

Internal distribution code:

- (A) Publication in OJ
(B) To Chairmen and Members
(C) To Chairmen
(D) No distribution

D E C I S I O N
of 13 April 2005

Case Number: T 0170/02 - 3.5.1

Application Number: 90310131.9

Publication Number: 0428252

IPC: H04N 7/167

Language of the proceedings: EN

Title of invention:

A system for controlling access to broadcast transmissions

Patentee:

News Datacom Ltd.

Opponents:

British Broadcasting Corporation
CCETT
Koninklijke Philips Electronics N.V.

Headword:

Controlling access/NEWS DATACOM

Relevant legal provisions:

EPC Art. 54, 56, 83, 123

Keyword:

"Violation of Article 123 EPC - maintained claim (no)"
"Novelty - maintained claim (yes)"
"Inventive step - all requests (no)"

Decisions cited:

-

Catchword:

-



Case Number: T 0170/02 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 13 April 2005

Appellant: British Broadcasting Corporation
(Opponent 01) Broadcasting House
London W1A 1AA (GB)

Representative: Abnett, Richard Charles
Reddie & Grose
16 Theobalds Road
London WC1X 8PL (GB)

Respondent: News Datacom Ltd.
(Proprietor of the patent) 51 Clevemont Road
Cordwallis Park
Maidenhead
Berks SL6 7B2 (GB)

Representative: Freed, Arthur Woolf
Marks & Clerk
Incorporating Edward/Evans/Barker
Clifford's Inn
Fetter Lane
London EC4A 1BZ (GB)

Other Party: CCETT
(Opponent 02) 4, rue du clos Courtel
F-35510 Cesson-Sévigné (FR)

Representative: Loisel, Bertrand
Cabinet Plasseraud
65/67 rue de la Victoire
F-75440 Paris Cedex 09 (FR)

Other Party: Koninklijke Philips Electronics N.V.
(Opponent 03) Groenewoudseweg 1
NL-5621 BA Eindhoven (NL)

Representative: Steenbeek, Leonardus Johannes
Philips
Intellectual Property & Standards
P.O. Box 220
NL-5600 AE Eindhoven (NL)

Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
21 December 2001 concerning maintenance of
European patent No. 0428252 in amended form.

Composition of the Board:

Chairman: S. V. Steinbrener
Members: W. E. Chandler
G. E. Weiss

Summary of Facts and Submissions

- I. This appeal is against the interlocutory decision of the opposition division concerning maintenance of European patent No. 0 428 252 in amended form.
- II. Three oppositions were filed against the patent as a whole covering Articles 100(a), (b), and (c) EPC. The opposition division held that the grounds for opposition did not prejudice the maintenance of the patent, based on the single request (third auxiliary request) filed by fax on 2 November 2001, having regard inter alia to following documents:
- A1: BBC Research Department Report, November 1986, S. M. Edwardson: "A conditional access system for direct broadcasting by satellite".
- A2: GB-A-2 132 860
- III. Opponent 01 (appellant) lodged an appeal and filed the following new evidence with the grounds of appeal:
- A8: US-A-4 007 355
A9: US-A-4 549 075
A10: EP-A-0 224 147
A11: US-A-4 442 345
A12: US-A-4 656 342
- IV. In a reply to the Board's communication accompanying the summons to oral proceedings, the proprietor (respondent) requested a postponement of the oral proceedings, which the Board allowed. Opponents 02 and 03 did not made any submissions in the proceedings, and

informed the Board, the former only via opponent 01, that they would not be attending the oral proceedings.

V. Oral proceedings were held on 13 April 2005. At the oral proceedings, the appellant requested that the decision under appeal be set aside and the patent be revoked. The respondent requested that the appeal be dismissed, i.e. that the decision of the opposition division to maintain the patent in amended form be upheld. Furthermore, the respondent requested amendments to claim 1 in accordance with auxiliary requests "A", "B", "C", "D", and "F", all filed with the letter received on 29 October 2002. At the end of the oral proceedings, the Board gave its decision.

