to NovAtel's U.S. Patent and to pending patent applications in other countries in the European Community, Japan, Canada and elsewhere. NovAtel counterclaims for declaratory relief and for other relief related to certain pending patent applications by Aram as well as for breach of the NDA. The facts, the expert evidence and the law related to the many issues raised are complicated. The main issues, however, appear to be as follows:

1. Is Heidebrecht an inventor or a co-inventor of the subject matter of any of the NovAtel patents? Was the Fenton patent derived from Heidebrecht? What level of proof is required to satisfy the Court on these questions?
2. Was there a breach of the NDA or other common law obligations of confidence and, if so, by whom?
3. If answers to questions 1 or 2 are in the affirmative, to what relief is the Plaintiff or the Plaintiff by counterclaim entitled?
4. Are there any bars to that relief including any which may be set out in the *Limitations Act*, R.S.A. 2000, c. L-12?

Events leading up to the meetings between NovAtel and Aram in June 2003

[6] Aram, formerly GEO-X Systems Ltd., has been involved for over 25 years in the business of designing and manufacturing seismic acquisition equipment. It is a major player in this industry in Canadian and international markets. Heidebrecht, prior to leaving the company in 2004, occupied the position of engineering manager in what was then called the Aram Division of GEO-X Systems Ltd.

[7] Heidebrecht's education includes a 2-year program at SAIT where he earned his qualification as an electronic engineering technician. He joined GEO-X Systems Ltd. in 1985 and around 2000 became the engineering manager. He has taken a one day course in GPS. He testified that he developed an interest in it because he

recognized the potential value of GPS to seismic acquisition by coordinating many points over a large area, all of which are capturing data at the same time.

[8] Indeed in 2001-2002, Heidebrecht was working on a system utilizing GPS for the purposes of synchronizing the timing in seismic acquisition so that the time which elapsed between sending the shockwaves and receiving them could be known very precisely. This became the subject of a provisional patent application in October 2002. As part of that application it was envisaged that not all Aram units needed to be provided with high precision clocks because the precise timing could be passed on from those units having access to precise time to those units which did not. Heidebrecht says that concept involved what he refers to as "neighbour assist".

[9] Heidebrecht states that in the spring of 2002 he read an article, very similar to that marked as Tab 19 of Exhibit 1, describing the E911 system which had been mandated by the U.S. Federal Communications Commission. The article briefly describes a system whereby a simple GPS device installed in a cell phone could utilize GPS assistance from, for example, a cell tower, which would greatly enhance the cell phone's ability in a "911" situation to identify its location because it would be provided with much of the information it would otherwise have to retrieve on its own. For example, it could be provided with precise satellite orbits and clock information, initial position, satellite selection, range and range rate information. It may also perform certain other functions leaving the cell phone GPS with fewer tasks to perform. Heidebrecht described his reading of the article as a "lightbulb" moment. From his knowledge of seismic acquisition, he could imagine the potential for use of a similar system in a seismic network where the Geophones or RAM units are stationary for an extended period of time during which some units may be prevented from having a clear view of the sky.

[10] Jerald Harmon is a consultant with Aram with respect to its patent applications and works closely with the personnel at Aram and their lawyer, Allen Marcontell in Houston, Texas. He worked with Heidebrecht in filing his patent application in the fall of 2002. He testified that in July 2002 he received a call from Heidebrecht and, during the course of the telephone call, Heidebrecht told him that he had been reading about this concept of E911 and was quite excited about its possible utility in the seismic context. Harmon,

who has a background in the seismic industry and some expertise in patent procedure, had not heard of the E911 concept but it was generally explained to him by Heidebrecht who thought the concept of assisted GPS could be used in the context of seismic data acquisition. He explained that there would be a base receiver with a clear view of the sky which could offer assistance to those units which did not have a clear view of the sky. He said that the concept was new to Heidebrecht as well, but that he thought it might be the way of the future for seismic because down the road there will be cheaper units available which might be suitable in terms of the amount of power they use and their accuracy. He mentioned that this was something that might be feasible down the road, "like 10 years away maybe". This idea was not made subject to a provisional or other patent application and the idea of using GPS for positioning or assisted GPS was not utilized in the patent application filed by Aram in the fall of 2002.

[11] The seismic acquisition business is very competitive and Heidebrecht did not know whether the technology in GPS had reached a stage whereby it was feasible in terms of cost, accuracy or reliability. He says that he anticipated the costs of GPS going down dramatically because of its increased use in the cell phone industry. Nevertheless, precise accuracy was very important. Furthermore, available power was also important because the use of GPS would not be feasible if during the period of gathering the seismic information, any of the GPS units failed for want of power.

[12] Zeljko Bacanek, an electrical engineer employed by Aram, confirmed these difficulties. He testified that from the year 2000 onwards, Heidebrecht was interested in GPS and from time to time they looked at what was available in that field to see whether something could be integrated into Aram's electronics. Up until the meeting of June 2003 with NovAtel, the primary focus of GPS, as far as Aram was concerned, was for timing and synchronization and Bacanek had worked with Heidebrecht on the Aram RF synchronization patent application in 2002 and had prepared drawings with respect to that patent. However, they were also interested in the potential of GPS for establishing position. Bacanek confirmed that they did not have much luck in finding "off the shelf" GPS items which could be incorporated into their system. Size was a problem, power was a problem and cost was a big problem. As of September 2002, they were not happy with the products on the market and

Bacanek testified that "Dave made the call not to go and integrate those products into our RAMS".

[13] During the course of his search for suitable GPS equipment which could be used with Aram equipment, Heidebrecht discussed his idea of assisted GPS, E911 and the need to locate a low cost receiver with electronic representatives outside of Aram.

[14] Terry Wood, a member of the Aram engineering group, revised a current project report on February 3, 2003 related to "GPS Radio System". Under the heading of Brief Description was written, "we would like to integrate an off the shelf GPS receiver into the newest generation of ARAM line equipment. This would give us accurate timing information and possibly location information for the line equipment." The objective of this project was to locate a small, low power GPS receiver that can easily be integrated into ARAM line equipment. It was given a low priority, perhaps because none of the engineering group was impressed by the available equipment they had "tested". Up until the time they met with NovAtel, Aram had not found any equipment which could be utilized in their line equipment for timing, let alone positioning.

[15] Nevertheless, Heidebrecht and his colleagues at Aram attempted to keep abreast as to what GPS units were available from suppliers which might meet the needs of those involved in seismic acquisition. Obviously, if GPS could be used to provide the precise location of all of the relevant points in addition to timing, this would have an impact upon the seismic industry.

[16] NovAtel is a provider of GPS devices and designs and manufactures customized devices for incorporation by its customers into specialized equipment. As it happened, Aram and NovAtel were neighbors and it was known to Aram that NovAtel were experts in GPS and GPS equipment. It was suggested to Heidebrecht that he might wish to make inquiries there and he did so.

The meetings of June 2003

[17] On the afternoon of June 11, 2003, Heidebrecht met with Nicholas Schubert at NovAtel to discuss available GPS equipment which might be used in seismic acquisition. At the time of the June 11 meeting, Schubert was a sales representative for NovAtel; he was still employed by NovAtel at the time of trial. The only documentary evidence relating to the June 11, 2003 meeting was prepared by

Schubert. The first is an internal email which reflects that the meeting was held and the second is an excerpt from Schubert's notebook which contains very sparse notes of this meeting. Heidebrecht testified that he told Schubert about his idea of utilizing the E911 system in a seismic context. Although Schubert does not recall that, I have little doubt that Heidebrecht told Schubert enough so that he would know what sort of equipment Aram was looking for. There is no reason to believe Heidebrecht gave Schubert any less information than had been shared with other suppliers of GPS equipment. Schubert recalls that Heidebrecht was making inquiries in the context of a timing problem and indeed his notes contain an item "timing degraded — under canopy". But they also contain the following line "REQ start @ 1m. vertical". For positioning, the seismic acquisition industry requires accuracy within 1 metre.

[18] A subsequent meeting was arranged for June 18, 2003 which was attended by Heidebrecht, Wood and Bacanek from Aram and Schubert, Fenton and Farlin Halsey from NovAtel. At the time of the meeting, Halsey was the vice president of marketing for NovAtel. By the time of the trial, he had become the vice president of corporate strategy and alliances. Fenton is the chief technology officer at NovAtel.

[19] Before the June 18, 2003 meeting, Fenton emailed NovAtel's in-house counsel requesting a form of Non-Disclosure Agreement "ASAP". The note referenced GEO-X and the subject of "positioning of seismic Geo-phones using low cost GPS equipment".

[20] After the initial meeting with Heidebrecht, Schubert spoke with Fenton, whose recollection is similar to Schubert's in as much as Aram wished to solve a timing problem using GPS in its seismic acquisition system. Fenton, after thinking about it, thought that GPS could be used for positioning as well. I think it is more likely that timing and positioning were raised by Heidebrecht at the meeting with Schubert and this was relayed to Fenton. I believe that is why Fenton's email to in-house counsel was worded the way it was.

[21] It is common ground that the parties executed an NDA at the June 18, 2003 meeting. It was Fenton's idea because he anticipated that both sides could be exchanging confidential information. It is interesting but not surprising that Heidebrecht did not suggest any sort of confidentiality agreement. NovAtel was just another GPS supplier. Fenton could not have arrived at the meeting of June 18, 2003 with

the expectation that NovAtel and Aram were collaborating to come up with something novel. Fenton was at the meeting of June 18, 2003, to assist in solving a problem which had been presented to NovAtel by Aram, i.e., the utilization of GPS in seismic data acquisition. Aram wanted to know what could be done reliably and accurately and whether it was commercially feasible.

[22] All six attendees at the June 18, 2003 meeting gave evidence. Not entirely unexpectedly, memories as to what occurred are not identical and tended to be self-serving. I acknowledge that Heidebrecht has no financial interest in the outcome of this litigation but his view is that he is the inventor of the subject matter of NovAtel's U.S. Patent and his evidence generally served that position.

[23] At the time of the June 18, 2003 meeting at Aram's premises, none of the Aram personnel knew very much about GPS and whether it was feasible to use GPS from a commercial or a technical standpoint. Both Heidebrecht and Bacanek took what Heidebrecht termed a "GPS 101" course from Fenton following the meeting. As for Woods, he did not know until the trial of this matter that carrier phase measurements had to be utilized to provide the positioning accuracy suitable for a seismic application. Accordingly, they could not have known what was possible GPS-wise at the time of the meeting.

[24] The meeting of June 18, 2003 was scheduled for 10:00 a.m. and while the parties agree that part of the time was taken up by a tour of the Aram facility, the Aram group generally believes that the tour took place after the meeting held in the main conference room while the NovAtel group recollects that the tour took place before the meeting. The meeting portion, which took place in Aram's large conference room, may have lasted as little as 35 minutes or as long as 1 hour and 15 minutes. The tour took as little as 20 minutes or as much as 30 minutes. Aram personnel recall the meeting ending just before noon and Fenton believes he got back to his office between 11:30 and 11:45 a.m. On the evidence before me, I believe the meeting portion of the Aram NovAtel get together lasted about an hour.

