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**Datasheet for the decision  
of 17 October 2006**

**Case Number:** T 1169/04 - 3.5.01  
**Application Number:** 93308629.0  
**Publication Number:** 0598513  
**IPC:** G06F 3/12, G06F 13/12  
**Language of the proceedings:** EN

**Title of invention:**

Method and apparatus for interfacing a peripheral to a local area network

**Patentee:**

CANON Kabushiki Kaisha

**Opponent:**

SEH Computertechnik GmbH

**Headword:**

Interface board/CANON

**Relevant legal provisions:**

EPC Art. 54(1)(2), 56  
RPBA Art. 10b(1)(3)

**Keyword:**

"Third auxiliary request filed at oral proceedings (not admitted)"  
"Public prior use proved (yes)"

**Decisions cited:**

G 0001/92, T 0472/92, T 0782/92

**Catchword:**

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Case Number: T 1169/04 - 3.5.01

**D E C I S I O N**  
of the Technical Board of Appeal 3.5.01  
of 17 October 2006

**Appellant:**  
(Patent Proprietor)

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**Decision under appeal:**

Decision of the Opposition Division of the  
European Patent Office posted 15 July 2004  
revoking European patent No. 0598513 pursuant  
to Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** S. Steinbrener  
**Members:** K. Bumés  
G. Weiss  
R. Wibergh  
A. Pignatelli

## Summary of Facts and Submissions

I. The appeal lies from the decision of the opposition division to revoke European patent

B1: EP-B1-0 598 513

on the ground that claim 1 as granted does not involve an inventive step over public prior uses of a network interface board labelled InterCon-Ether (internal designation DL-820), manufactured, sold and delivered to various customers by the opponent and presented at a trade fair ORGATEC in Cologne (DE) from 22 to 27 October 1992. In this context, four affidavits E2 to E5 and several invoices were submitted. The opposition division heard three witnesses, viz. Mr. Landgraf, Dr. Wolff and Mr. Plake, and an executive director of the opponent, Mr. Ellerbrake, to investigate the prior uses.

II. By a letter dated 5 October 2006, the appellant proprietor requested that the decision under appeal be set aside and the patent be maintained on the basis of:

- main request: amended claims 1 to 26 previously entitled "Second Auxiliary Request" filed with a letter of 18 September 2006;
- first auxiliary request: amended claims 1 to 19 filed as a "Third Auxiliary Request" with said letter;
- second auxiliary request: claims 1 to 26 as granted.

Claim 1 of the main request and first and second auxiliary requests reads:

"1. Apparatus for networking a peripheral device (4) having printing capabilities to a LAN (6), said apparatus comprising:

a circuit board (2);

a first connector (202, 203, 204) coupled to said circuit board (2) to connect to a LAN interface (101), for receiving peripheral device job information from the LAN (6);

a temporary memory (220) coupled to said circuit board (2), for storing the peripheral device job information;

a second connector coupled to said circuit board (2) to connect to a peripheral interface (100), for transmitting peripheral device job data to the peripheral device (4);

a processor (216) coupled to said circuit board (2) for controlling data transfer between said LAN interface (101), said temporary memory (220) and said peripheral interface (100);

characterised in that

said first connector is operable for receiving peripheral device status requests from the LAN interface (101), and for transmitting peripheral device status information to the LAN interface (101);

said second connector is operable for transmitting peripheral device status queries to the peripheral interface (100), and for receiving peripheral device status data from the peripheral interface (100), the peripheral device status data including information as to whether the peripheral device (4) is ready as well as information concerning physical configuration of the peripheral device (4);

a memory (222) coupled to said circuit board (2) for storing an application module which causes the peripheral device job information received from the LAN interface (101) to be transmitted to the peripheral interface (100) as the peripheral device job data, and

for storing a control module which causes the peripheral device status requests received from the LAN interface (101) to be transmitted to the peripheral interface (100) as the peripheral device status queries and which causes the peripheral device status data received from the peripheral interface (100) to be transmitted to the LAN interface (101) as the peripheral device status information;

said temporary memory (220) is operable for temporarily storing, during execution, the application module and the control module; and in that

said processor (216) is operable for executing the application module and the control module."

