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**Datasheet for the decision
of 20 January 2015**

Case Number: T 0683/11 - 3.4.03

Application Number: 09009163.8

Publication Number: 2113893

IPC: G07F17/32

Language of the proceedings: EN

Title of invention:

Secure offline interactive gambling

Applicant:

NDS Limited

Headword:

Relevant legal provisions:

EPC 1973 Art. 54(1), 56

Keyword:

Novelty (yes)

Inventive step (yes)

Decisions cited:

T 0641/00, T 1102/06, T 1543/06, G 0001/05

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

European Patent Office
D-80298 MUNICH
GERMANY
Tel. +49 (0) 89 2399-0
Fax +49 (0) 89 2399-4465

Case Number: T 0683/11 - 3.4.03

**D E C I S I O N
of Technical Board of Appeal 3.4.03
of 20 January 2015**

Appellant: NDS Limited
(Applicant) One London Road
Staines, Middlesex TW18 4EX (GB)

Representative: Abraham, Richard
Maguire Boss
24 East Street
St. Ives
Cambridgeshire PE27 5PD (GB)

Decision under appeal: **Decision of the Examining Division of the European Patent Office posted on 1 February 2011 refusing European patent application No. 09009163.8 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman G. Eliasson
Members: R. Bekkering
T. Bokor

Summary of Facts and Submissions

I. The appeal is against the decision of the examining division refusing the application no. 09 009 163.

The decision was based on the state of the file, as requested by the applicant, with reference to the communication of the examining division dated 1 December 2010, in which the applicant was informed that the subject-matter of the claims was not novel, Article 54(1), (2) EPC, over document

D3: US 6 234 898 A,

lacked technical character, Article 52(2), (3) EPC,

and/or did not involve an inventive step in the sense of Article 56 EPC over document D3 and documents

D1: WO 99/39312 A,

D4: WO 01/75545 A.

II. The appellant requested at the oral proceedings before the board held on 20 January 2015 that the decision under appeal be set aside and that a patent be granted on the basis of the following documents:

Description: Pages 1 to 31 as filed during the oral proceedings before the board;

Claims: 1 to 4 as filed during the oral proceedings before the board;

Drawings: Figures 1 to 3 as originally filed.

III. Claim 1 reads as follows:

"A secure offline interactive gambling method for providing an offline interactive gambling application in which a user interactively provides a sequence of user selections in response to gambling input, the method comprising:

insecurely storing an offline interactive gambling application including all rules governing execution of the offline interactive gambling application;

executing the offline interactive gambling application through interaction with a user;

randomly or pseudo-randomly generating gambling input to the offline interactive gambling application during execution of the offline interactive gambling application;

determining at least one result of the offline interactive gambling application based on the gambling input and at least some user selections made in response to the gambling input during execution of the offline interactive gambling application;

securely storing information related to the execution of the offline interactive gambling application, said information comprising information from which the at least one result of the offline interactive gambling application can be derived, wherein said securely storing said information comprises securely storing: a log of the at least some user selections made in response to said gambling input during execution of the offline interactive gambling application; and a log of

the gambling input generated during execution of the offline interactive gambling application;

securely transmitting said information related to the execution of the offline interactive gambling application for subsequent checking by a central gambling facility to verify said at least one result of the offline interactive gambling application; and

after the central gambling facility has checked said information related to the execution of the offline interactive gambling application to verify said at least one result of the offline interactive gambling application by performing at least one of the following with said gambling input and user selections: a repeated execution of a portion of the offline interactive gambling application: a repeated execution of the entire offline interactive gambling application: and execution of a corresponding verification application that provides results substantially identical to results obtained by execution of the offline interactive gambling application, receiving a validated notice of the at least one result from the central gambling facility."

IV. The present application is a divisional application of the earlier application no. 02 796 949. Following a decision of the board on the earlier application in appeal case T 1102/06, a patent was granted on the earlier application with a claim 1 directed at a secure offline interactive gambling system and a claim 11 directed at a secure offline interactive gambling method.

V. Reference is also made to the following further document:

D2: US 5 850 447 A.