[25] During the meeting, Heidebrecht's recollection is that he did almost all of the talking and, in essence, disclosed the basis of Fenton's proposal, the various drafts of which were entered as exhibits. Everyone seems to agree that Heidebrecht and Fenton were the only two significant participants in the meeting because the

discussions were, for the most part, technical. The consensus is that Heidebrecht chaired the meeting and, at the beginning at least, led the discussion at the whiteboard.

[26] According to Heidebrecht, he began by explaining the basic fundamentals of seismic acquisition and set out some of the challenges and the need for precision in terms of timing and positioning. He went on to describe how he thought an E911 system could be adapted for use in seismic acquisition because the Geo-phones were in place for long periods (up to 24 hours). He thought that someday one could eliminate the need to do a survey of many points which, up to this point in time, needed to be staked. He described how the master GPS receiver located at the control house or "dog house" would supply tracking assistance information to the slave units. During the meeting, he recalls Fenton looking him in the eye and saying "Dave, you have a great idea".

[27] Fenton, on the other hand, says that he went to the meeting to pitch a solution to problems that he was aware all seismic acquisition companies were having. He says that Heidebrecht described timing problems and then Fenton got up and described his solution and indicated that they could solve not only the timing problems but also the positioning problems because GPS had come a long way. He said that the meeting participants were cynical to some degree and they were not sure if his solution would be readily acceptable by the industry or whether it would work.

[28] Generally, Bacanek supported Heidebrecht's version of the meeting including the fact that Heidebrecht disclosed much of what is contained in the proposal drafted by Fenton as well as the content of the provisional patent application filed by Fenton and NovAtel. This included the concept of "neighbour assist" which, oddly enough, the Plaintiffs say was omitted from the original proposal and the provisional patent application.

[29] Both Heidebrecht and Bacanek were taken to the claims set out in the patent application at Tab 107 of Exhibit 1, as well as the issued patent, Exhibit 1, Tab 138.

[30] The Aram witnesses testified that most of the claims formed the basis of Heidebrecht's presentation at the June 18, 2003 meeting. I did not find that testimony very helpful. To the extent that witnesses were taken to specific claims and asked whether they formed part of the presentation that Heidebrecht gave at the June 18, 2003

meeting, these questions are extremely leading. Also, given that all of the Aram witnesses are of the view that Heidebrecht had brought the E911 concept to the conference table, their answers really constitute their opinion as to what that concept includes when applied to seismic acquisition.

[31] No one retained notes of the meeting except Schubert and those notes are sparse and cryptic. They can be found at Tab 53 of Exhibit 1. His notes, in my view, confirmed that there was a discussion about timing because there is reference to "100ms across entire network", "looking wireless device", and "1000/yr initially — for simply timing". However, there is also a reference to "stakeless survey — eventually".

Subsequent Events

[32] Fenton testified that he returned to his office and almost immediately began work on his proposal. His office is next to that of Jonathan Ladd, the President and Chief Executive Officer of NovAtel. Ladd testified that he recalls talking to Fenton after he returned from a meeting at Aram. Fenton told him that "GEO-X" was looking for ways to use GPS in their seismic lines for timing purposes, but that he (Fenton) had an idea where they could use it for positioning even in highly obstructed environments. Ladd said he was interested in this problem because he was aware of it from his past experience. From time to time, he would chat with Fenton as to how he was getting along because he was aware that it was a significant challenge to ascertain precise location in situations where the units in question were in highly obstructed environments.

[33] Tab 56 of Exhibit 1 represents Fenton's first draft of the Aram GEO-X seismic L1 opportunity. "L1" is the name of a frequency band for low cost commercial equipment. By July 11, he revised the draft slightly by removing the reference to Aram GEO-X and further by claiming copyright and other property rights to the draft in the name of NovAtel This document can be found at Tab 57 of Exhibit 1 and was sent by Fenton, along with an email, to several other NovAtel people including Messrs. Ladd, Schubert, Halsey and Stephen Duncombe, a business development manager at NovAtel. The email included the question as to how they should move forward with the opportunity, i.e., with Aram or another company. On Monday, July 14, Heidebrecht and Fenton spoke by telephone and Fenton said that he intended to apply for a provisional patent with

respect to a proposal he had drafted dealing with the problems discussed during the course of the June 18 meeting. Heidebrecht testified that he became very upset and there ensued a heated discussion. Fenton does not recall the conversation and does not recall a heated exchange although he concedes that Heidebrecht did mention that he too wished to file a patent with respect to the subject matter of the meeting. This is acknowledged in Fenton's email to Heidebrecht dated July 16, in which he encloses a copy of the proposal which is clearly claimed as NovAtel's property. The email itself reads as follows:

> As discussed earlier this week by phone, attached is an initial Draft proposal for a GPS system that would provide positioning and time synchronization capability to the FDU units along a seismic cable. As you will find there are a lot of TBDs as indicated by ???? If you could provide this info to me, I will up-date this document to better understand the requirements and provide a more accurate estimate of the work required.
>
> I suppose eventually (if it looks good to you) we will need to re-format this idea into a Power Point presentation to give our respective management/owners for funding and project kick off etc.
>
> Anyway you mentioned that you will be going on holidays starting this Friday. I realize that I haven't given you much time, but any feedback you can provide me before you take off would be appreciated.
>
> Also, please keep this information secure as covered by our Non-Disclosure Agreement. I have our patent person drafting a provisional application based on this paper (excluding project details). You mentioned that you (GEO-X) would also like to file something along these lines. If what you had in mind is similar to this, then we could talk about giving you guys certain exclusivity rights based on project funding.

Fenton had sent the proposal to his patent attorney and by July 17 NovAtel's lawyer, Patricia Sheehan of the law firm Cesari and McKenna, filed a provisional application for a patent at the U.S. Patent and Trade-mark Office.

[34] On July 18, Heidebrecht had a telephone conversation with Harmon, in which the former expressed his displeasure that NovAtel was filing a patent with respect to assisted GPS. He indicated that he wanted Harmon and their lawyer to get working on a patent and he had spoken to management who were on-side with spending the money for that purpose. Heidebrecht sent Harmon a copy of the seismic opportunity document and advised him that he should feel free to refer to it with respect to the patent application. Harmon testified that Aram encouraged him to get to work on the patent application as soon as possible and get it filed.

[35] On August 6, Fenton emailed Heidebrecht wondering whether he was back from his holidays and whether he had a chance to finish reviewing the proposal. Apparently, Fenton had telephoned Heidebrecht on the Friday before he left on vacation and Heidebrecht had told him that the equipment depicted in the proposal was that of a competitor. As a result, Fenton had done a new picture which he enclosed with his August 6 email. Heidebrecht's response is interesting. It was:

> Hi Pat, I was doing just that when your email came in. The proposal looks good, I have added a section to the background and changed the timing in the specifications. I have sent a copy to Don Chamberlain our owner. What is the next course of action on your end?

Fenton responded the same day as follows:

> Hi Dave, thanks for your feedback and mark-ups to this document. The next thing we should do is have a business discussion to explore various methods of developing this system. It will take considerable investment to fully produce a working system from this concept paper. This initial business discussion should explore what level does GEO-X want to "invest" in this development, what would be the associated "strings" on the developed IP, and what kind of working relationship we would have between our two companies etc. Pat.

[36] On Thursday, August 7, Heidebrecht emailed Fenton to the effect that before they were able to start on the commercial side of the discussions "we need to understand the technical side a little more. Our understanding of GPS is limited at this point. Is it possible for me to spend a little time with your people to further my knowledge of the system. This will give GEO-X a better understanding of the scope of the task". Fenton responded the same day that he would be happy to do so and as a result Heidebrecht took what he referred to as a "GPS 101" course during the month of August.

[37] On August 20, 2003, Heidebrecht and Harmon had another telephone conversation; notes of that conversation were kept by Harmon and form part of Exhibit 1 Tab 76. During that telephone conversation, Heidebrecht apparently indicated that a NDA was signed between NovAtel and Aram and that the basic ideas were his. He further indicated that NovAtel planned to apply for a patent and said that a seismic license would be available to GEO-X at a price. Heidebrecht reported that he had told NovAtel that Aram also wanted to apply for a patent and he wanted a provisional patent filed as soon as possible and certainly before the trade show to be held in the latter part of October 2003.

[38] On September 1, 2003, Aram converted its original patent filed in October 2002 to a regular patent application. On October 25, 2003, Marcontell, on behalf of Aram, filed a Continuation In Part to the U.S. application of September 1, 2003. This Continuation In Part included the elements of the Fenton proposal which had been forwarded to Harmon by Heidebrecht. Harmon drafted the greatest part of this document and in so doing, used the Fenton proposal. Thus the Continuation In Part application filed on October 25 contained elements of both the previous Aram patent applications and the Fenton proposal.

[39] No further communication took place between Aram and NovAtel except some emails in October 2003 suggesting that the two companies get together at the up-coming trade show in Dallas. Heidebrecht was attending the trade show as were Schubert and Duncombe. Heidebrecht invited the NovAtel contingent to stop by. At that time, NovAtel was looking for a financial commitment to the project but rather than giving them an answer with respect to that, Heidebrecht testified that his response was that they had not resolved the patent issue and indeed he asked what they were doing at the show. The implication was that they might be shopping their proposal around to other industry participants. Schubert and Duncombe responded that they were just there to get a feel for the industry and Heidebrecht reminded them that they were still bound by the NDA. Indeed, Duncombe reported that Heidebrecht said that Aram was still not ready to make a commitment. NovAtel responded that it was proceeding to prove-up the concept on their own and would be showing them the results. Apparently Heidebrecht expressed some displeasure at the fact that NovAtel filed for patent shortly after the initial meeting and pointed out that there was an NDA in place.

[40] In the meantime, NovAtel was becoming concerned that Aram was not going to commit to developing the project and they began thinking of other people they could approach as suitable partners. One of the reasons that Schubert and Duncombe went to the trade show in Dallas was to look around and try to find out who the other players were. Fenton was rather taken aback at Heidebrecht's reaction to Schubert and Duncombe at the trade show and was not sure to what Heidebrecht was referring. However, he made sure that the slight changes that were made by Heidebrecht to the document

Fenton had sent him were deleted from the proposal. He made some other changes and this resulted in revision "C" and that version of the "Land Seismic L1 Opportunity" was entered as part of Tab 88 of Exhibit 1.

[41] At about that time in November 2003, NovAtel began doing some testing in its lab and in or around the Bowness area of Calgary, Alberta. NovAtel built a small prototype and took it into the bush in the Bowness area and collected some data, making sure that the system would run for 24 hours without crashing the computer or encountering cable problems.