III. In an annex to summons, the Board analysed the opponent's various acts of prior use to establish the closest prior art and to identify any differences of the claimed circuit board with respect to this prior art. The Board noted that the use of a modular programming technique (e.g. sub-routine) to increase the programming efficiency appeared to have been known to the skilled person before the priority date claimed.

IV. In preparation for the oral proceedings, the respondent filed a copy of

D1: "Wie funktioniert das? Der Computer", Meyers Lexikonverlag, Mannheim/Wien/Zürich 1990, pages 150 and 151,

to demonstrate that modular programming formed part of a programmer's common knowledge.

V. The appellant essentially argues that the apparatus according to claim 1 distinguishes from the InterCon-Ether interface network board by the following features:

- (A) the software is organised in two modules, viz. divided in an application and a status module;
- (B) the second connector is located between the processor and peripheral interface;
- (C) device status queries are used, i.e. the whole chain of communication is implemented as a query;
- (D) only the processor is used for controlling the data transfer and no additional controller circuit is used,
- (E) the claim distinguishes status data and status information and, thus, implies some format change.

All these features are said to contribute to a non-obvious overall function of the apparatus, in particular by enabling print jobs and status requests to be processed in parallel.

The appellant additionally argues that the respondent has not fulfilled the high burden of proof set out in decisions T 782/92 and T 472/92 regarding evidence in support of an alleged public prior use where practically all the evidence lies within the power and knowledge of the opponent. It is not clear from the testimonies taken during the opposition proceedings how the InterCon-Ether interface network board handles status requests.

- VI. The respondent essentially argues that claim 1 is broader than the embodiments so that only difference (A) may exist to render the subject-matter of claim 1 new but not inventive, since the difference represents a programmer's routine approach. In particular, Table 1 and Figure 4 of B1 make clear that the opposed patent uses the same type of network controller (DP83902) as

the one used on the InterCon-Ether interface board. Figure 4 also shows that the patent does not rule out the concurrent use of a processor (216) and one or more network controllers (206, 224) on the interface board. Further, according to the wording of claim 1, status queries are sent to the peripheral interface of the network board, i.e. to the SCSI interface (100) shown in Figure 3 or to the SCSI controller (224) shown in Figure 4 of B1, rather than to the peripheral device, e.g. printer (reference numeral 4 in Figure 1). In other words, the SCSI interface on the claimed network board is read out like a dual-port RAM on the InterCon-Ether board. Further, Figure 4 shows that the printer port (226) of the network board (reference numeral 2 in Figure 1) has its own SCSI controller (224). If claim 1 is to cover the embodiment of Figure 4, the location of the second connector (external port 226) is not a distinguishing feature. If, on the other hand, the second connector is situated between the network board (2) and its peripheral interface (reference numeral 100 in Figure 3 of B1), this is a mere design option without any technical advantage. Since claim 1 does not define any difference between status 'data' and status 'information' or between a 'request' and a 'query', the claim does not imply any format conversion.

Regarding the burden of proof, the respondent argues that sufficient evidence in support of public prior uses of the InterCon-Ether interface network board has been provided during the procedure before the opposition division. Moreover, the obviousness objection is based not only on the prior uses but also on a brochure

E8: SEH Computertechnik GmbH, "InterCon-Ether,

Universal network-interface for Novell and  
Unix, express data transfer"

which was distributed at the ORGATEC trade fair and  
describes the interface board presented there.

VII. After discussion of the main request and first and  
second auxiliary requests at the oral proceedings, the  
appellant submitted a third auxiliary request formed  
from the main request by deleting claims 1 to 19 and  
combining claims 20 and 21 into an amended independent  
claim to underline a multi-tasking functionality  
enabled by the modular programming technique. The issue  
of admissibility of this request was discussed with the  
parties.

