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# Datasheet for the decision of 22 September 2011

**Case Number:** T 1454/09 - 3.5.03

**Application Number:** 04250452.2

**Publication Number:** 1443735

**IPC:** H04B 7/185

**Language of the proceedings:** EN

**Title of invention:**
Simplex remote telemetry via a satellite system

**Applicant:**
Globalstar L.P.

**Opponent:**
-

**Headword:**
Telemetry via satellite/GLOBALSTAR

**Relevant legal provisions:**
EPC Art. 56

**Relevant legal provisions (EPC 1973):**
-

**Keyword:**
"Inventive step - yes (after amendment)"

**Decisions cited:**
-

**Catchword:**
-

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**Case Number:** T 1454/09 - 3.5.03

# D E C I S I O N
**of the Technical Board of Appeal 3.5.03**
**of 22 September 2011**

**Appellant**: Globalstar L.P.
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**Representative**: Greene, Simon Kenneth
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**Decision under appeal:** **Decision of the Examining Division of the European Patent Office posted 10 February 2009 refusing European patent application No. 04250452.2 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairman:** A. S. Clelland
**Members:** B. Noll
M.-B. Tardo-Dino

## Summary of Facts and Submissions

I. This appeal is against the decision of the examining division refusing European application no. 04250452.2 pursuant to Article 97(2) EPC on the ground that the subject-matter as claimed in a main request and three auxiliary requests lacked an inventive step (Article 56 EPC). Inter alia, the following documents were cited in the impugned decision:

D3: US 5,983,198 A
D5: DE 36 44174 A1
D6: GB 2 254 529 A.

II. With the statement of grounds of appeal submitted on 22 June 2009 the appellant filed a single new set of claims as a main request. It was requested that the decision under appeal be set aside and a patent be granted. Oral proceedings were requested as an auxiliary measure.

III. In a communication accompanying a summons to oral proceedings the board gave a preliminary opinion on the case, inter alia on added subject-matter (Article 123(2) EPC) and inventive step (Article 56 EPC).

IV. In preparation for the oral proceedings revised claims were filed.

V. Oral proceedings before the board took place on 22 September 2011. In the course of the oral proceedings the appellant's representative filed an amended set of claims replacing the previous claims on file. It was requested that the decision under appeal

be set aside and that a patent be granted on the basis of claims 1 to 21 as filed in the course of the oral proceedings. As an auxiliary request, it was requested that the case be remitted to the department of first instance for further prosecution.

VI. Claim 1 as filed on 22 September 2011 reads as follows:

"A method for routing telemetry data, telemetry data being data from a sensor for monitoring a remote asset, the method characterised by comprising:

transmitting said telemetry data in a simplex mode to a satellite of a communications system,

and characterised in that said telemetry data is combined on board said satellite with regular traffic on said communications system, thereby forming a compound signal, the compound signal subsequently being transmitted from said satellite to a gateway subsystem and said telemetry data then being extracted from said compound signal using software and hardware attached to said gateway system,

and in that said telemetry data is formatted in a message comprising one or more packets, each packet comprising a data structure comprising:

a preamble field (402) for identifying the start of the packet;

an electronic serial number (404) for identifying a specific remote telemetry unit;

a global positioning system, GPS, flag (406) for indicating whether the remote asset has a GPS receiver for determining the location of the remote asset;

a message number field (408) for indicating the number of the message;

a number of packets field (410) for indicating the

number of packets in the message;

a message data field (414) for storing information from a sensor at the remote asset;

a sequence number field (412) for indicating where the packet is in the sequence of packets for a particular message; and

a forward error correction code field (416) for error checking."

Claim 13 as filed on 22 September 2011 reads as follows:

"A system for routing telemetry data, telemetry data being data from a sensor for monitoring a remote asset, the system characterised by comprising:

a transmitter arranged to transmit said telemetry data in a simplex mode to a satellite (110) of a communications system, and characterised in that said telemetry data is combined on board said satellite with regular traffic on said communications system, thereby forming a compound signal;

a gateway subsystem having an antenna adapted to receive said compound signal from said satellite; and

software and hardware attached to the gateway subsystem and adapted to extract said telemetry data from said compound signal,

and in that said telemetry data is formatted in a message comprising one ore [*sic*] more packets, each packet comprising a data structure comprising:

a preamble field (402) for identifying the start of the packet;

an electronic serial number (404) for identifying a specific remote telemetry unit;

a global positioning system, GPS, flag (406) for indicating whether the remote asset has a GPS receiver

for determining the location of the remote asset;

a message number field (408) for indicating the number of the message;

a number of packets field (410) for indicating the number of packets in the message;

a message data field (414) for storing information from a sensor at the remote asset;

a sequence number field (412) for indicating where the packet is in the sequence of packets for a particular message; and

a forward error correction code field (416) for error checking."