[42] In the new year, NovAtel sent a crew to British Columbia near Chilliwack where there was a big portion of forest that someone else had set aside for testing equipment. There were paths through 10 square miles of forest which had never been cut. The results of that testing were very encouraging. NovAtel was satisfied that the project was feasible but they had to find a partner in the industry to manufacture the seismic equipment. NovAtel only provides the GPS devices for installation by manufacturers in their equipment. It was with this goal in mind that NovAtel arranged a meeting with Aram on June 21, 2004. The power point presentation prepared for that meeting was entered as Tab 100 of Exhibit 1. Prior to the meeting Fenton and Halsey went to the Paris trade show for the purposes of trying to attract a partner. While there, they wanted to present the opportunity to Aram but they did not have a chance to do that and so arranged to meet in Calgary. On June 21, 2004, Halsey and Fenton went to Aram and met with Heidebrecht, Don Chamberlain, Chief Executive Officer, Bacanek and Virgil Barfield, the vice president of marketing. Halsey gave the general corporate overview part of the presentation and Fenton made the technical part of the presentation. It is interesting that the last pages of the NovAtel power point presentation make it clear that NovAtel's next steps were to locate and work with a best industry partner. Both Fenton and Halsey testified that they were there to get a commitment one way or the other from Aram. Aram was either in or out.

[43] Fenton said that there was little enthusiasm expressed by Aram as a result of this meeting and they heard nothing further from Aram following it. Chamberlain testified that he thought NovAtel was shopping the proposal to others and while he told Mr. Heidebrecht to continue working with NovAtel, he was upset

that NovAtel appeared to be marketing "Dave's invention". He certainly did not like the idea of Aram paying the kind of money NovAtel wanted to develop an invention to which Aram was entitled. Indeed, Mr. Chamberlain agreed that he went "silent" on NovAtel and more effort was put into searching for competing patents filed on behalf of NovAtel and in working with NovAtel on its proposal. Aram's searches through to March, 2005 revealed no patent filed on behalf of NovAtel which was good news to Aram.

[44] More specifically, Mr. Chamberlain during his cross examination confirmed that he gave the following answers to the following questions at his Examination for Discovery:

> "Q Did you have any questions for the NovAtel employees who made the presentation, sir?
>
> A Well, no, I didn't. The light — the light sort of came on to me what they were up to.
>
> Q What do you feel they were up to?
>
> A Taking Dave's invention and marketing it to other people. They were looking for a partner. That meant they were going to go to other people other than us, and the other thing. If you look at these numbers here, if you look at the cost of each, they get progressively bigger right until there's a big number. That's sort of like a standard oh, yeah, type of person trying to get you to pay those expenses. And why should I pay those expenses when it was Dave's invention."

Mr. Chamberlain had no intention of pursuing this venture with NovAtel although he did not say so. Instead, he went "silent" on them.

[45] On July 15, 2004, NovAtel finalized its regular patent application. It was published on February 10, 2005.

[46] The Continuation In Part application which had been filed by Aram and which included the positioning aspect was published on March 3, 2005. In the summer of that year, NovAtel's counsel wrote to Aram that they had become aware of Aram's application and claimed that it disclosed information provided to Aram by NovAtel under the NDA and that it was NovAtel's proprietary information and subject to a NovAtel patent application. This was the first time that Aram became aware that NovAtel had actually proceeded with filing the patent application which Fenton told Heidebrecht that NovAtel was going to file back in 2003. Many searches conducted prior to the publication of NovAtel's patent application would not

have disclosed the existence of it and, for whatever reason, it did not come to Aram's attention until the summer of 2005.

[47] This litigation commenced on July 6, 2006. The NovAtel patent issued on October 3, 2006 as U.S. 7,117,094.

[48] Prior to NovAtel's presentation to Aram on June 21, 2004, NovAtel had made similar power point presentations to third parties unbeknownst to Aram. In early 2005, NovAtel obtained a portion of the requested funding from one of the third parties to whom it had earlier presented the power point presentation. Further funding was obtained in October 2005 from the same third party to permit NovAtel to develop further a commercial embodiment of the concept in the seismic opportunity for use with seismic data acquisition systems. Aram became aware of this during the discovery process in this litigation.

Litigation History

[49] Following the issuance of the Statement of Claim, NovAtel's U.S. Patent counsel spoke by telephone conference with the patent examiner for U.S. 10/891,800 on July 27, 2006 for the purpose of attempting to obtain allowance of the application. The following day NovAtel filed an amendment to the claims of this patent application. On August 8, 2006, the U.S. Patent Office issued a Notice of Allowance of NovAtel's U.S. Regular Patent Application 10/891,800. NovAtel paid the issue fee on August 10, 2006 and on September 21, 2006 the parties became aware that the U.S. Patent was scheduled to issue on October 3, 2006.

[50] On August 15, 2006, Aram filed materials with this Court in support of an application for a mandatory injunction compelling NovAtel to suspend the issuance of its U.S. Patent application until an expedited trial of the action could occur. A trial date was set for February 2007 and a date in September for the hearing of the injunction application. NovAtel filed its Defence and Counterclaim and Affidavits opposing the Plaintiff's motion on August 25, 2006. NovAtel made a cross-motion seeking a dismissal of the Statement of Claim on the basis that the claim was barred by the *Limitations Act*. All motions were heard by Justice Romaine on September 12, 2006. On September 28, 2006 Justice Romaine issued written reasons refusing the Plaintiff's application for an interim mandatory injunction, [152 A.C.W.S. (3d) 1121], and a single judge of the Court

of Appeal declined to grant an interim stay pending appeal. Accordingly, NovAtel's U.S. Patent issued on October 3, 2006.

[51] On December 20, 2006, Aram filed an Amended Statement of Claim pleading conversion of patent monopoly rights belonging to Aram as a result of the issuance of NovAtel's U.S. Patent. By way of further relief Aram sought that NovAtel be directed by this Court to amend inventorship of U.S. 7,117,094 to add Heidebrecht as an inventor, to request re-examination by the U.S. Patent Office of U.S. Patent 7,117,094 and to cancel from such issued U.S. Patent claims of which Heidebrecht is declared by this Court to be the inventor.

[52] On December 29, 2006, Justice Romaine rendered a written decision dismissing the Plaintiff's action because it was barred by the *Limitations Act* [154 A.C.W.S. (3d) 824]. This was appealed and an expedited hearing was undertaken. The Court of Appeal allowed the appeal and held that it was not plain and obvious that the *Limitations Act* provided a defence and, therefore, this was not an appropriate case for summary judgment [156 A.C.W.S. (3d) 794].

[53] In April 2007 NovAtel brought a motion returnable May 4, 2007 seeking that this action be stayed on the basis that this Court did not have jurisdiction *simpliciter* to determine the issues of inventorship, that this Court was not *forum conveniens* to determine these issues and that the issue of inventorship should be determined by way of an "interference" proceeding before the U.S. Board of Patent Appeals and Interferences.

[54] Justice Clark dismissed NovAtel's motion to stay the action and ordered that the paragraphs challenging the jurisdiction of this Court be struck from NovAtel's defence. Justice Clark declared *inter alia* in his order:

1. It is hereby declared that the Defendants, by their conduct and actions to date, have attorned to the jurisdiction of this honourable Court with respect to all matters raised.
2. It is further declared that this honourable Court is the appropriate forum to determine all issues in the within action.
3. The Defendant's application for an order staying the within action is denied.
4. The trial shall proceed as expeditiously as possible.

[55] A number of related filings have occurred by both parties in the U.S. Patent Office and both Aram's Statement of Claim and NovAtel's Defence and Counterclaim have been further amended as

a result to include relief with respect to those filings. This trial was limited to the issues of liability.

[56] The parties filed an extensive Agreed Statement of Facts and three books of agreed exhibits. Evidence was heard over four weeks in October 2007. Written argument was filed and oral argument heard on December 18 and 19, 2007.

The Positions of the Parties

[57] Aram says that by pursuing the patents referred to above as well as related patents in other jurisdictions and by developing other uses of the principles reflected in these patents, NovAtel has breached the NDA. Moreover, it has misappropriated Aram's intellectual property. Aram claims, as assignee of Heidebrecht's rights, inventorship or co-inventorship in the subject matter of U.S. patent 7,117,094. The same claim is made for all of the other patents referred to in the Statement of Claim. It seeks a declaration that Heidebrecht is the sole and only inventor of the subject matter of those patents and that, by virtue of his assignment, the declaration be made for the benefit of Aram. Alternatively, the Plaintiff Aram seeks a declaration that Heidebrecht is a co-inventor. Aram seeks consequential relief including various mandatory injunctions to regularize all of the patents and patent applications world-wide for the purposes of making them consistent with those declarations. Aram seeks an accounting of all revenues and profits, damages for theft, conversion and wrongful misappropriation of intellectual property, damages for breach of the NDA and other relief including punitive and exemplary damages and the appointment of a Receiver or Receiver Manager of the Plaintiff's rights in the Heidebrecht invention. Aram, as assignee of Heidebrecht's rights, claims in effect that it is the beneficial owner of NovAtel's issued patent or, alternatively, a co-owner. Aram claims that not only did Fenton and NovAtel derive the issued patent from Heidebrecht, but Fenton and NovAtel have acted in a reprehensible and vindictive way in prosecuting rights which rightfully belong to Aram.

[58] NovAtel's position is that it did not breach the NDA; in fact Aram, by utilizing the Fenton proposal to file a patent application, is in breach of the NDA. NovAtel's position is that Fenton is the inventor and that whatever was contributed by Heidebrecht could not possibly entitle him to the status of either inventor or co-inventor. In any event, NovAtel says that Aram's claim is barred by the *Limitations Act*.

[59] A great deal of expert evidence was led as to what the invention is and the inventive aspects of the many claims included in the patent applications. There was a lot of expert evidence led as to what constitutes conception and communication in the context of a patent derivation claim in the United States. There was also evidence given as to the patent processes and substantive law of patents in other jurisdictions.

Patent Derivation

[60] Because seismic activity is world-wide, NovAtel followed the common practice of filing first in the United States by filing a provisional patent application on July 17, 2003. It is common ground that each and every other regular or continuation patent application filed by NovAtel in the United States and every foreign application (whether in the European Patent Office, Norway, Canada or Japan) takes priority from that first U.S. filing. Much of the expert evidence related to U.S. Patent law and the law of other jurisdictions.

[61] The United States is a first "to invent" rather than a "first to file" country. It is common ground that, in this respect, U.S. law is unique in that it looks at the date of invention rather than the date the patent application was filed. In pursuing patents world-wide, it is common for inventors to file first in the U.S.