VI. The appellant submitted in substance the following arguments:

Claim 1 differed from claim 11 deemed allowable in T 1102/06 in that it unequivocally did not require the central gambling facility for verifying the at least one result of the offline interactive gambling application to be present in the same territory as the user-end part of the system for the claims to be directly infringed.

The checking feature of the invention performed by the central gambling facility was, however, intended to remain a limitation of the claim. It was this checking function of the invention provided by the central gambling facility which limited the scope of protection of the claim for consistency with the inventive concept deemed allowable in T 1102/06.

Further cited document D4 was of mere background relevance to the inventive concept of the invention.

Moreover, claim 1 included the further step of receiving a validated notice of the at least one result from the central gambling facility.

The subject-matter of claim 1 was, therefore, novel and inventive over the cited prior art.

Reasons for the Decision

1. The appeal is admissible.
2. *Amendments*

Claim 1 is based on claim 9 as originally filed, in combination with the description as originally filed (page 18, line 27 to page 27, line 32; in particular page 23, lines 17 to 21 ("*sequence of user selections in response to gambling input*"), page 26, lines 3 to 5 ("*when the [...] application determines that the game is over, it informs the user [...] the result of the game*"), page 25, lines 8 to 13 ("*receiving a validated notice [...]*")).

The dependent claims 2 to 4 correspond to claims 10 to 12 as originally filed claims.

The amendments, thus, comply with Article 123(2) EPC.

Claim 1 is moreover based on claims 52, 53, 55, 57 and 61 to 63 and on the same parts of the description indicated above of the earlier application as originally filed.

The dependent claims 2 and 3 are based on claims 8 and 9 and on the description (page 17, lines 1 to 26) of the earlier application as originally filed. Claim 4 corresponds to claim 28 of the earlier application as originally filed.

The amendments, thus, also comply with Article 76(1) EPC.

3. According to the appellant, claim 1 differed from claim 11 deemed allowable in T 1102/06 in that it unequivocally did not require the central gambling facility for verifying the at least one result of the offline interactive gambling application to be present in the same territory as the user-end part of the system for the claims to be directly infringed. This reformulation of the claims deemed allowable in T 1102/06 was desirable since the central gambling facility might in practice be located in a different territory to the subscriber unit thereby potentially forcing the patentee to rely upon indirect (or "contributory") infringement of the granted parent in certain European states in order to enforce patent rights; the need to rely upon indirect infringement was undesirable since there was little guidance under national law on the requirements necessary to show indirect infringement for a network-enabled invention.

Yet according to the appellant, the checking feature of the invention performed by the central gambling facility was intended to remain a limitation of the claim. It was this checking function of the invention provided by the central gambling facility which limited the scope of protection of the claim for consistency with the inventive concept deemed allowable in T 1102/06.

4. In the board's judgement, claim 1 in fact includes as a step of the claimed method that the central gambling facility checks said information related to the execution of the offline interactive gambling application to verify said at least one result of the offline interactive gambling application by performing at least one of the following with said gambling input

and user selections: a repeated execution of a portion of the offline interactive gambling application: a repeated execution of the entire offline interactive gambling application: and execution of a corresponding verification application that provides results substantially identical to results obtained by execution of the offline interactive gambling application.

In this respect, the formulation "*after the central gambling facility has checked said information [...] to verify [...] by performing at least one of the following [...]*" in the board's judgement merely emphasizes the sequential nature of this checking step performed at the central gambling facility and the subsequent method step of receiving a validated notice of the at least one result from the central gambling facility.

As such, this wording is not considered to make any difference over that of claim 11 as granted on the earlier application which simply defines that the method comprises the step of (at a processing unit operatively associated with the central gambling facility) checking said information and verifying said at least one result [...] by performing at least one of the following [...].

However, claim 1 in the present case is not identical to claim 11 granted on the earlier application in that it includes, as a further method step, receiving a validated notice of the at least one result from the central gambling facility. Accordingly, problems regarding double patenting do not arise (cf decision G 1/05, OJ EPO 2008, 271, Reasons 13.4).