VIII. The appellant requested that the decision under appeal  
be set aside and that the patent be maintained in  
amended form on the basis of the claims in accordance  
with the main request or one of auxiliary requests 1  
or 2, all requests as specified with the letter dated  
5 October 2006 or, alternatively, on the basis of the  
claims 1 to 6 submitted as third auxiliary request at  
the oral proceedings before the Board.

The respondent requested that the appeal be dismissed.

IX. The Chairman pronounced the Board's decision at the end  
of the oral proceedings.



## Reasons for the Decision

*Prior art according to Article 54(2) EPC*

1. On the basis of the affidavits filed with the notice of opposition and the testimonies taken by the opposition division, the Board is satisfied that a first public prior use of the interface board InterCon-Ether, model DL-820, took place in the form of a presentation at the ORGATEC trade fair in Cologne (DE) from 22 to 27 October 1992, i.e. before the priority date of 18 November 1992 claimed by the patent. The appellant has not provided any specific reason for calling any of the testimonies into question. The appellant rather objects that it is not clear from the testimonies exactly how the exchange of signals in the InterCon-Ether interface board took place.
  
2. According to the record of Mr. Landgraf's testimony, he demonstrated the InterCon-Ether interface network board at the trade fair. The demonstration presented a test environment comprising a personal computer PC, an Ethernet LAN and a Kyocera printer with an interface board of the type DL-820 installed. The PC and the printer were interconnected only via the LAN. Apart from the possibility of printing via the LAN, the current status of the printer was automatically displayed on the PC. There was also an option to actively request the status of the printer, the request being sent to the printer via the LAN and the interface board. Status data was returned the same way. Printer status data comprised 'error messages' (e.g. paper cassette not ready or cover open, i.e. the configuration) and also 'ready messages' (through the

automatic display option). This description matches the testimony of witness Dr. Wolff. Mr. Landgraf mentioned additionally that the interface board was able to store data received from the printer which then could be requested by the PC. That demonstration was performed and explained to visitors including network administrators having sufficient knowledge to understand the extrinsic overall function of the interface board.

3. The Board is also satisfied that an additional interface board of the type DL-820 was available for inspection and/or purchase by visitors of the ORGATEC trade fair. The circuits used on the board (see the DL-820 circuit diagrams and corresponding photographs submitted with Mr. Ellerbrake's affidavit E2), including an Intel microprocessor and a network controller DP83902, could thus be identified by the attendees.
  
4. The respondent has also proven to the Board's satisfaction that interface boards of the type InterCon-Ether were sold, in particular by presenting evidence of a number of non-confidential shipments of such interface boards to clients. As an example chosen from affidavit E2, two interface boards InterCon-Ether were sold to the company GRAFIKOM, Vienna (AT), with an invoice dated 10 September 1992 (see also the testimony of the opponent's executive director Mr. Ellerbrake who had signed the invoice).

The circuit diagrams of DL-820 added to some of the affidavits were not available to the public but according to the date printed on them (5.5.92) it can

be accepted that they describe the design of the sold interface boards. According to decision G 1/92 of the Enlarged Board of Appeal (OJ EPO 1993, 277), the shipped interface boards could be analysed and the features shown in the circuit diagrams could be derived from that analysis. A skilled person was able to decompile the functions of the software of the interface boards. Therefore, those features were available to the public and form prior art under Article 54(2) EPC.

5. The appellant argues that different interface boards with different Ethernet interfaces (10Base2 and 10BaseT) were sold and that there is confusion about what type of network board was shown at the ORGATEC trade fair (see points 22 to 23 in the statement of grounds of appeal). However, as claim 1 is not specific in this respect, the type of Ethernet interface is not relevant to the discussion of the claim.
  