[62] Patents are governed by Title 35 of the United States Code (35 U.S.C.). A patent gives the inventor or owner of the patent a right to exclude others from making, using, offering to sell, or selling the patented invention. A co-inventor, on the other hand, can exploit the patent without consulting with his fellow inventor(s).

[63] While patent law is by no means identical in all jurisdictions, it was not urged before me that different results might obtain with respect to inventorship or derivation from one jurisdiction to the other. Most of the argument related to U.S. law although a number of Canadian authorities were put before me as well. Nevertheless, for purposes of the patent issues, I proceed on the assumption that the proper law with respect to Aram's derivation claim is U.S. law and, at this point, I make no analysis of this issue under any other law.

[64] A number of experts were called to explain U.S. law on patent derivation. The Plaintiff called Thomas Schatzel and Danny Huntington. The Defendants called David Quinlan and Bruce

Stoner. The legal experts generally agreed that a person alleging that the subject matter of a patent claim was derived from him by the inventor named on the patent must prove:

1. Prior conception of the invention; and
2. Communication of that conception to the patentee.

Conception

[65] It is generally agreed that conception is defined as:

> Formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention, as it is hereafter to be applied in practice. Conception is complete when the idea is so clearly defined in the inventor's mind that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation.

See Schatzel Report para. 55, Exhibit 36.

[66] Nevertheless, it must be more than just a general goal or a plan and Schatzel, on behalf of Aram, agreed that it must not only be an idea of a result to be accomplished but it must include the means of accomplishing that result. Quinlan in his report Exhibit 105, para. 48 put it this way:

> In contrast, merely suggesting an idea of a result to be accomplished, rather than a means of accomplishing it, is not conception, nor is explaining the state of the art at the time of the invention.

[67] Similarly, as was stated by the United State Court of Claims in the *Garrett Corporation v. United States*, 422 F.2d 874 (Ct. Cl. 1970) at 881:

> Joint invention connotes collaboration of effort to produce a complete and operative invention. One who merely suggests an idea of a result to be accomplished, rather than means of accomplishing it, is not a joint inventor.

[68] This same principle was put another way by the U.S. District Court for the Eastern District of Michigan in *Huck Manufacturing Company v. Textron Inc.*, 187 U.S.P.Q. 388 (S.D. Mich. 1975):

> The suggestion or conception of an idea or appreciation of a result to be accomplished, rather than the means of accomplishing it, particularly when the means constitute an essential part of the invention, does not constitute joint or sole inventorship.

[69] In short, to meet the first step of the test for derivation, the Plaintiffs must show not only that Heidebrecht came up with the idea of using GPS technology to collect timing and positioning information for use in seismic data acquisition, but that he had developed a method for doing so.

Standard of Proof

[70] There is no dispute that Aram must prove its case with "clear and convincing evidence" because, as the U.S. Supreme Court said in *Hess v. Advanced Cardiovascular Systems*, 103 F.3d 976 (Fed. Cir. 1997) (lexis) at 980:

> The temptation for even honest witnesses to reconstruct, in a manner favourable to their own position, what their state of mind may have been years earlier, is simply too great to permit a lower standard.

[71] The soundness of this requirement is, I think, borne out by the evidence in this case. While I believe that all who gave evidence in this case are honourable people, an examination of their evidence must be critical, particularly where it serves their own interests or the interests of their masters. This Court must be vigilant in determining whether such evidence is corroborated or whether it is consistent with the objective evidence.

Aram's Argument

[72] As I understand the argument put forward on behalf of Aram, it relies upon Heidebrecht's evidence, as supported by other Aram witnesses, to the effect that much of the seismic proposal put forward by Fenton in his initial documents, his provisional and regular patent application and the issued patent was based on ideas given to him by Heidebrecht. Indeed, much of the evidence of Heidebrecht and other witnesses consisted of putting the various claims advanced in the Fenton patent applications and the issued patent to the witnesses and getting their views as to whether that was disclosed by Heidebrecht during the meeting of June 18, 2003. Aram then purports to isolate the contributions of Fenton which comprise those portions of claims not contributed by Heidebrecht. Aram suggests that the only contributions made by Fenton relate to:

1. Batch processing.
2. The provision of tracking assistance information to assist GPS receivers.
3. Utilization of the base GPS receiver at the location of one of the digitizer units.

[73] Aram says that each of these features would be known by someone well-versed in the state of the art in GPS and, thus, are not inventive. Indeed, they called an expert, Dr. Fattouche, who gave opinion evidence that each of these three elements was well known and would have been obvious to a person of skill in the art. Aram also argues that even if the batch processing referred to in the patent

is not batch processing as it is usually known, the methodology is already the subject of a patent held by other employees of NovAtel which is incorporated by reference into the patent that was issued to Fenton. Thus, it cannot be claimed as an invention by Fenton.

[74] Aram says that all Fenton brought to the inventors' table was state of the art knowledge in GPS and, through the inspiration of Heidebrecht's ideas, he came up with a proposal utilizing those ideas and incorporating state of the art knowledge to accomplish the invention. The Plaintiff cited cases in support including the Supreme Court of Canada case of *Apotex Inc. v. Wellcome Foundation Ltd.*, [2002] 4 S.C.R. 153, 2002 SCC 77, 21 C.P.R. (4th) 499, para. 99, and *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (U.S. 2007), from the U.S. Supreme Court.

The Invention

[75] The first step taken by American courts when deciding derivation cases is to determine the inventive elements of the contested claims: see *Eli Lilly and Co. v. Aradigm Corp.*, 376 F.3d 1352 (Fed. Cir., 2004), 1360; *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir., 2005); *Trovan, Ltd. v. Sokymat*, 299 F.3d 1292 (Fed. Cir., 2002). This approach makes sense. Before we can determine who conceived the invention, we must know what it is.

[76] Broadly stated, the invention is a system which uses GPS in the acquisition of seismic data for both timing and position purposes, critical elements of seismic acquisition. It is not for me to make the judgment as to whether the invention which is the subject of this dispute is inventive rather than a reflection of the prior art because that determination has already been made. The U.S. Patent Office, in its allowability ruling dated August 2, 2006 (Exhibit 26 and Tab 130 of Exhibit 1), has decided that the invention is an advance over the prior art.

[77] The examiner said that the prior art does not disclose the concept of collecting range information from the base receiver with a substantial view of the sky and the slave receivers, where those receivers at various times have access only to weakened signals or signals corrupted by a multipath, and using batch processing over an extended period of time to calculate the positions of the slave GPS receivers associated with digitizers and Geo-phones. That is essentially claim number one in the issued patent.

[78] It was Dr. Fattouche's evidence that claim number one included, by necessary implication, the concept of assisted GPS although it is conceded that it is not included explicitly. In his view, it was necessarily implied because without it the invention would not work. The plaintiff's fundamental position is that assisted GPS is the common thread throughout all of the claims. According to Dr. Fattouche, the data collected from these weakened or corrupted signals could then be batch processed (a system of averaging) and thus be rendered useful data. This was also Heidebrecht's vision in transposing the E911 system to seismic acquisition.

[79] In my view, claim number one of the issued patent does not include assisted GPS; claim number two does. This is clear on their plain reading and from reading the rest of the narrative. It is true that claim number one, as originally drafted in the provisional patent application, did include assisted GPS, but that changed. It probably changed because of the testing which was done by NovAtel in early 2004 in the thick forests of British Columbia. This was a critical test and I agree with NovAtel that this was a test of claim one, i.e. without assisted GPS but with batch processing. Fenton described the processing this way:

> What this picture shows is an array of digitizing units underneath the forest, and what I want to kind of describe is how the signal's going to get through to the receiver. And what I am expecting, and what I have designed the system for is there are times when we have clear view to the satellite through gaps in the forest. And even in the very dense forests that we have been in, if you look at the forest floor on a sunny day, you can see little sprinkles of sun that have made it through the leaves.
>
> So over time, over the period of the day, for instance if I put an antenna on the floor and watch the sun go by, there will be times where the sun will go across the antenna and get direct view to the celestial body. So similarly, I'm expecting, as the GPS is going across the sky, each receiver will get the clear view to the satellite for periods of time throughout its pass, and I need that in order to make this work, and I'll explain why.

And further on he said:

> So I guess the point I'm trying to make is all of the data where we have to lean on the AGPS for tracking is almost completely garbage for trying to establish the position within a metre. So what the processing has to do is clip all of this out. And we take several passes through the data and clip all this data out using the code and the carrier as an indicator of data that's not usable. So we clip this out, and then what's left is the good data that we then batch process through more classical means of taking the good data and the carrier data and determining where your position is.

> The reason why we want assisted GPS is because if we're not assisted through here, when the sun — when the satellite comes back out from around the tree, the receiver is not off looking for it in a different direction. Like, if we didn't have assistance, it may skip all but the really large areas of observability and we miss all the little ones. So the assistance is there to keep the receiver on the satellite so that when it — when we get a clear shot at it, we could capture that data, and it's not off looking in the wrong place.
>
> So its whole purpose in the system is to keep the receiver locked to the satellite so that we can then have all the data that we can go through and pull out these — basically the diamonds from all this rough, so that when we go to process that, we're only processing the diamonds to get the final position.
>
> So that's the story on the batch processing.

[80] In other words, contrary to the expectation of Heidebrecht and the evidence of Dr. Fattouche, the utility of assisted GPS is not for the purpose of obtaining useful data when satellite signals are corrupted by multipath or are weakened and then averaging that data. Its purpose is to maximize the availability of useful data when the slave GPS units at the Geophones do have clear, albeit brief, views of satellites.

[81] This analysis reveals, in my opinion, that Heidebrecht had a notion that assisted GPS could be used in a seismic context using the same principles which are utilized in E911 but did not have a firm idea as to how it could be accomplished. He had a notion that averaging data over a long period of time would be helpful. The actual processing method used in the patent is not a system of averaging. Averaging would not give sufficient accuracy for seismic purposes. The trick, as Mr. Fenton said, was not to average the data; it was to identify the data which was "garbage". This was recognized after the testing which was done in British Columbia in early 2004.

Conception: Analysis of the Evidence

[82] I believe that Heidebrecht was alive to the potential benefits which GPS might bring to the seismic industry. I also believe that he read an article similar to that found at Tab 19 of Exhibit 1 and that he discussed this with Harmon sometime in the summer of 2002. In this discussion he speculated as to the usefulness of the E911 concept in seismic data acquisition. Nevertheless, at this time, he had no more than a general or rudimentary sense of GPS and what it could or could not accomplish. It should be noted that the patent application upon which he and Harmon collaborated in October 2002 was limited to solving a timing problem which had been plaguing the

seismic acquisition industry for many, many years. It did not include the concept of E911.