5. *Novelty, inventive step*

5.1 As a preliminary remark, it is noted that the subject-matter of claim 1 is novel and involves an inventive step essentially for the same reasons given with respect to claim 11 of the earlier application in decision T 1102/06.

The presence in claim 1 of the further step of receiving a validated notice of the at least one result from the central gambling facility, not disclosed or suggested in any of the prior art documents, further adds to the novelty and inventive step of the subject-matter of claim 1.

5.2 *Novelty*

5.2.1 *Document D3*

Document D3, cited in the application as originally filed (page 1, lines 15 to 18), discloses a system and method providing an offline interactive gambling application in which a user interactively provides a sequence of user selections in response to gambling input generated by a random gambling input generator.

An example of such a gambling application is a poker game (D3, column 3, line 41 to column 4, line 34), like in the application (original description page 5, lines 8 to 13). A "deck of cards" is created by the software with the aid of a random number generator. The user can now decide which "cards" in the hand to retain or discard in order to attempt to improve the displayed hand (column 3, line 66 to column 4, line 8).

The system of D3 comprises a secure processing and memory apparatus in the form of a smart card, together with non-secure input and display means connectable to the smart card. The memory of the smart card stores software controlling the operation of the game and also data relating to gains or losses of the player. Input signals generated by the player are processed within the secure processor and all operations which can influence the outcome of the game are carried out within the secure processor so that the system is not susceptible to tampering, even when used in a non-secure environment (abstract; column 3, lines 26 to 40).

According to D3, *"although there is communication between the secure processor of the smart card and external input and display means, this communication concerns only output signals from the secure processor which generates a display, and permissible control signals generated by the keypad or other input means which is operated by the user of the system. There is no bus or other communications link which is accessible to a would-be hacker or criminal which could be accessed to tamper or interfere with the operation of the system"* (column 5, lines 43 to 53).

Thus, in document D3, there is no central gambling facility, no transmitting of information to such a facility, no verification of the result at the central gambling facility and no receiving of a validated notice of the result from the central gambling facility.

Accordingly, the subject-matter of claim 1 is new over document D3 (Article 54(1) EPC 1973).

5.2.2 Document D1

Document D1, cited in the application as originally filed (page 1, lines 9 to 12) discloses a system and method for playing a lotto game.

As disclosed in D1, *"In a lotto game, players are given the opportunity to choose one or more player numbers. When the winning number or numbers is determined, players receive a prize based on a comparison between the winning number or numbers and the player number of [sic] numbers previously chosen by the player. It is understood to be a fundamental rule of lotto games and similar games that the player number or numbers must be picked by the player before the winning number or numbers is announced"* (page 1, lines 16 to 22).

According to D1, *"There is significant potential for fraud in lotto games and similar games. For example, if a player could succeed in picking the player number after the winning number had already been announced, the player could fraudulently obtain a prize"* (page 1, lines 23 to 26).

Document D1 prevents this type of fraud in that the player number is transformed by a transformation function, such as a one-way function or hash function, into a transformed number. The transformed number is ultimately compared with a winning number to determine a winner. Preferably, the transformation function is chosen so that it will be very difficult to invert; that is, given only the transformation function and the transformed number, it will be difficult to find the player number. Furthermore, in the case of a significantly large prize, a player is required to present the player number, the transformation function, and the transformed number in order to collect the

prize. Thus, since a fraudulent player will not be able to compute the player number, he will not be able to fraudulently claim to have won (page 5, lines 9 to 19).

The system generally comprises a display (such as a television set), an input device (such as a television remote control), a communications interface (such as an integrated receiver-decoder typically used for subscriber television) and a security device (such as a smart card interacting with the integrated receiver-decoder) (figures 2A, 2B and corresponding description).

A player number is provided to the system and transformed in the smart card (security device) by a one-way function such as a hash function (page 14, line 30 to page 15, line 25). The player number, the hash function and the transformed player number are typically all stored on the card.

A winning number, chosen by any appropriate means such as random generation, is received, typically via a broadcast transmission. The winning number is compared to the transformed player number. If the winning number matches the transformed player number or, according to the rules of whatever game is being played, partially matches the transformed player number, the player wins (page 16, lines 23 to 28).