6. The affidavits and testimonies of the witnesses Dr. Wolff, software developer, and Mr. Plake, hardware developer, enable the Board to derive technical details of the signal and data transfers relating to status requests on the InterCon-Ether network interface board to the extent required for a comparison with claim 1 of the patent. In particular, the use of a dual-port RAM as a peripheral interface (for connection with the printer) and technical details of how the exchange of signals in the InterCon-Ether interface takes place have been provided (see in particular Dr. Wolff's statements on pages 2 to 3 of his affidavit E5 and pages 18 to 19 of his testimony; Mr. Plake's statements on page 3 of his affidavit E4 and pages 28 to 29 of his

testimony). The Board does not see any reason to doubt the correctness of the evidence or the credibility of the witnesses. The requirements set out in decisions T 472/92 (OJ EPO 1998, 161) and T 782/92 (not reported in OJ EPO) are therefore fulfilled.

7. Document E8 "InterCon-Ether", which was admitted into the proceedings by the opposition division, is a handout given to visitors of the ORGATEC trade fair and describes the interface board DL-820 for use with Kyocera printers. It is therefore regarded as written prior art. It discloses an interface board connecting a printer to a LAN and allowing the status of the printer to be checked via status requests transferred over the LAN. A photograph of the interface board shows a processor on the board. However, document E8 is silent on the type of organisation of the software on the interface board.

*Articles 54(1) and 56 EPC - Novelty and inventive step  
- Main, first and second auxiliary requests*

In the appellant's view, the subject-matter of claim 1 common to these requests differs from the InterCon-Ether board by features (A) to (E).

8. Alleged difference (A)
  - 8.1 Even if the software on the InterCon-Ether network interface board were structured in the form of a device job application module and a status module, such a difference could not be identified from the interface board as presented at the ORGATEC trade fair. The respondent conceded that even a decompilation of the

software on the sold InterCon-Ether boards might not reveal the modular structure of the software. The Board concurs with that point of view and therefore regards this feature as novel over the publicly used interface board DL-820.

- 8.2 On the other hand, modular programming techniques (e.g. the use of sub-routines; object-oriented programming) and their purposes (e.g. programming efficiency; ease of maintenance) were well-known to the skilled person before the priority date of the patent (see e.g. D1). The Board therefore judges that this feature represents an obvious design option.

9. Alleged difference (B)

The appellant argues that another difference exists in that the second connector is located between the processor and the peripheral interface. As pointed out by the respondent, Figures 3 and 4 of the patent are in conflict with each other in this respect.

- 9.1 If claim 1 covers the embodiment of Figure 4 of the patent, the alleged difference (B) does not exist: In Figure 4, the peripheral interface 224 is part of the network board which implies that a connector is used not between the board and the peripheral interface but between the peripheral interface and the printer - as in the case of the InterCon-Ether network board.

- 9.2 If claim 1 covers the embodiment of Figure 3 of the patent, the peripheral interface (100) is separate from the network board NEB (2) which would indeed imply a detachable connection using a connector between the

processor and the peripheral interface. However, the Board judges that separating a peripheral interface from the rest of a network board by a connector represents a design option and compromise which a skilled person will readily choose upon balancing well-known advantages (easy separation and reconnection) and disadvantages (cost, size, unreliable electric contact) thereof.

10. Alleged difference (C)

The appellant argues that claim 1 requires queries to be sent through to the peripheral device in order to prompt it to provide data about its current status. In contrast, the InterCon-Ether network board uses a dual-port RAM into which the status of the peripheral device is written at regular intervals and read out by subsequent status requests. The dual-port RAM solution therefore includes the risk of reading status data that is not up-to-date.

The Board, however, concurs with the respondent's observation that claim 1 does not specify that status queries are sent through to the peripheral device. According to the wording of claim 1, device status queries are transmitted to the peripheral interface 100 which then returns device status data. As shown in the embodiments according to Figures 3 and 4 and described in paragraph 0040 of the patent, the SCSI interface 100 or SCSI controller 224 represents the peripheral interface specified in claim 1. In either case, the peripheral interface is not located in the peripheral device (i.e. printer). According to Figure 4, the bidirectional SCSI controller 224 is even located on

the network board and thus read out on the board. The bidirectional dual-port RAM on the InterCon-Ether network interface board operates in the same manner.