VII. At the end of the oral proceedings the board announced its decision.

## Reasons for the decision

1. *Claim 1 - basis for amendments (Article 123(2) EPC)*

The first and second features in Claim 1 specifying the transmission of the telemetry signal over a satellite find a basis in the originally filed application, see paragraphs [0007, 0008] of the published application and claim 1. The expression "gateway applique", which was objected by the board as having no clear technical meaning, has been replaced by the expression "hardware and software" which is originally disclosed in connection with the "gateway applique" in paragraph [0026] of the published application. The third feature consisting of eight sub-features which define the composition of a data packet is based on figure 4 and paragraphs [0035-0043] of the published application.

Claim 13 relates to a system which corresponds to the method of claim 1 in terms of system features. Therefore, claims 1 and 13 as amended meet the requirement of Article 123(2) EPC.

The subject-matter of dependent claims 2-12 originates from originally filed claims 2-10, 13 and 24, respectively, and that of dependent claims 14-21 from originally filed claims 2, 5, 7, 8, 13, 4, 10 and 24, respectively, in terms of system features.

2. *Claim 1 - inventive step (Article 56 EPC)*

Claim 1 relates to a method of transmitting telemetry data from a remote sensor, which monitors an "asset", to a customer. The telemetry data is formatted into a sequence of data packets which are transmitted as an additional radio signal "piggybacked" on a regular satellite communication radio channel.

The prior art document D3 describes a system in which an amount of liquid delivered by a truck to a customer's tank is measured. The measured value is relayed to a central station via a dedicated satellite link (cf. column 4, line 46 to column 5, line 10). D3 does not disclose any of the features in the characterizing portion of claim 1. These features define a specific configuration of the physical and transport layers for the process of transmitting the telemetry data via satellite. Thus, the technical problem to be solved when starting out from D3 is to provide an implementation for transmitting specific telemetry data over an existing satellite link.

The board notes that the transmission of telemetry data as a "piggyback" radio signal over a regular satellite communication radio channel is known per se from D5. Moreover, converting real-time telemetry data into data packets for the purpose of transmission forms part of the common general knowledge in the art and would be obvious for the skilled person. Be that as it may, there is no disclosure or suggestion in the prior art known to the board that the telemetry data be formatted in packets each of which includes a GPS flag for indicating whether the remote asset has a GPS receiver for determining its location. The GPS flag serves to distinguish mobile assets from stationary ones and so that the telemetry data received in the back office may be appropriately processed (cf. paragraph [0038] of the description). There is no suggestion in D3 or D5 which would lead the skilled person to provide a GPS flag as part of the structure of each data packet carrying telemetry data.

D6, cited in the impugned decision, is not specifically concerned with transmitting telemetry data but with a problem which arises in connectionless packet switching, namely transmitting messages exceeding a maximum size as segments of smaller packets, e.g. in asynchronous transfer mode, over a network. Figure 1 of D6 shows the data format of each packet which includes, inter alia, a message identifier field MID which serves for multiplexing several messages on the same virtual channel and which is unique for the segments of each message. This identifier can be taken to correspond to the message number field in claim 1. However, neither this message identifier field nor the other fields in the packet structure disclosed in D6 would lead the

skilled person to provide a GPS flag in each packet for indicating the presence of a GPS receiver in the remote asset.

The board therefore concludes that the method according to claim 1 involves an inventive step, having regard to D3, D5 or D6 or any combination thereof (Article 56 EPC).

3. For the same reasons it has to be concluded that the system according to claim 13 involves an inventive step.

4. Thus, the grounds for refusal as set out in the impugned decision have been overcome by amendment so that the decision under appeal has to be set aside.

The board's decision is however only on inventive step, having regard to prior art documents D3, D5 and D6. Therefore, it is appropriate to remit the case to the examining division for further examination, inter alia, as to whether there are still outstanding issues as regards the dependent claims or whether the description requires adaptation.

## Order

**For these reasons it is decided that:**

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance for further prosecution.

The Registrar The Chairman

G. Rauh A. S. Clelland