In the case of large prizes, the player's win is verified at a game control site. Verification comprises verifying that the transformation function which the player has is the transformation function which the player is authorized to have; verifying that the player number, when input to the transformation function, yields the transformed player number; and verifying,

typically by physical evidence, that the card has not been tampered with (page 17, lines 11 to 17).

Regarding the player number, according to D1, the player is allowed to choose his own player number. Alternatively, any of a wide variety of methods may be used for choosing a player number. For example, any of the following methods may be used: a player number may be randomly generated by any appropriate component of the system of Figs. 2A and 2B; a player's favourite number may be stored and automatically provided by any appropriate component of the system of Figs. 2A and 2B; and a list of player numbers, including favourite numbers, numbers previously played, or other numbers may be stored and either one number may be automatically provided by any appropriate component of the system of Figs. 2A and 2B or a list of numbers may be provided to the player for making a choice. Furthermore, according to D1 it is appreciated that a player may play more than one number, typically at an increased cost (page 14, lines 16 to 29).

Having regard to claim 1, however, document D1 does not disclose providing an interactive gambling application in which a user interactively provides a sequence of user selections in response to gambling input (pseudo-) randomly generated. Moreover, there is no disclosure in D1 of securely storing information comprising a log of the at least some user selections made in response to said gambling input during execution of the offline interactive gambling application and a log of the gambling input generated by the random gambling input generator during execution of the offline interactive gambling application.

In document D1, in case the player number is randomly generated, there is no disclosure, and indeed there would be no reason in the context of the lotto game of D1, for the user interactively providing a sequence of user selections in response to randomly generated gambling input and for securely storing a log of at least some of these user selections.

Furthermore, in D1 there is no securely transmitting this information for subsequent checking by the central gambling facility and no verifying of the result of the offline interactive gambling application by performing a (repeated) execution of the gambling application or a corresponding application.

Accordingly, the subject-matter of claim 1 is also new over document D1 (Article 54(1) EPC 1973).

5.2.3 Document D2

Document D2 relates to a secure system for remote participation in interactive games where televiewers are asked, during a broadcast, to give answers to questions broadcast from a station. If the right answer is given a winning may be assigned (column 1, lines 8 to 15 and 60 to 61).

During such games, a maximum answering time has to be set in order to prevent the televiewer from making his answer after the solution to the game has been given from the station or after he has looked up the answer in an encyclopedia or any other reference data base (column 1, lines 16 to 21).

To this end D2 provides a secured system of remote participation in interactive games with verification of

the chronology of events which relies on the counting, by a secured microprocessor (for example a microcircuit card), of consecutive periods of time of which the first one is initialized by a cryptographically secured message sent by the transmitter and the last one is ended by a connection of the games machine to the central computer of the transmitter for the forwarding thereto of the answer (column 1, lines 8 to 10 and column 3, lines 33 to 45).

Having regard to claim 1, document D2 is not concerned with an interactive gambling application in which a user interactively provides a sequence of user selections in response to gambling input generated by a random gambling input generator.

Accordingly, the subject-matter of claim 1 is new over document D2 as well (Article 54(1) EPC 1973).

5.2.4 *Document D4*

Document D4 relates to a method for broadcasting a game whereby a person may view a live or recorded game from a remote site. Rather than broadcasting motion image data, requiring a large data transmission capacity, only game data is collected and transmitted. This game data includes data on coordinates of each unit or character showing on a player's computer, operation instructions etc. When a viewer accesses the website and selects a game that the viewer wishes to see, the game data of the selected game are automatically transmitted to the viewer's computer. When the transmission is completed, the game program is automatically executed by the replay unit and the viewer will be able to enjoy the game which has

previously been broadcast (page 4, line 10 to page 5, line 18).

The method of claim 1 differs from that of document D4 *inter alia* in that the gambling application is run at the user and re-executed in the central gambling facility whereas in D4 the game is run by a player and re-executed at a viewer.

Accordingly, the subject-matter of claim 1 is also new over document D4 (Article 54(1) EPC 1973).