[83] When he approached Schubert in June 2003, I believe Heidebrecht was primarily concerned with solving the timing problem and he thought that there might well be equipment out there that would allow him to implement and solve the problems referred to in the patent application filed October 2002. Nevertheless, I find that he also discussed the positioning issue with Schubert and this caused Schubert to note the specification of 1 metre as a requirement. I find that Schubert passed this on to Fenton which is why Fenton emailed a request for a NDA using the words that he did. Schubert's June 12 email to Heidebrecht with its enclosures relating to the Superstar II support my view that timing was not the only issue being discussed. Nevertheless, based on the information Heidebrecht had at the time and his lack of knowledge of GPS and what it could do, Heidebrecht had very little sense of what could be accomplished position-wise. Fenton, on the other hand, had a great deal of knowledge in this area and this caused him to become intrigued with the positioning aspect because he felt, based on his knowledge and experience, that a great deal was available in the GPS "toolbox" and it might offer an answer to the positioning problem.

[84] Heidebrecht believes that the genesis of the Fenton proposal was a discussion that occurred at the June 18 meeting and that a number of ideas came from him, including the idea of incorporating the E911 system into seismic acquisition and utilizing a master GPS device with a clear view of the sky to help other GPS devices which did not have a clear view of the sky.

[85] I believe on June 18 Heidebrecht, for at least a good portion of the meeting, did lead the conversation and described the process of seismic acquisition generally and the accuracy requirements for both timing and positioning. In addition to talking about the timing problems, I also find that he discussed the possibility of the use of GPS in positioning and this resulted in Schubert making the note "stakeless survey eventually". It seems clear that this note was made as a result of something said at the meeting and it was Heidebrecht's view that a stakeless survey was probably feasible eventually. He did not believe that it was achievable in the near future given the state of the art whereas Fenton did. Fenton would not have used the word "eventually". Heidebrecht recalls that Fenton looked him in the eye

and said: "Dave you have a great idea". Banacek's recollection is that it was Schubert who said it was a great idea and Fenton agreed. I do not know exactly what was said but I am satisfied that Fenton thought that the idea of a stakeless survey was certainly interesting and probably feasible. I find also that Heidebrecht discussed the idea of having a GPS unit with a clear view of the sky in the doghouse and the possibility of it assisting the GPS units located in the field whose view of the sky might be obstructed. He probably did refer to the E911 concept and make the observation that the units in the field are stationary for long periods of time. This was an advantage over the E911 system. I have little doubt that Fenton participated actively and shared his belief that a lot was possible using the GPS "toolbox".

[86] One of Aram's legal experts, Thomas Schatzel, in support of his conclusion that Fenton improperly "derived" the subject matter of claims 10, 13, 25 and 27 of issued U.S. Patent 7117094 from Heidebrecht, assumes that claims 10, 13, 25 and 27 were "conceived" and "communicated" by Heidebrecht to Fenton in June 2003.

[87] The issued patent has 27 claims and many of the witnesses called on behalf of Aram testified as to whether those claims initiated with Heidebrecht. As I have indicated, the answers tended to serve Aram's interests. Also, the questions were extremely leading. Moreover, the questions were loaded in the sense that the answers depend upon the witnesses' view of whether or not the claims are included within the concept of E911, which all of the Aram witnesses agreed had been discussed by Heidebrecht. Accordingly, that evidence has to be looked at very critically by this Court and the existence of corroboration is important.

[88] It will be recalled that Heidebrecht, in his 2002 patent application, used what he describes as "neighbour assist". Briefly, this is a concept by which one GPS unit can transfer information to a neighbouring GPS unit. The information transferred is usually time. Heidebrecht says that he disclosed to the June meeting this concept as part of his invention. I am satisfied on the evidence that "neighbour assist" is the subject of prior art and I accept the evidence of Fenton that time transfer from a GPS receiver to any other device has been done since GPS receivers were created in the 1980s. As it relates to the derivation claim it is, in my view, a red herring. Insofar

as it is argued by Aram that "neighbour assist" in combination with assisted GPS is inventive, my comments as they relate to the other claims are applicable.

[89] Aram argues that Heidebrecht had reduced portions of his invention to writing and sets out a number of documents in para. 27 of its written argument. Most of those documents are not authored by Heidebrecht, the exceptions being those documents found at Tabs 1, 27 and 145 of Exhibit 1. To say those documents reflect even a portion of an invention is more than a stretch. As NovAtel points out, there is nothing in Heidebrecht's or Aram's files or Heidebrecht's engineering log book which constitute an explanation of what he alleges is his invention. Such documents do exist for his patent filing in October, 2002 regarding the synchronization patent.

[90] Similarly, other corroborating evidence, including the testimony of Harmon, does little more than establish that Heidebrecht had an idea of utilizing an E911 system for seismic with a master GPS device with a clear view of the sky helping other GPS devices which may not have a clear view of the sky. Suggesting that an E911 concept might be transferrable to seismic data acquisition does not, in my view, amount to a conception of the means of accomplishing a desired result. The seismic industry had speculated for some time about the extent to which GPS could be utilized reliably and economically to achieve the necessary precise results related to positioning. Heidebrecht was among those people but the devil was very much in the detail by which this might be accomplished. Suggesting that the E911 solution could be utilized in a seismic context without having a clear idea of where and how it could be accomplished does not constitute a basis for inventorship or joint inventorship.

[91] I am confirmed in this view by the evidence of Bacanek who testified as to what Heidebrecht drew on the whiteboard by drawing it himself to his best recollection. Essentially, his recollection was that Heidebrecht drew a typical seismic operation including the seismic truck and a network of Geo-phones. He also recalled that Heidebrecht drew in a wireless repeater to illustrate that one can bridge canyons or other areas that cannot support cable. There is no evidence, however, that Heidebrecht had a clear idea as to how, technically, the concept of E911 would be applied to a seismic context. Bacanek testified that Heidebrecht, in essence, contributed the

requirements and specifications required for accurate seismic acquisition and further speculated that the E911 concept might be useful and that those GPS units with obstructed views of the sky could receive assistance from a master GPS unit with a clear view of the sky. Bacanek also confirmed, in cross examination, that the primary purpose for which Aram was considering the use of GPS was in the area of timing. He also recalled that Fenton was at the whiteboard and talking about GPS signals. He also specifically recalls Fenton talking about how to use GPS signals in calculating position. I am satisfied that this was an area in which Heidebrecht and his colleagues at Aram had little capability.

[92] I am satisfied from all of the evidence, including the evidence of Heidebrecht himself that he did not have a clear idea as to how GPS could be used in the acquisition of seismic data or the means of accomplishing it. For example, his testimony included the following:

> A Honestly, you know, when I read this, it's like a light bulb; it just comes on. And what was happening is, there is an E911 emergency program that the FCC was planning to roll out.
>
> Q Let me stop you there, sir. What was your understanding of that E911?
>
> A Is that anyone with a cell phone could be located for emergency purposes. And at that point, there was still two different methods of doing it; but the one method which was winning out was utilizing assisted GPS.
>
> Q And where did you learn that, sir?
>
> A That was in this article.
>
> Q Sorry, continue?
>
> A And probably through other previous discussions on E911 with other people on the other method of triangulation we're aware of.
>
> Q And what specific topics, if any, do you recall were discussed in this article that you read, sir?
>
> A Basically, it goes out and it says this is how we see the E911 rolling out with using assisted GPS for the cell phones. And with that assistance, you know, the cell tower or cell site, when utilized that to process the data and then be able to locate where the cell user is.
>
> And it's just immediately — well, there is one other aspect, too, and that was, it's not as clear in this article, but it does say where it has greater sensitivity.
>
> And what that means is, is that under — and the thing is, normally, if you had a GPS receiver in here, you wouldn't be able to get anything. And I was thinking, yeah, okay. And so with assisted GPS, you get that extra 15, 16, 17 DB, which is a term of how sensitive it is. And what you can do is,

then, you can actually utilize this for under, you know, like tree canopies, foliage and, you know, obstructions. And you know what, this had large implications for seismic.

And honestly, one of the things, and that was sort of my vent, is, to utilize technologies and integrate those into what was appropriate for seismic instruments. And, you know, you knew for sure — it's like a DVD player. The first one comes and it's, I don't know, a thousand bucks, $1,200, and I can buy one from Wal-Mart for 79 bucks now.

And I knew that GPS technology where both systems are using battery, you know both, you know, needing small, compact devices that this was a total fit for seismic.

Q You mentioned assisted GPS, sir. What did you understand that to mean?

A Assisted GPS back then was — what I understood, reading the article, was that there would be an assistance-type server. And what they would provide was a list of satellites and Doppler offset. Those two, I was familiar with and, you know, and knew, you know, generically what that was. And it also provided a list of broadcast symbols, which I'm still not sure what's all contained in there. But basically, providing assistance really to go hand — you know, help that receiver to go and locate its position and essentially, you know, capture the GPS satellite signals.

[93] And further he said in cross examination;

Q What is the accuracy provided by E911?

A You'd have to ask someone that's an expert of GPS.

Q You don't know that?

A Not off the top of my head, no. I assume it's close enough to locate a person.

Q And what accuracy is needed for seismic surveying, sir?

A Typically less than a metre.

Q So this invention or this eureka moment you had when this read this article in 2002, you say discussed the concepts of E911, correct?

A The article discussed, yes, the elements that made E911 work.

Q So, sir, I'm curious, what changes did you propose to this E911 concept to provide the accuracy you needed for seismic surveys?

A Well, first of all, the biggest benefit of E911 is it's able to distinguish satellite signals. But what we were able to do was process over time, and that was a huge benefit. And the other one is, is obviously, timing is a big part of it, reinjection of the position back, or as we had talked about, the position, itself, might be calculated in the slave and to produce timing.

Of course, the timing, as we know, depending on the foliage that's located, you might not have some of the receivers receive signals, so we would have to do neighbour assist.

Q Well, I think you testified to me on discovery that your idea was to average over time, the position information from the GPS receiver; right?

A I assume that what you are saying is part of the elements, yes.

And further on;

Q Now, sir, how many satellites need to be tracked simultaneously by GPS receiver to get position?

A Typically four.

Q What if there is less than four satellites? Can a receiver still get its position?

A It can still receive and calculate position, but not to the same accuracy.

Q Well, you told me in your discovery that if you have the luxury of time, you can use less than four satellites, correct?

A That's still up for debate. That's potentially true.

[94] He had no understanding of broadcast data symbols and why they are critical to the successful implementation of the invention. His idea was to "average" data which would not have provided the required accuracy. He did not know how many satellites needed to be viewed by the slave GPS units. At best, Heidebrecht had a vague idea of what he would like to accomplish but not a clear idea. Moreover, he had no clear understanding of how it could be accomplished. His knowledge of GPS technology was insufficient to permit him more than a general understanding of what was possible.

