

EUROPEAN PATENT OFFICE (MUNICH)  
80298 MUNICH  
Germany

**BY ELECTRONIC FILING ONLY**

10<sup>th</sup> September, 2015

Dear Sir(s),

**For EUROPEAN PATENT NUMBER EP1850151 (APPLICATION NUMBER 07113031.4) OF  
WESTERNGECO SEISMIC HOLDINGS LIMITED AND SERVICES PÉTROLIERS  
SCHLUMBERGER AND OPPOSITION THERETO BY ION GEOPHYSICAL CORPORATION  
Appeal Number: T2305/14-3.4.03  
Our Ref: AJF/JAS/P124484EP00**

In respect of the above-noted appeal, we file herewith a Reply to the Opponent's Statement of Grounds for Appeal, along with Second to Seventh Auxiliary Requests, and copies showing "tracked changes".

Yours faithfully,

Dr. James SHORT  
BOULT WADE TENNANT; Association Number 505  
Representative for the Patentees

PGS Exhibit 1125, pg. 1  
PGS v. WesternGeco (IPR2014-01477)

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## REPLY TO THE GROUNDS FOR APPEAL OF THE OPPONENT

European Patent Number EP1850151 (Application Number 07113031.4) of  
WesternGeco Seismic Holdings Limited and  
Services Pétroliers Schlumberger and  
Opposition thereto by Ion Geophysical Corporation  
Appeal Number: T2305/14-3.4.03  
Our Ref: AJF/JAS/P124484EP00

### Introduction

The Patentees, WesternGeco Seismic Holdings Limited of Citco Building, P.O. Box 662 Road Town, Tortola, VG and Services Pétroliers Schlumberger of 42, rue Saint Dominique, 75007 Paris, France, and the Opponent have both appealed the decision of the Opposition Division dated 15 October, 2014.

These observations are the Patentees' reply to the Opponent's Grounds for Appeal. The Opponent's Grounds for Appeal have been directed to the claims found allowable by the Opposition Division. These claims were filed with the Patentees' Grounds for Appeal as the First Auxiliary Request. Accordingly, and for reasons of conciseness, it is the First Auxiliary Request that is considered below. However, to the extent that the Opponent wishes its comments to be considered to in relation to any or all of the other requests, the Patentees hereby reserve the right to repeat the arguments below in those contexts.

In addition to the requests filed previously, additional Auxiliary Requests are enclosed herewith as discussed below.

The new Auxiliary Requests have been filed only as precautionary measure – the Patentees believe that the Opponent's objections are without merit. Oral Proceedings are hereby requested should the Board of Appeal decide not to maintain the patent in the form of the Main Request filed with the Patentees' Grounds for Appeal.

### Admissibility of document D4

Article 12(4) RPBA clearly indicates that the Board has discretion to admit or to not admit evidence that could have been filed earlier in proceedings.

In the present case, the new prior art document D4 (an extract from "Aerodynamics of the Airplane") has been cited thirty-three months after the opposition period expired. No reason has been given for this late filing. Indeed, the Opponent has not even acknowledged in the statement of Grounds for Appeal that this document is late-filed.

It is notable that the form of the claims maintained by the Opposition Division is as a result of an amendment made to the Patent in response to the Opponent's objection of intermediate generalisation. That is, the features added to the claim were requested by the Opponent themselves on page 11 of the Notice of Opposition. Such features incorporated into the

independent claims could not possibly have come as a surprise to the Opponent; they were clearly considered by the Opponent before the expiry of the opposition period.

The Board will note from section 3.5 of the Opposition Division's Grounds for the Decision under appeal that the Opponent has already argued that there has not been any search of the feature introduced into claim 1 during the opposition proceedings, and that this has been dismissed because, firstly, the feature was in the claims of the application as originally filed and, secondly, the question of whether claims have been searched by the Search Division or not during prosecution is wholly irrelevant to an Opposition.

Since the document is cited as common general knowledge, it is assumed that the Opponent would consider that it would be readily available to the Skilled Person. Therefore, it seems unlikely that it would have been difficult to uncover this reference earlier. On the other hand, if its existence has only recently been brought to the attention of the Opponent, then this must be evidence that it is, in fact, not common general knowledge at all.

Of course, the Board has discretion to admit the document on the basis of its relevance to the question of inventive step. In this regard, the Patentee submits that the document is clearly irrelevant. Firstly, it relates to aircraft, whereas the Patent is concerned with control of marine seismic survey vessels. Secondly, it is dated 1941, whereas the priority date of the Patent is 1998. The Patentee suggests that it is rather unlikely that a Skilled Person in the field of marine positioning equipment would consider a fifty-seven year-old textbook on airplanes when considering the disclosure of D1 (itself dated 1998).

Furthermore, the particular "tables" of D4 that the Opponent has relied upon for evidence that the Skilled Person would use a look-up table in D1 do not have any relation to the problem of steering marine seismic streamers. In fact, the "tables" are not tables, but graphs. They are certainly not look-up tables; they do not provide any motivation to use a look-up table in any control method. They would not even motivate the use of a look-up table in an aircraft!

It is not immediately clear why the Opponent has made reference to look-up graphs of Figures 1.42 and 1.43 of D4 in the analysis. For completeness, it is noted that the graphs plot  $C_L$  against  $C_D$ . That is, they show the relationship between lift and drag in the context of an aircraft in which drag is undesirable because it leads to greater fuel requirements and thereby greater weight of the aircraft. As the Board will appreciate, this is at odds with the context of the Patent, where some drag can be desirable; drag can help to pull the streamer into a straight line. Indeed, devices such as tail buoys are often used to deliberately apply drag to the trailing end of the streamers. Whilst there are parallels between the sciences of aerodynamics and fluid dynamics at the most fundamental level, this alone is not sufficient to establish textbooks from one practical technical field (airplane design) as common general knowledge in a different practical technical field (control of marine streamers) which deals with different real-world problems.