In addition, the Board judges that the terms "status query" and "status request" do not by themselves imply a technical difference. Neither the wording of claim 1 nor the description of the patent support a different finding. Difference (C) is thus considered to be inexistent.

11. Alleged difference (D)

The appellant further argues that according to claim 1 no controller circuit is used in addition to the processor for controlling the data transfer. However, according to the embodiment shown in Figure 4 of the patent, the same type of network controller (DP83902, see Table 1 of B1) as the one used on the InterCon-Ether network interface board (see e.g. the circuit diagram and photographs attached to Mr. Ellerbrake's affidavit E2) and possibly another network controller (224) can be used in conjunction with the processor (216) of the interface board. The wording of claim 1 does not rule out the use of an additional network controller, either. Therefore, claim 1 if interpreted in the light of the description and the drawings does not distinguish in this respect from the publicly used device. The Board therefore finds that the alleged difference (D) does not exist, either.

12. Alleged difference (E)

The appellant asserts that claim 1 requires a format change to take place from status data to status information and *vice versa*. The Board, however, concurs with the respondent in considering that claim 1 fails to specify a format conversion between the peripheral interface and the peripheral device. While generally data may be considered as an encoded or formatted form of information, the claimed apparatus processes "data" and "information" at a same technical level. The Board therefore finds that this aspect entails no difference between the subject-matter of claim 1 and the publicly used InterCon-Ether network interface board.

13. Finally, the Board sees no synergetic effect of the aforementioned differences (A) and (B) (if construed on the basis of Figure 3). Software modularity and the location of the second connector do not interact but represent an aggregation of obvious features.

Therefore, claim 1 encompasses an obvious modification of the publicly used interface board InterCon-Ether DL-820 and, thus, does not involve an inventive step.

*Third auxiliary request*

14. The third auxiliary request was submitted at the oral proceedings before the Board.

14.1 The respondent objected to this request because it was submitted late and introduced an aspect which had not been a topic before (simultaneous processing, multi-tasking). Claim 1 as granted is silent on multi-tasking,



this functionality being introduced only by dependent claim 21 (B1). When the witnesses were heard during the opposition proceedings, this aspect was not addressed. Therefore, its introduction would require a further hearing of the witnesses to investigate how the InterCon-Ether network interface board works in this respect. The respondent would need an opportunity to prepare a full response. In his opinion, it would be unfair to admit the request at such a late stage of the appeal proceedings as the case might have to be remitted to the opposition division for further prosecution.

- 14.2 According to Article 10b(1) of the Rules of Procedure of the Boards of Appeal (RPBA), the Board has a discretion to allow amendments depending on their complexity, the current state of the proceedings and the need for procedural economy. In addition, according to Article 10b(3) RPBA, amendments after oral proceedings have been arranged shall not be admitted if they raise issues which the Board or the other party cannot reasonably be expected to deal with without adjournment of the oral proceedings. Thus, the more complex the issues raised by amendments are and the later those amendments are filed, the greater the risk that the remaining time is insufficient to consider them properly.

The issue of multi-tasking was not discussed until the oral proceedings of the appeal procedure. This amendment would thus raise a new issue at a late stage although the appellant had several opportunities to amend the claims before. Even when the summons indicated the Board's doubts about the allowability of

claim 1, the appellant did not direct an amended independent claim to the multi-tasking feature. In the interests of procedural economy and fairness, in particular in *inter partes* proceedings, the Board does not consider a remittal to the department of first instance and/or a rehearing of the witnesses justified. The primary function of oral proceedings is to discuss issues and not to open new ones.

Therefore, the Board does not admit the third auxiliary request into the proceedings.

## **Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:

M. Guidi

S. Steinbrener