[95] By his own admission, Heidebrecht's understanding of G.P.S was limited which caused him to request Fenton to give him what he termed a course in "GPS 101" after the June 18 meeting. None of the Aram personnel was well-versed in GPS. This was recognized in a September 2001 document contained at Tab 3 of Exhibit 1 where it was acknowledged that other companies were beginning to specify GPS tracking and that GEO-X should look outside for partnering in order not to lose ground to Sercel, a competitor, with respect to GPS capability. Heidebrecht was interested in finding out what was out there GPS-wise and whether it could solve his timing problems. He was also interested in knowing how long until a stakeless survey might be feasible technically and commercially. For these reasons he called on NovAtel.

[96] Heidebrecht says that he knew what was in the GPS proposal for seismic sent to him by Fenton with the July 16, 2003 email before reading it; he knew it reflected his ideas. I do not accept that assertion. In my view, Heidebrecht was not capable of producing

that document which also explains why he did not reduce his alleged invention to writing.

[97] Pratap Misra, who teaches at Massachusetts Institute of Technology and is a well respected expert in this area, testified that, in his opinion, the GPS proposal authored by Fenton in July 2003 represents a specialized GPS application as opposed to an ordinary one. In his opinion the developer of that specialized application would be required to possess a deep understanding of:

(a) GPS signal structure;

(b) Processing stamps for acquisition and tracking of signals;

(c) Nature of the measurements: Code phase and Carrier phase measurements;

(d) Nature of the errors in the measurements and how to compensate for them; and

(e) Algorithms for extracting the desired position, velocity and time estimates from the raw measurements.

I accept that evidence and based upon all of the evidence I am satisfied that Heidebrecht did not possess a deep understanding of any of the five subject matters required to prepare a proposal for a GPS based seismic data collection system.

[98] Even by the time of the trial, Heidebrecht's testimony demonstrated only a superficial understanding of GPS and certainly did not demonstrate the knowledge required to draft the proposal as Fenton did, devise a plan of going forward to determine feasibility, and put in place the sort of testing NovAtel did over the fall of 2003 and the spring of 2004.

[99] On the other hand, Fenton was eminently qualified to come up with his proposal. He was a GPS guru, he was well educated in this area and he had an immense amount of experience. He also had seismic experience prior to the June 18, 2003 meeting and knew generally about the problems facing seismic acquisition companies. What he did not know, he either was told at the meeting or could have discovered from anyone knowledgeable in seismic.

[100] Aram contends that Fenton did not contribute anything inventive and did only what a person with ordinary skill and knowledge in GPS could have done without extensive research or experimentation. The evidence, in my view, does not support that conclusion. Considerable experimentation and testing by NovAtel took place in fall of 2003 and winter of 2004 and the provisional

patent application underwent some changes that resulted in the issued patent as it is today.

[101] It certainly cannot be said, in my view, that a person of ordinary skill would conclude that based upon Heidebrecht's ideas in June 2003, the solution advanced in the Fenton issued patent was at all obvious. In my view, the Fenton invention combines prior art with some unique features or combinations. The U.S. Patent Office found these inventive and I agree with that decision.

[102] Moreover, it was certainly not predictable that the original "Fenton proposal" would work. NovAtel had to prove the concept and undertake the tests that it did. As the result of testing and experimentation, the application was changed somewhat and a novel batch processing process was utilized. The fact that the processing was the subject matter of another NovAtel patent was acknowledged in the Fenton patent application.

Conclusion on Derivation

[103] I find that Heidebrecht's ideas as disclosed at the meeting of June 18 did not amount to conception sufficient to satisfy that element of derivation. The concept was not clearly defined and required much more than ordinary skill to reduce to practice. As events unfolded, it required extensive research and experimentation. At most, Heidebrecht communicated an idea of a result which might be accomplished; he did not communicate or have knowledge of the means of accomplishing it. In my view, he was neither an inventor nor a joint inventor. The Plaintiff has failed to prove its case related to derivation by clear and convincing evidence which would require me to conclude that it was highly probable. Rather, I am satisfied that in June 2003 Heidebrecht did not have a concept which was capable of being derived. Accordingly, I dismiss the derivation claim.

Breach of Confidence and NDA

[104] It is generally understood that three elements are needed to demonstrate a breach of confidence:

1. The supplying of information having a quality of confidence about it;
2. The communication of the information in circumstances in which an obligation of confidence arose; and

3. The unauthorized use of the information by the confidee to the confidor's detriment.

See *International Corona Resources Ltd. v. LAC Minerals Ltd.*, [1989] 2 S.C.R. 574, 26 C.P.R. (3d) 97; *Pharand Ski Corp. v. Alberta* (1991), 116 A.R. 326, 37 C.P.R. (3d) 288 (Q.B.); *Murphy Oil Co. v. Predator Corp.* (2006), 408 A.R. 98, 2006 ABQB 680.

[105] The nature of the cause of action for breach of confidence has been the subject of considerable judicial discussion including that contained in *Cadbury Schweppes Inc. v. FBI Foods Ltd.*, [1999] 1 S.C.R. 142, 83 C.P.R. (3d) 289, paras. 19 and following. The cause of action has been variously described as equitable and "*sui generis*". For the purpose of this case, I do not think it is important to resolve that controversy. Suffice to say that, however the obligation is characterized, the Court's concern is with enforcing the reasonable expectations of the parties in the particular commercial context.

[106] Context informs the parties' reasonable expectations. In this case, we are dealing with sophisticated parties who were and are corporate leaders in their respective fields. Aram is a leader in the manufacture of seismic acquisition equipment. NovAtel is a leader in GPS. Each had expertise in intellectual property and considerable experience in prosecuting patents. While breach of confidence is a cause of action distinct from derivation, there is considerable overlap in the evidence and the parties' reasonable expectations as to how their respective ideas would be developed are an important backdrop to the questions of confidentiality.

[107] Aram was having little luck in finding a low cost, low power, reliable GPS unit for use in its system. When Heidebrecht approached NovAtel, he was primarily interested in the timing question but he was also interested in knowing what was available position-wise. In his initial meeting with Schubert, Heidebrecht did not lay out any ground rules for the meeting in terms of its purpose or in terms of what his expectations were as to the relationship. It was all rather vague. When Fenton became involved because he had the technical expertise to answer some of Heidebrecht's questions, the matter was not clarified further by anyone at Aram. It was Fenton who brought with him the NDA, which the parties executed. While the agreement contains the date of May 20, 2003, the parties agree that this was a mistake and the agreement was actually executed on

June 18, 2003. While it is true that the agreement is mutual, it is significant that Aram did not put forward any plan or any sense of its expectations in terms of what it anticipated would occur or how the relationship between Aram and NovAtel would develop.

[108] The existence of a contract such as the NDA in this case also informs the nature of the obligations between the parties. As the Supreme Court of Canada said in Cadbury Schweppes, a contractual term may modify a general obligation otherwise imposed by equity. The NDA may inform the nature of the relationship and the extent of the obligation. It also informs the reasonable expectations of the parties.

Was the Information Communicated in Circumstances in Which an Obligation of Confidence Arose?

[109] I am satisfied that the information in question was communicated in circumstances that import an expectation of confidence. At the end of the June 18, 2003 meeting, it was agreed that Fenton would draft a business proposal to be presented to Aram. As was said by Megarry J. in *Coco v. A.N. Clark (Engineers) Ltd.*, [1969] R.P.C. 41 (Ch. D.) at 48:

> In particular, where information of commercial or industrial value is given on a business-like basis and with some avowed common object in mind, such as a joint venture or the manufacture of articles by one party for the other, I would regard the recipient as carrying a heavy burden if he seeks to repel a contention that he was bound by an obligation of confidence...

[110] I think that at the end of the meeting of June 18, 2003, the parties had in mind pursuing a common objective. In addition, the parties executed the NDA at that meeting. Execution of an NDA is further evidence that the information was disclosed in circumstances importing a duty of confidence: see *Stenada Marketing Ltd. v. Nazareno* (1990), 33 C.P.R. (3d) 367 (B.C.S.C.), at para. 34.

Was the information confidential?

[111] Although I find that the Plaintiffs have made out the second part of the test for breach of confidence, I am troubled by the proposition that the information disclosed by Heidebrecht at the June 18, 2003 meeting was confidential. The concept of E911 was in the public domain. Furthermore, the challenges facing seismic data acquisition companies and the specification requirements were well known in the industry, which for the purposes of the breach of confidence analysis means that they were "public knowledge": see

Visagie v. TVX Gold Inc. (1998), 42 B.L.R. (2d) 53 (Ont. S.C.J.), at para. 240; aff'd (2000), 6 B.L.R. (3d) 1 (Ont. C.A.). Fenton and NovAtel were aware of much of that information and anything of which they were not aware could have been easily obtained. I have accepted that Heidebrecht drew Fenton's attention to the connection between GPS and seismic, but it was Fenton who came up with how that connection could be made.

[112] I am mindful of the observations of the Supreme Court of Canada in *Cadbury Schweppes*, at para. 75:

> Equity has set a relatively low threshold on what kinds of information are capable of constituting the subject matter of a breach of confidence. In *Coco v. A.N. Clark (Engineers) Ltd.*, *supra*, Megarry J., at p.47, considered that "some product of the human brain" applied to existing knowledge might suffice. [Emphasis in original].

[113] The authorities refer to six factors which ought to be considered to determine if the information has a quality of confidence. They are:

(1) the extent to which information is known outside the owner's business;

(2) the extent to which it is known by employees and others involved in the owner's business;

(3) the extent of measures taken by him to guard the secrecy of the information;

(4) the value of the information to him and his competitors;

(5) the amount of money or effort expended by him in developing the information; and

(6) the ease or difficulty with which the information could be properly acquired or duplicated by others [i.e. by their independent endeavours].

See *Pharand Ski Corp*, at para. 137, quoting *Ansell Rubber Co. Pty Ltd. v. Allied Rubber Industries Pty Ltd.*, [1967] V.R. 37, and *Deta Nominees Pty Ltd. v. Viscount Plastics Products Pty Ltd.*, [1979] V.R. 167.

[114] None of those factors is helpful to Aram in establishing that the information was confidential. While I appreciate that those factors are not exhaustive, it is certainly an indication that, on a continuum, the information provided by Heidebrecht was on the very low end of the scale.

[115] Moreover, as indicated before, the reasonable expectations and the parties' obligations are informed by the NDA and, in that connection, "confidential information" is specifically defined:

> "Confidential information" means any trade secrets, information and data of a confidential or proprietary nature (whether oral, in tangible form or observed) obtained by the Receiving Party from the Disclosing Party which (a) derives economic value, actual or potential, from not being generally known to or readily ascertainable by other persons who could obtain economic value from its disclosure or use and (b) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

[116] The information that Aram communicated to NovAtel was easily ascertainable and it was not the subject of any effort on the part of Aram to maintain its secrecy. On the contrary, Heidebrecht had discussed his ideas with other GPS suppliers. He testified that he had discussed aspects of assisted GPS and E911 with a number of suppliers for the purpose of ascertaining whether a low cost receiver was available on the market.