In summary, D4 is irrelevant as a whole, and the specific part of D4 referred to by the Opponent is even less relevant.

In view of (i) the Opponent's failure to explain why the document was filed so late, (ii) the fact it could have easily been uncovered much earlier, (iii) the fact it lies in a completely different art

from the Patent, and (iv) the fact that it is prima-facie irrelevant to the present case, it is therefore requested that the Board exercise its discretion to find the document inadmissible.

### **Article 56 EPC**

#### **D2, D3, and D4 are not Common General Knowledge**

The Opponent has raised a single objection of lack of inventive step against the claims deemed allowable by the Opposition Division. Specifically, the Opponent has objected that the independent claims, claims 1 and 14, lack an inventive step over the combination of document D1 with the common general knowledge of the person of ordinary skill in the art of marine seismic streamer positioning devices. The Opponent has attempted to exemplify the Skilled Person's common general knowledge using D2, D3 and D4.

The Patentees disagree that these documents are relevant to common general knowledge. As made clear from decision T475/88, a single publication cannot normally be considered to represent or evidence the common general knowledge of the skilled person. The Opponent has provided no evidence of why the Skilled Person would be aware of the disclosure of documents D2, D3, or D4.

In this regard, it is noted that documents D2 and D3 are merely patent specification and are not technical journal documents or textbooks, and therefore cannot normally be considered common general knowledge. Furthermore, it is noted that document D4, whilst a textbook, does not relate to marine seismic apparatus. D4 discusses the aerodynamics of the airplane, which for the reasons explained above, has no relevance to the specific technical problems confronting the Skilled Person in the field of marine seismic streamer control.

Accordingly, it is disputed that any of D2, D3, or D4 would form part of the Skilled Person's common general knowledge. To establish the Skilled Person's common general knowledge requires more than simply their citation without evidence, and the burden of proof lies with the Opponent to establish the nature of these documents.

Finally, it is noted that whilst the Opponent has identified a technical problem solved by the two distinguishing features, this technical problem forms no further part of the analysis on inventive step. In other words, while the Opponent has attempted to show that the Skilled Person could make a combination of features falling within the scope of the claims using common general knowledge, there is no argument suggesting that the Skilled Person would make such a combination. The Opponent's analysis thus applies hindsight.

The Opponent has not presented any objection based on the combination of two prior art documents. Reference to documents D2, D3, and D4 have been provided in the Opponent's Grounds for Appeal, purely as evidence of the common general knowledge of the Skilled Person. Since the common general knowledge in the field of the Patent does not include D2, D3, or D4, the Opponent's only inventive step objection fails and the ground of inventive step need not be considered further. However, for completeness, in the sections below the other problems with the Opponent's analysis are highlighted.

## Novel features

The Opponent has conceded that there is no disclosure in document D1 of the features of:

- (1) “using a control system distributed between a global control system located on or near a seismic survey vessel and a local control system located on each streamer positioning device”; and
- (2) “the adjusting comprises calculating with a localised conversion program of the at least one local control system, a desired force on the at least one streamer positioning device using the location information, the desired force selected from a desired horizontal force, a desired vertical force and both”.

It is the Patentees' position that neither of these features is disclosed in any prior art document (whether individually or collectively).

The Patentees note that D2 fails to disclose the distribution of a control system between two locations. The passage from line 14 to 20 in column 4 indicates that either a computer programme will calculate how to steer the device (column 4, line 15 – this is a complete control system located on board the ship), or the calculation may be made on the device (column 4, lines 19 and 20 – this is a complete control system located within the positioning device). As clearly expressed in this passage, the control system is not distributed, but is a complete control system at either location. There is no disclosure of both of these optional control systems being provided simultaneously and acting collectively. Moreover, there is no need for two control systems to be provided, since the alternative control systems can both carry out the entire control process.

D2 is also silent on the nature of the calculations made in the control system and provides no disclosure of a look-up table nor any indication that force is a consideration in any way.

The Patentees submit that D3 fails to disclose any form of control system in the sense claimed. The disclosure of D3 relates solely to a communications system for transmitting control signals. D3 is silent on the origin of those signals and the use of the signals. The “central controller” discussed on lines 28 to 31 of column 3 is an “intelligent modem”. That is, it controls the protocols for the transmission of signals between the vessel and the streamer equipment; it has no role in how to control that equipment and it does not calculate what control signals to send. This intelligent modem simply transmits the pilot’s instructions to the bird. The passage on column 4, lines 45 to 47, states “control signals are received by the bird electronics 50 to control the wings of the bird”. In this generic description, “bird electronics” is simply the actuator that receives the unspecified “control signals” from the modem and actuates the motor (for example, bird electronics could be a motor driver) and the sensors that measure various operating parameters. D3 is silent on the nature of the control signals, fails to disclose distributed control, and provides no indication that force is a consideration in any part of the system.

D4 discloses nothing of any relevance to these features.

In summary, it is disputed that any of the documents discloses the novel features of the claims. More generally, the Patentees submit that these novel features do not form part of the Skilled Person’s common general knowledge.

The two novel features cannot be considered using the partial problems approach

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