5.3 *Inventive step*

5.3.1 The closest prior art is considered to be document D3 which, as discussed above (cf point 5.2.1), discloses a secure offline gambling system and method providing an interactive gambling application in which a user interactively provides a sequence of user selections in response to gambling input generated by a random gambling input generator, and thus relates to the same type of gambling game application as the patent application under consideration.

Document D3, however, relies on the security of the system being achieved by carrying out all operations, which can influence the outcome of the game within the secure processor of the smart card, so that the system is not susceptible to tampering, even when used in a non-secure environment. There is no central gambling facility, no transmitting of information to such a facility and no verification of the result of the gambling application at such a central facility.

Having regard to claim 1, by verifying the result of the gambling application at the central gambling

facility, the gambling application can be stored insecurely, thus allowing dispensing with more expensive secure memory for storing the application (description page 17, lines 1 to 14) and, as argued by the appellant, making it easier and inexpensive to distribute and update the gambling application.

None of the cited prior art documents address this problem or suggest the solution as claimed.

The gambling method as claimed relies on randomly generated gambling input from the user application (eg the "cards" provided in a poker game etc.). This input, however, should be tamper resistant, as any manipulation to this input could fraudulently affect the outcome of the game.

In contrast, the lotto game of document D1 relies on the winning number being drawn centrally in a secure manner and thus places less stringent security requirements on the user application. As a consequence, D1 relies on the gambling application at the user to be sufficiently secure, at least for the smaller prizes. Accordingly, document D1 does not suggest the claimed solution.

Neither is the solution suggested by document D4. The examining division essentially argued that D4 anticipated the claimed solution for the same purpose of insecurely storing the gambling application. In D4, however, the game is stored at the viewer in an insecure manner, security in the sense of the application in relation to gambling fraud not being an issue in this document. Document D4 is, thus, of no relevance to the problem posed. Neither is the claimed solution provided in document D4. As discussed above,

in D4 the game is run by a player and re-executed at a viewer, which is fundamentally different from the claimed method where the gambling application is run at the user and re-executed in the central gambling facility.

- 5.3.2 Moreover, if document D1 or D2 were to be taken as the closest prior art, the basic difference between the subject-matter of claim 1 over D1 or D2 would be the provision of an interactive gambling application in which a user interactively provides a sequence of user selections in response to gambling input generated by a random gambling input generator and the storing of information comprising a log of the gambling input generated by the random gambling input generator during execution of the offline interactive gambling application and a log of the at least some user selections made in response to said gambling input during execution of the offline interactive gambling application.

As discussed above, these features are essentially occasioned by the different type of gambling game being provided and the ensuing different security issues.

It is true, that since rules for playing games are part of the subject-matter excluded under Article 52(2) EPC and thus considered non-technical, they cannot support the presence of inventive step (see decisions T 641/00 (OJ EPO 2003, 352) and T 1543/06). In the context of the problem-solution approach used for assessing inventive step, this implies that they appear in the objective problem-to-be-solved as a constraint to be met.

The above differences however do not relate to the rules of the game per se, which anyway are well-known (eg a poker game), but relate to the technical implementation of the rules of the game.

There is nothing in D1 or D2 as to such an implementation. The only available prior art implementation of a gambling method is provided in D3, as discussed above, which however relies on a self-contained secure application at the user and thus differs fundamentally from the claimed solution.

5.3.3 Accordingly, the subject-matter of claim 1, having regard to the cited prior art, is not obvious to a person skilled in the art and, therefore, involves an inventive step in the sense of Article 56 EPC 1973.

5.4 The remaining claims are dependent on claim 1 and define further limitations. The subject-matter of these claims, therefore, is also new and involves an inventive step.

6. The patent application documents also meet the remaining requirements of the EPC, so that a patent can be granted on the basis of these documents.

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 with the order to grant a patent on the basis of the following application documents:

Description: Pages 1 to 31 as filed during the oral proceedings before the board;

Claims: 1 to 4 as filed during the oral proceedings before the board;

Drawings: Figures 1 to 3 as originally filed.

The Registrar:

The Chairman:



S. Sánchez Chiquero

G. Eliasson

Decision electronically authenticated