[117] I find that the information disclosed by Heidebrecht to NovAtel during the June 2003 meetings was not confidential information.

Unauthorized Use?

[118] Given that I have found that the parties were pursuing the possibility of a business opportunity in June 2003, and given the low threshold required to establish that information is confidential, I should pursue the analysis of whether NovAtel breached the obligation to Aram in case my classification of the information as non-confidential is wrong.

The Fenton Proposal

[119] The original proposal drafted by Fenton can be found at Tab 56 of Exhibit 1 and the one forwarded to Heidebrecht on July 17, 2003 can be found at Tab 57. They are virtually identical except for the title and the format. The copy sent to Heidebrecht was identified as the restrictive proprietary information of NovAtel and there is a warning as to the unauthorized use of the restrictive proprietary information. As indicated before, I am satisfied that little, if any, of the material which discloses the method by which assisted GPS could be implemented in a seismic context could have been contributed by Heidebrecht beyond the general observation that the E911 concept might be usefully adapted to seismic data acquisition

given the length of time the Geo-phones are stationary. The developmental risks referred to in the document were real and needed to be overcome in order to make the proposal work. It was Fenton who could have understood those risks. He is the only one of the two who could have come up with the Development Plan contained in the proposal.

[120] When he forwarded the proposal, Fenton informed Heidebrecht that he had asked NovAtel's patent person draft a provisional patent application. He previously had informed Heidebrecht of this by telephone on July 14 to which Heidebrecht says he expressed some anger and informed Fenton that he or Aram would be filing a patent with respect to the process as well. In response to that Fenton advised Heidebrecht as follows:

> You mentioned that you would also like to file something along these lines. If what you had in mind is similar to this, then we could talk about giving you guys certain exclusivity rights based on project funding

[121] The parties' expectations as to intellectual property are informed somewhat by the NDA, which provides that no provision of the agreement shall be construed as granting any interest in any confidential information and that the disclosing party retains all intellectual property in the confidential information.

What were the parties' reasonable expectations?

[122] It is well established by the authorities including *Lac Minerals* and *Coco v. A.N. Clark* that it is the parties' reasonable expectations in the particular context of the case which define the parties' respective obligations in their dealings. The particular context in this case included the fact that (apart from the NDA) the parties had reached no consensus on how to proceed or on their respective rights and obligations which were, therefore, fluid and not cast in stone.

[123] Sophisticated parties like NovAtel and Aram are not only entitled to negotiate rights and obligations, they are expected to. The reasonable man, however ubiquitous, is not a mind reader. Aram made no attempt to define the relationship; nor was there any offer of consideration.

[124] Can it be said that a reasonable man in the position of Fenton would have understood that, if he was able to succeed in finding a GPS solution to seismic acquisition, he was not to apply to patent that solution? Clearly, Fenton did not understand that to be the

case. He was very forthright about his understanding and told Heidebrecht that he was proceeding to file for a patent. He further informed Aram that it might be able to negotiate exclusivity rights. Apparently, Heidebrecht took great exception to this but if he thought Fenton was off side, surely Fenton would reasonably expect him to say so.

[125] Heidebrecht says that he did so in the July 14 telephone call but his evidence on this point, like several others, is vague. He testified that he indicated Fenton could not file a patent because it was Heidebrecht's idea but went on to say that Fenton was adamant that he was going to file. Heidebrecht's response was we would continue to work this out. On cross examination he stated that, while he was not in agreement with Fenton filing for a patent, he was prepared to postpone the controversy until it was determined that the proposal was technically feasible. I find that whatever conversation took place on July 14, Heidebrecht did not clearly or unequivocally tell Fenton that Fenton did not have the right to file for a patent. This finding is also consistent with the communications following July 14.

[126] After Fenton confirmed in writing that it was his intention to pursue a patent forthwith, Heidebrecht had several options by which he could have registered his displeasure or protected his perceived rights. He could have replied to the effect that Aram claimed ownership of the idea or that Fenton had no right to pursue a patent. He could have broken off the relationship. He could have consulted his solicitor. Instead, he responded that the proposal looked good, made some changes to it and asked what was the next course of action.

[127] Fenton responded as one would expect. He replied that the parties needed to have a business discussion to define their relationship because it was going to require considerable investment to take this concept to production. If Heidebrecht was of the view that his idea had been misappropriated, his further response to Fenton is bizarre. He responded that Aram needed to know more about the technical side in order to get a better understanding of the scope of the task before Aram could discuss the commercial side. This could only have meant to Fenton that Aram was otherwise onside with what had been communicated to it by NovAtel.

[128] It is remarkable in the extreme that Heidebrecht, while complaining bitterly to Harmon that NovAtel was stealing his idea, continued to play along with Fenton as if it were business as usual.

[129] What he did do was to have Harmon conduct patent searches and utilize Fenton's proposal to prepare another patent application on behalf of Aram. He did not inform Fenton that he was preparing to file a patent.

[130] Aram and NovAtel got into a discussion about the possibility of using GPS in seismic acquisition. They did so without defining their relationship. There is nothing wrong with that but the consequence is that the parties needed to agree on how to proceed in future. In this case no agreement was reached. NovAtel attempted to persuade Aram to participate in the proposal. After its testing and experimentation in the fall of 2003 and the winter of 2004, NovAtel presented its findings and its proposals to go forward to Aram in June 2004. While Aram did not disclose this to NovAtel, I find that at that time, Aram had no intention of participating with NovAtel. Mr. Chamberlain did not like what he saw and he was upset with NovAtel. Moreover, he was not interested in paying a lot of money for what he thought Aram was entitled to for nothing. Aram had filed a patent and Aram concentrated on ascertaining whether NovAtel had actually filed a competing patent. While Heidebrecht was instructed to continue to work with NovAtel, the strategy appeared to be to avoid a confrontation until Aram knew all of the facts.

[131] Aram argues that NovAtel misused the information provided to it in the following ways: by using it to develop a seismic data acquisition system; by presenting the seismic data acquisition system to Aram's competitors; and by patenting the seismic data acquisition system which, once published, prevents Aram from using its own information and precludes Aram from applying for a patent to protect its information.

[132] None of these actions by NovAtel amounts to a misuse of the information provided to it by Aram. At the end of the June 18, 2003 meeting, the employees of both parties agreed that Fenton would put together a proposal for how to use GPS technology in seismic data acquisition. This is exactly what he did. Everything that Fenton and NovAtel did after providing the seismic opportunity document to Heidebrecht, including the alleged breaches identified by Aram, is understandable and legally defensible when consideration is given to the reasonable expectations of the parties and the Plaintiff's ambiguous course of conduct.

Ought this Court to exercise its equitable jurisdiction?

[133] An action for breach of confidence is an action in equity. Whenever a party invokes the equitable jurisdiction of this Court, judges must ask themselves whether that equitable jurisdiction ought to be exercised. Given Aram's conduct as set out above, had I found a breach of confidence, would this be an appropriate case in which to exercise this Court's equitable jurisdiction?

[134] I have found that despite being unhappy with NovAtel's expressed intention to file for a patent with respect to the Fenton proposal, Aram took no steps to convey to NovAtel Aram's perception that its confidential information was being misused. While Heidebrecht testified that he expressed disappointment and anger at this proposition during a phone call with Fenton, he did not follow up in any way in the face of Fenton's written confirmation that he intended to pursue a patent on behalf of NovAtel. Moreover, the very next day, Aram pursued with its patent people the filing of a Continuation In Part using the Fenton proposal. It did not tell NovAtel it was doing so. In the result, Aram did precisely what it says NovAtel should not have done. Furthermore, while NovAtel was totally up front with what it was doing, Aram was not. In my view, even had there been grounds to do so it would not be appropriate to exercise this Court's jurisdiction to grant an equitable remedy with respect to NovAtel's pursuit of its patent.

[135] With respect to presenting the Fenton proposal to others in the industry, nothing came of that prior to NovAtel's presentation to Aram in June 2004. It was still open to Aram to partner with NovAtel to develop a new GPS-enabled seismic data acquisition system. I have found that at that time it was Aram that had decided not to proceed with the NovAtel proposal, although it did not expressly say so to NovAtel. Under the circumstances, it would also be inappropriate to exercise my jurisdiction with respect to that complaint.

Summary on Breach of Confidence

[136] Aram and NovAtel on June 18, 2003 agreed to pursue a common objective of utilizing GPS in a seismic context. Nevertheless, at that meeting, Heidebrecht did not disclose any information to NovAtel that would be considered confidential under the NDA or by courts of equity.

[137] Fenton drafted his proposal and believed that he had the right to pursue a patent for the subject matter of his proposal. I find that he had a reasonable basis for that belief and that he held it in good faith. He communicated that intent to Heidebrecht who replied that Aram intended to apply for a patent of its own. Fenton's immediate response was that perhaps Aram could negotiate exclusive rights based on project funding. By responding as he did, I believe Heidebrecht gave some validity to Fenton's reasonable expectations. Moreover, contemporaneously with that he instructed his patent expert to use Fenton's proposal for the purpose of pursuing a patent on behalf of Aram. Upon consideration of all of the facts, I would not exercise my equitable discretion to grant a remedy even if I thought that Fenton and NovAtel were in breach of the NDA by pursuing the patent to its ultimate issue.

[138] Furthermore, I do not believe that Aram utilized the information contained in the proposal to the detriment of Aram. While there was some discussion of the concept with parties other than Aram, NovAtel was still prepared to have Aram as its partner as late as June 2004.

[139] Accordingly, I dismiss Aram's claim for a remedy arising out of breach of confidence.

Limitations Period

The Legislation

[140] This action is governed by the *Limitations Act*. The applicable limitation periods are set out in s. 3(1) of the *Limitations Act*:

> 3. *Limitation Periods* — (1) Subject to section 11, if a claimant does not seek a remedial order within
>
> (a) 2 years after the date on which the claimant first knew, or in the circumstances ought to have known,
>
> (i) that the injury for which the claimant seeks a remedial order had occurred,
>
> (ii) that the injury was attributable to conduct of the defendant, and
>
> (iii) that the injury, assuming liability on the part of the defendant, warrants bringing a proceedings,
>
> or
>
> (b) 10 years after the claim arose,
>
> whichever period expires first, the defendant, on pleading this Act as a defence, is entitled to immunity from liability in respect of the claim.

The Procedural History

[141] Prior to the trial of this case, NovAtel applied for summary judgment on the basis that Aram's claim was barred by the *Limitations Act*. Romaine J. allowed the application for summary judgment, but the Court of Appeal was of the view that the limitations issue could not be decided on a summary judgment basis: see *Aram Systems Ltd. v. NovAtel Inc.* (2006), 411 A.R. 17, 2006 ABQB 948, rev'd (2007), 404 A.R. 288, 2007 ABCA 100. While remaining cognizant that the test for granting a summary judgment is different than the test applicable after a trial on the facts, I do find the comments of the Court of Appeal helpful in deciding this issue.