VI. Claim 1 of the main request reads as follows:

"A receiver system for controlling access to a broadcast transmission provided by a transmitter having a transmission scrambler for at least partially scrambling a broadcast, said broadcast transmission comprising the scrambled broadcast and information comprising data which is acted upon by a seed generating algorithm in the transmitter to generate a seed used in scrambling the broadcast, the system comprising:

a multiplicity of subscriber receivers (26) each comprising:

means for receiving the at least partially scrambled broadcast and the data which is used by the seed generating algorithm for the generation of the seed; and

a receiving descrambler (46) for descrambling said at least partially scrambled broadcast; and

a plurality of portable executing means (32) operatively associable with any one receiving descrambler (46), characterised in that: in each receiver (26), the descrambler (46) is operative when associated with any one of said portable executing means (32), to generate the seed by executing operations on said data identical to those executed in the transmitter and in accordance with the seed generating algorithm, and to generate a descrambling code, based on the seed, for use by said associated receiving descrambler to enable said receiving descrambler to descramble said broadcast; the seed generating algorithm is resident on the portable executing means (32) and the seed generating algorithm is executed in the portable executing means (32); and each descrambler (46) comprises an electronic mailbox for receiving data from broadcast transmissions and from a first portable executing means (32) associated therewith and, upon replacement of said first one of said portable executing means with a second one of said portable executing means, providing said data to said second one of said portable executing means, thereby enabling said second one of said portable executing means."

Claim 1 of auxiliary request "A" replaces the words "the descrambler is operative when associated with" by "the descrambler is operative in association with".

Claim 1 of auxiliary request "B" specifies an alternative wording of the feature of request "A" as "a descrambler and an associated portable executing

means are operative when associated to generate the seed".

Claim 1 of auxiliary request "C" adds to any of the above requests the feature "no cryptographic keys in the decoder" and preferably "no cryptographic keys relating to the seed generating algorithm".

Claim 1 of auxiliary request "D" specifies that the enabling of the second executing means is "based on said data".

In claim 1 of auxiliary request "F", the term "data" is replaced by "messages".

VII. The appellant argued as follows:

In security systems it was important to define which component performed which function to produce a system that prevented fraud. However, the functions of the various components in claim 1 and/or the patent as a whole were not clear.

Firstly, the features in claim 1 as filed of the identical receiving decoders having no secret cryptographic keys and identical operations of the portable executing means were no longer in maintained claim 1. This violated Article 123(2) EPC. The disclosure was also insufficient because the description gave no details of such a system.

Secondly, maintained claim 1 specified that both the descrambler and the smart card generated the seed. This combination was not originally disclosed so that the

claim violated Article 123(2) EPC and Article 83 EPC. Moreover, the granted claim specified only that the descrambler generated the seed, so that the scope of protection had been extended contrary to Article 123(3) EPC.

After amendment in opposition, the new invention was simply the use of a "mailbox" for transferring data between smart cards.

A2, which disclosed all the other features of claim 1, disclosed storing message data transmitted over-air in a buffer store and transferring this data to the smart card. The message could be over-air credit, which showed that the mailbox was suitable for the claimed "receiving data from broadcast transmissions". The message could also be a request to display remaining credit, which showed that the mailbox was also suitable for the claimed "receiving data ... from a first portable executing means".

Since the arrangement of A2 transferred data between the store and the smart card, it was clearly suitable for doing this "upon replacement of said first one of said portable executing means with a second one of said portable executing means" as claimed in claim 1. Even if this feature did limit the claim, this must happen when a smart card was replaced in A2. Claim 1 was therefore not novel.

Even if claim 1 did differ from A2, the skilled person would realise from A2 that the smart cards would need to be changed from time to time, or if a major breach

of security occurred. It would be obvious to replace any credit remaining on the old card.

Transferring credit from one smart card to another was well known, e.g. from A8, A9, A10 and A12. The skilled person would thus have had no problem implementing the transfer of credit from the old card to the new card.

Apart from problems of clarity and added subject-matter, the amendments in the auxiliary requests did not affect the arguments concerning inventive step.

VIII. The respondent argued as follows:

The features of a plurality of receivers, executing identical operations and having no cryptographic secrets were not essential to the invention and were validly deleted from claim 1.

The point concerning what generated the seed, depended on the interpretation of the claim. The granted claim covered both embodiments of the original description. The maintained claim 1 had been amended by adding the features of claim 5. Thus the amendment was both supported, satisfying Article 123(2) EPC, and restricted to the main embodiment, satisfying Article 123(3) EPC.

The mailbox was defined in functional terms. Firstly, receiving data from two sources, the head end and the smart card. Secondly, sending data upon replacement of the smart card. A2 only disclosed transferring data to the smart card from the head end, but not from another

smart card. Thus A2 did not disclose controlling the store in the claimed manner, so that claim 1 was novel.

The technical problem was to enable a smart card provided by the service provider. The invention solved the problem by allowing the transfer of credit to a new card both over-air from the head end, or from the old smart card.

A1 and A2 disclosed various existing solutions, which already solved the problem, so that the skilled person would not have modified them. One solution was the use of pre-paid cards (see A1, page 10, 8.1, and A2, page 4, lines 4 to 16). In this case, all the credits were used up before the smart card had to be exchanged for a fresh one (see e.g. A2, page 4, lines 12 to 16). Another solution was over-air credit, which had the disadvantage of requiring a high bandwidth to download all the users' credit. If this solution were applied, the skilled person would transfer all the credit from the head end, and there would be no need to transfer data from the first card. Conversely, applying the teaching of A8 to A10 would imply transferring all information from the old card to the new card and not transmitting any data from the head end.

The amendments in the auxiliary requests did not affect the arguments concerning inventive step.

Reasons for the Decision

1. The appeal complies with the requirements referred to in Rule 65(1) EPC and is, therefore, admissible.

2. The patent relates to the general problem of controlling access to television broadcasts (see Figures 1 to 3 and associated text). In particular, it concerns a receiver, comprising a decoder and a portable execution unit (smart card), which contains an algorithm that generates the seed for the descrambler based on data transmitted from the transmitter. As a result, the receiver contains no cryptographic keys. The decoder also contains a "mailbox" that enables messages to be passed to the smart card from both the transmitter and an old smart card. The messages may relate to enabling or credit information, particularly the amount of viewing credit left on an old card when it is replaced by a new card (e.g. on a security update).

Insufficiency of disclosure

3. The respondent has not alleged that the "mailbox" is anything more than a memory store controlled according to the described and claimed functionality. The Board does not doubt that the skilled person would be able to implement such a "mailbox" with the given functionality. Concerning the "enabling" of the second smart card, the original description discloses, at page 6, lines 46 to 47 of the A-publication, that this is based on a message left by the old card. The Board judges that the skilled person would be able to implement an "enabling" based on such a message.

Added subject-matter and interpretation of claims (main request)

4. The negative limitation that the decoder contains "no cryptographic keys" has been deleted from originally filed claim 1. In order for a deletion of a feature to be allowable under Article 123(2) EPC, the skilled person must be able to recognise that the feature is not essential to the invention. The Board judges that the circumstances that imply that a feature is essential are not necessarily identical for positive and negative features in a claim. This may be seen from the fact that the skilled person might not be able to recognise whether an invention would work if a positive feature were to be deleted, whereas he would generally be able to imagine situations where the invention would work despite the presence of a feature contrary to a negative limitation. For example, in the present case, such a feature could be secret cryptographic data resident in the receiver for some purpose entirely unconnected with the invention. Thus, the skilled person would normally need to find stronger reasons to consider a negative feature as essential compared to a positive feature. In the present case, such stronger reasons are not apparent to the Board, the original disclosure rather presenting the negative feature as some kind of additional advantage. Hence, although the originally filed description mentions at page 5, lines 29 to 30 of the A-publication that the lack of cryptographic keys is a "particular feature of the present invention", the Board judges that this is not the same as saying that it essential, so that it may be deleted.

5. The Board agrees with the respondent that the feature of identical operations of the portable executing means that was deleted from originally filed claim 1 cannot be regarded as essential because the amended claim is directed to a single receiver.

6. The Board also agrees with the respondent that the point about whether the descrambler or the smart card generates the seed, turns on the interpretation of the phrase "the descrambler is operative when associated with ... portable executing means, to generate the seed" in the granted claim. However, the Board interprets the phrase rather more broadly than the appellant. The Board judges that the formulation "operative when associated with" is more remote and broader than the strict meaning that the descrambler alone generates the seed. Rather, it means that the descrambler and the smart card are together involved in generating the seed. The role of the descrambler could range from virtually nothing, such as receiving the seed from the smart card, to virtually everything, such as generating the seed when the smart card is plugged in. This interpretation is in line with the different embodiments on file at various stages of the proceedings. On filing, there was an embodiment (page 5, lines 36 to 40 of the A-publication) with no smart card, but just a memory containing data used to reproduce the seed, i.e. the descrambler alone generated the seed. This part of the description was deleted on grant. In one embodiment of the granted patent, the smart card generates the decoding seed (page 4, line 48), i.e. the role of the descrambler is virtually zero. Finally, in another embodiment of the granted patent, the executing means only contains "part of the instructions required to

descramble the transmission" (page 2, lines 38 to 39), i.e. both the smart card and the descrambler play a role. This embodiment was deleted in opposition.

7. The Board thus judges that the wording of granted claim 1 covers a wide range of distribution of functions between the smart card and the descrambler. Consequently, the amendment to specify that the seed generating algorithm is executed in the smart card is a restriction to the granted claim and is not an extension of protection. Since this is also supported by the remaining embodiment, it is also not an extension of subject-matter either.