The Ultimate Limitation Period

[142] The ten year ultimate limitation period is set out in s. 3(1)(b) of the *Limitations Act*. It bars any order sought more than ten years after the claim arose. This action was commenced on July 6, 2006. All the relevant events fall within the ten-year ultimate limitation period.

The Discoverability Limitation Period

[143] The discoverability limitation period is set out in s. 3(1)(a) of the *Limitations Act*. It bars any order sought more than two years after the claimant knew or should have known that an injury occurred, that the injury was attributable to the defendant and that the injury warrants bringing a proceeding.

Burden of Proof

[144] According to s. 3(5)(a) of the *Limitations Act*, the burden of proving that this application has been brought before the expiration of the discoverability period falls on Aram:

> (5) Under this section,
>
> (a) the claimant has the burden of proving that a remedial order was sought within the limitation period provided by subsection (1)(a), and....

The Meaning of Injury

[145] "Injury" as it is used in the *Limitations Act* is defined in s. 1(e) as follows:

> (e) "injury" means
>
> (i) personal injury,
>
> (ii) property damage,

(iii) economic loss,

(iv) non-performance of an obligation, or

(v) in the absence of any of the above, the breach of a duty;

[146] In *Sousa v. Mayo* (2005), 56 Alta. L.R. (4th) 395, 2005 ABQB 845, the parents of a deceased infant sued the doctors who had overseen the infant's delivery. The allegedly negligent doctors applied for summary judgment, citing the expiration of the discoverability period found in s. 3(1)(a) of the *Limitations Act*. Over two years had passed between the negligent delivery and the filing of the statement of claim, but less than two years had passed between the death of the infant and the filing of the statement of claim. The parent's claim for compensation for loss of reproductive ability due to the doctor's negligence was barred by the *Limitations Act* because the two-year period began running at the time of the delivery. The parent's claim under the *Fatal Accidents Act*, R.S.A. 2000, c. F-8, was not barred by the *Limitations Act* because the two-year period did not start running until the death of the infant. In so deciding, Binder J. said the following at para. 37:

> I am satisfied that [*sic*] Legislature intended the discoverability period to commence at different times for different injuries and different claims which may arise from the same events. This conclusion is consistent with the intent and the object of both the *Limitations Act*, which rests on certainty, evidentiary, and diligence rationales, and the *Fatal Accidents Act*, which was intended to create a new right of action for dependents not available under the common law.

[147] Sousa was applied by the Court of Appeal in *Sun Gro Horticulture Canada Ltd. v. Abe's Door Service Ltd.* (2006), 397 A.R. 282, 2006 ABCA 243. In *Sun Gro*, the plaintiff had hired the defendant to build an extension of its plant. The defendant had built the extension without a building permit and in breach of the fire code. In March 2000, the plaintiff learned that the building breached the fire code. In November 2000, the building burned down. The plaintiff filed its statement of claim on October 1, 2002. In finding that the plaintiff's claim was not barred by the *Limitations Act*, the Court of Appeal considered the meaning of the term "injury" as it is used in s. 3(1)(a) and said this at para. 11:

> I agree with the Respondent that the Appellant confuses the concept of a cause of action with that of an injury. The *Limitations Act* defines a "claim" as a matter giving rise to a civil proceeding in which a claimant seeks a remedial order (s.1(a)). A "remedial order" is defined as a judgment or an order made by a court in a civil proceeding requiring a defendant to comply with the duty

> or pay damages for the violation of a right (s.1(i)). The *Act* defines "injury" to mean personal injury, property damage, economic loss, non-performance of an obligation or, in the absence of any of the foregoing, the breach of a duty (s.1(e)). It is true that a factual nexus gives rise to only one cause of action, and a judgment merges all claims for damages arising from that cause of action. Section 3(1)(a), however, links immunity with the discoverability of the injury, not the discoverability of a cause of action for any injury. [Emphasis in original].

[148] I take *Sousa* and *Sun Gro* to stand for the proposition that multiple injuries can arise from one event. The discoverability limitation period for each injury can start to run at a different point in time. The three main injuries claimed by the Plaintiff in this action are derivation, breach of the NDA and breach of the equitable duty to protect confidential information. The latter two can be dealt with together for the limitations analysis. After applying the relevant law to the facts of this case, I have determined that the claim for derivation, had it been successful, would not be barred by the *Limitations Act*. A claim for breach of the NDA or breach of confidence, had it been successful, would be barred by the *Limitations Act*.

Derivation

[149] As set out above, to show derivation a claimant must prove prior conception of the invention and communication of the conception to the patentee. In deciding derivation claims, defining precisely what the invention consists of is an absolutely necessary precondition to deciding who conceived it. In American courts, it has been held that the first step in deciding whether derivation has occurred is to construe the meaning of the contested patent claims; see *Eli Lilly and Company*; *Phillips*; and *Trovan, Ltd.*

[150] In this case, Aram had no way of knowing that an injury had occurred until it had the opportunity to review the patent claim filed by NovAtel and to determine what inventive elements it contained. Therefore, the discoverability period set out in s. 3(1)(a) of the *Limitations Act* did not start to run until the February 10, 2005 publication of NovAtel's patent. Aram's claim was brought within two years of this date and therefore is not barred by the *Limitations Act*.

Breach of Confidence

[151] The Court of Appeal, when it heard the appeal from the summary judgment application, considered at para. 29 how the *Limitations Act* might apply to Aram's claims for breach of confidence, at

> [I]n light of the very broad definition of "injury" in the *Limitations Act*, it is arguable that the additional disclosures constitute additional breaches of the nondisclosure agreement and the duty of confidence and, accordingly, additional "injuries" for the purposes of restarting the limitations clock.

[152] While I recognize that there could be separate injuries, on the facts before me I have found no breaches by NovAtel and I do not intend to speculate on how hypothetical breaches would be treated under the *Limitations Act*.

Counterclaim

[153] The Defendants filed a counterclaim naming Aram, Heidebrecht and Chamberlain as Defendants by Counterclaim. The substance of the argument advanced in the counterclaim is that the Defendants by Counterclaim breached their equitable duties of confidence when the Continuation In Part Application was filed on Aram's behalf by Marcontell on October 25, 2003. The Continuation In Part Application was drafted by Harmon and based largely upon Fenton's Seismic Opportunity Document.

[154] To remedy the breach of equitable duty, the Plaintiffs by Counterclaim ask for a declaration that NovAtel is the owner of the invention described in the Seismic Opportunity Document and that Fenton is the sole and only inventor thereof and a declaration that NovAtel is the sole owner of U.S. Patent 7,117,094 and that Fenton is the sole and only inventor thereof. Additionally, the Plaintiffs by Counterclaim ask for a direction that the Defendants by Counterclaim abandon and withdraw United States Patent Application 10,693,298, United States Continuation Patent Application 11/537,719, United States Continuation Patent 11/833,642 and any other Aram patent filings which include subject matter disclosed in the Seismic Opportunity Document or invented by Fenton.

[155] I have found in favour of the Defendants and, having done so, I am not aware of any relief that the Defendants require. My findings are consistent with the state of affairs, as I understand it, in the U.S. and other patent jurisdictions. I do not believe the Defendants have suffered any loss. To the extent that my judgment might be found useful in other jurisdictions, I believe it speaks for itself and does not require any consequential declaration or order. Nevertheless, I am prepared to hear the Defendants further on this issue and invite counsel for the Defendants to speak to this issue further.

Conclusion

[156] At the outset of my analysis, I proposed that this case would be resolved when four issues had been addressed. Those issues are as follows:

1. Is Heidebrecht an inventor or a co-inventor of the subject matter of any of the NovAtel patents? Was the Fenton patent derived from Heidebrecht? What level of proof is required to satisfy the Court on these questions?
2. Was there a breach of the NDA or other common law obligations of confidence and, if so, by whom?
3. If answers to questions 1 or 2 are in the affirmative, to what relief is the Plaintiff or the Plaintiff by counterclaim entitled?
4. Are there any bars to that relief including any which may be set out in the *Limitations Act*, R.S.A. 2000, c. L-12?

[157] Having reviewed the case law and the evidence and having heard from both parties, I resolve the above issues as follows:

1. Heidebrecht is neither an inventor nor a co-inventor of the subject matter of any of the NovAtel patents. Fenton's patent was not derived from Heidebrecht. To succeed on this point, Aram would have needed to tender clear and convincing evidence that Heidebrecht conceived of a complete and operative invention which he then communicated to Fenton. Aram was unable to do so. I find that Heidebrecht did not conceive of a complete and operative invention, but rather of only an idea of a result which he hoped to achieve. It was Fenton who had the expertise to develop and test the complete and operative invention. The only information communicated by Heidebrecht to Fenton, such as technical specifications and industry challenges, was easily ascertainable and in no way inventive.
2. The Defendants did not breach their duty of confidence to the Plaintiff. To succeed on this point, Aram would have needed to prove on a balance of probabilities that it has supplied confidential information to the respondents in circumstances which imported an obligation of confidence and the Defendants subsequently used the information in an unauthorized manner which caused detriment to the Plaintiff. I am satisfied that any information provided by Aram to the Defendants during the June 2003 meetings was communicated in circumstances

which imported an obligation of confidence; however I am unable to conclude that the information was confidential or, if it was, that the Defendants used it in an unauthorized manner. Furthermore, had I found a breach of confidence I would not exercise my equitable discretion in this case as I have concerns about the not-entirely-forthcoming manner in which the Plaintiff behaved.

3. Because I have answered the first two questions in the negative, it is unnecessary to consider this third issue.
4. Had I found that Heidebrecht was an inventor or a co-inventor, I would have found that the Plaintiff's derivation claim was not barred by the *Limitations Act*. There is no question that Aram's claim was brought, accordingly, within the ten-year ultimate limitation period and the inquiry is whether the two-year discoverability limitation period applies. With regard to the Plaintiff's claim for derivation, I held that Aram could not have known whether derivation had occurred until it had the chance to review the content of the Defendants' U.S. patent following the patent's publication on February 10, 2005. Aram's claim was brought within two years of the patent's publication and therefore is not barred by the discoverability limitation period. With regard to Plaintiff's claim for breach of confidence, I accept the Court of Appeal's reasoning that there could have been multiple breaches and multiple injuries; however, having found none I am not prepared to speculate as to what might be a breach or an injury were the facts before me different, nor how those breaches and injuries would be dealt with under the *Limitations Act*.

[158] The Plaintiff's claims are dismissed.

[159] This case raised a number of complex issues and the evidence was complicated. I am indebted to all Counsel for their thorough presentations and their tireless efforts to "keep it simple."

[160] Counsel may speak to costs.

Action and claim dismissed.