Novelty (main request)

8. Since it is agreed that the mailbox functions only as a store, the Board agrees with the appellant that the buffer store below the sound/data multiplexer 210 in Figure 11 of A2 can also be considered as a "mailbox". A2 thus discloses all the features of claim 1 except for the function of the mailbox.
9. The question then arises whether and to what extent this functional definition limits the claim. Both parties cite Guidelines C-III, 4.8, which states that apparatus for carrying out a process or for a particular use must be construed as meaning merely apparatus suitable for carrying out the process or for the stated use. The appellant considers that this implies in the present case that the mailbox can be any store that can pass data from one entity to another, thus including the buffer store in A2. The respondent

argues that the elements cited in A2 are not suitable for the specified purpose.

Although the Guidelines require only that the element is suitable for the intended purpose, the Board judges that this cannot be extended to mean *could be* suitable for the intended purpose if modified appropriately. Thus, although the store in A2 could be made to pass data between the various parts of the system, the question is whether it does so according to the limitations imposed on the claim by its functional description.

10. In this respect the Board distinguishes between use and function. The passages of the Guidelines cited by the parties deal with the use to which a claim is put, which generally relates to other features that are not within the scope of the claim. The Guidelines give the example of a "mold for molten steel" in which the use relates to molten steel, which is not part of the claim to the mold. On the other hand, in a true functional feature, the function generally relates to features which are within the scope of a claim. For example, the feature in the present claim 1 "mailbox for receiving data from broadcast transmissions and from a first portable executing means" relates to specific data, and if this data is defined in the claim, the claim is limited to receiving this data. In the present case, the data from broadcast transmissions and from a first portable executing means is defined in the claim and the Board judges that the mailbox must therefore be interpreted as being arranged to store this data.

11. The Board agrees with the appellant that A2 discloses at page 6, lines 57 to 59 and lines 63 and 64, that the buffer stores messages that have been transmitted over-air, and therefore data from broadcast transmissions as claimed in the first part of the feature. However, although it is clear from the function of displaying remaining credit described at page 7, lines 9 to 10, that data can be received from the Conditional access sub-system (CASS), e.g. a smart card, the Board judges that it is not disclosed that this data is stored in the buffer store as required by the last part of this feature.

For similar reasons, the Board agrees with the respondent that A2 does not disclose the remaining features of claim 1, namely that the data is received "upon replacement of said first one of said portable executing means with a second one of said portable executing means, providing said data to said second one of said portable executing means, thereby enabling said second one of said portable executing means".

12. The Board accordingly judges that claim 1 is novel (Article 54 EPC).

Inventive step (main request)

13. The Board judges that the differences identified above solve the objective technical problem of enabling a smart card provided by the service provider. The Board judges that the skilled person would consider solving this problem, in particular when the card is replaced "from time to time", or if a major breach of security occurs as disclosed in A2 at page 4, lines 2 to 3.

14. The Board further judges that when enabling a new card it would be obvious to consider replacing any credit remaining on the old card since the loss of money would be annoying to the viewer, in particular if the replacement was initiated by the service provider for security reasons. In order to replace the remaining credit, information must be transferred from where the credit is known, namely from the old card or, possibly from the head end. The latter seems unlikely unless the head end were permanently updated with the credit remaining on the card, which, by analogy with the respondent's argument about downloading credit, would be undesirable owing to the high bandwidth required.

The skilled person would be aware, from A10 for example, that one possible way of transferring credit from one smart card to another is to use an intermediate store. Since A2 discloses, in the bottom right part of Figure 12, that the buffer store may store credit from the head end, the Board judges the skilled person would consider using it as an intermediate store for storing the credit to be transferred from the old to the new card. The Board thus judges that it would be obvious to store credit data received from both the broadcast transmissions (head end) and from the smart card. Finally, it is self evident that the credit data would be transferred upon replacement of the card, as claimed.

15. The respondent argues that the skilled person would only consider transferring data from the head end or the old smart card, but not a combination of both. However, it follows from the above that the Board judges that the transfer of credit from the old card is

an obvious addition to the system using over-air credit. Moreover, the claimed transfer of data to the second card is very general, the said data being "data from broadcast transmissions and from a first portable executing means". In particular, there is no specified relationship between the data from the two sources. Thus the claim covers the case where the transfer of data from the broadcast transmission to the second smart card is an independent function. This need not even relate to credit information, but could be any data that the service provider needs to send to the viewer's card.

16. The subject-matter of claim 1 of the main request accordingly lacks an inventive step (Article 56 EPC).

Inventive step (auxiliary requests)

17. The respondent agreed that the auxiliary requests "A", "B", "C", "D" and "F" were fall back positions in the event of a negative judgement on Article 123 EPC, but did not affect the arguments concerning inventive step. Accordingly, they do not involve an inventive step for the same reasons as the main request.
18. There being no other requests, it follows that the patent must be revoked.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

D. Sauter

S. Steinbrener