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**Datasheet for the decision
of 9 December 2010**

Case Number: T 1097/06 - 3.5.01

Application Number: 04405195.1

Publication Number: 1583013

IPC: G06F 17/60

Language of the proceedings: EN

Title of invention:

Computer-based system and method for detecting risks

Applicant:

Swiss Reinsurance Company

Opponent:

-

Headword:

Risk detection / SWISS REINSURANCE

Relevant legal provisions:

EPC Art. 52(1)(2)(3), 123(2)

Relevant legal provisions (EPC 1973):

EPC Art. 54(1)(2)

Keyword:

"Novelty - no (all requests)"

Decisions cited:

T 0258/03

Catchword:

-



Case Number: T 1097/06 - 3.5.01

D E C I S I O N
of the Technical Board of Appeal 3.5.01
of 9 December 2010

Appellant: Swiss Reinsurance Company
Mythenquai 50/60
8022 Zürich (CH)

Representative: Braun, André jr.
Braunpat Braun Eder AG
Reussstraße 22
Postfach
4015 Basel (CH)

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 20 March 2006
refusing European patent application
No. 04405195.1 pursuant to Article 97(1) EPC
1973.

Composition of the Board:

Chairman: S. Wibergh
Members: K. Bumés
G. Weiss

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division to refuse European patent application No. 04405195.1, entitled "Computer-based system and method for detecting risks" and published as

A1: EP-A1-1 583 013,

on the ground of obviousness (Article 56 EPC 1973) in relation to a set of claims filed on 1 June 2005. The decision was taken "according to the state of the file", by reference to two substantive communications dated 10 March 2005 and 4 January 2006, respectively. The latter communication had been issued as an annex to a summons to oral proceedings, citing three prior art documents:

D1: US-A-6 002 748

D2: US-B-6 169 476

D3: WO-A-01/63 534.

(a) The examining division considers a general purpose networked computer system to represent the closest prior art (2nd communication, point 4.5) since a networked server, a database and terminals are the only technical features of the claimed system, those features being commonplace in the field of computer technology, as illustrated by D1 or D2 (2nd communication, point 4.1). The remaining features are said to define steps of a "mental act for risk detection" since they "can be performed mentally, without the assistance of any technical means". Furthermore, the mental act is directed at supporting a business decision by evaluating the impact of an emerging risk on an insurance product (2nd communication, point 4.2). The technical problem solved

by the present invention is merely to automate the steps of the mental act for risk detection. The skilled person would use standard data processing techniques to translate the non-technical requirements into a general purpose networked computer system (2nd communication, point 4.6).

- (b) In an alternative line of argument (2nd communication, point 5), the examining division sets out from document D2 (entitled "Early warning system for natural and manmade disasters") and considers the applicant's contribution to reside in cognitive data having no technical impact on the claimed system. Therefore, an objective technical problem cannot be identified and at least the requirement for an inventive step is not satisfied.

- II. The appellant requests that the decision under appeal be set aside.

As main request, the appellant requests that a patent be granted on the basis of the claim set underlying the impugned decision.

As first to fifth auxiliary requests, grant is requested on the basis of one of five amended sets of claims filed with the statement setting out the grounds of appeal.

Oral proceedings have been requested in case the Board does not consider any of the requests allowable.

The fifth auxiliary request defines the most specific version of claim 1, which reads as follows (with labels

added by the Board to facilitate references to individual paragraphs):

- [a] "1. Computer-based risk detection system (1) for detecting emerging risks in systems including at least one of a power network, a communication network, a traffic transportation system, such as a railway or highway, a fuel transportation system, such as an oil or gas pipeline, and a civic structure, such as a dam, a power plant or a manufacturing plant, the system comprising:
- [b] a server (10) connected to a communication network (2),
- [c] means for receiving on the server (10) risk information from geographically distributed computerised data sources (3A, 3C, 3D, 3E, 3G, 3H) located in first geographical areas (A, C, D, E, G, H) via the communication network (2), said risk information including an identification of a specific risk, a rating of said specific risk, and information for associating said specific risk with one of the first geographical areas (A, C, D, E, G, H),
- [d] means for storing received risk information, the identification of the specific risk and the rating of the specific risk being assigned to one of the first geographical areas (A, C, D, E, G, H),
- [e] stored correlation factors (631) associated with geographical areas (A, B, C, D, E, F, G, H), the correlation factors (631) indicating a level of correlation between geographical areas for a particular type of risk,

[f] detection means (14) for detecting a specific risk emerging in one of the first geographical areas (A, C, D, E, G, H) and spreading to one or more second geographical areas (B, F) based on stored risk information (61) and based on the stored correlation factors (631), the detection means (14) being designed to detect the emerging specific risk based on the rating of the specific risk assigned to the one of the first geographical areas (A, C, D, E, G, H), the rating of the specific risk having a value from a defined set of rating values with different levels, and the detection means (14) being designed to detect the emerging specific risk spreading to one or more second geographical areas (B, F) based on the stored correlation factors (631), and

[g] signalling means (13) for providing to an interface (5, 5', 5'') output data depending on the detected emerging risk and the second geographical areas (B, F)."

III. The statement setting out the grounds of appeal emphasises technical features of the computer-based risk detection system and refers to a specific problem defined in the application (A1, paragraph 0004, last sentence): how to detect risks emerging in geographical areas without having to collect measurements of risk indicators in all of the geographical areas. The claimed solution is presented as a system tailored to the purpose of indicating areas where an emerging risk is to be expected, without having to set up a monitoring infrastructure in all of those areas.

The geographically distributed data sources (e.g. sensors) of the claimed system transmit a *rating* of the emerging risk to the server to detect a spreading risk based inter alia on that rating. The appellant considers this feature as a difference over the early warning system of D2. Moreover, D2 does not inspire the skilled person to store correlation factors of geographical areas and/or spreading patterns.

Therefore, the appellant considers the claimed system to be novel and involve an inventive step.

- IV. The Board summoned the appellant to attend oral proceedings scheduled for 9 December 2010. In an annex to the summons, the Board expressed doubts about the novelty of claim 1, even in its most specific version (i.e. auxiliary request 5), with respect to D2.
- V. By a letter received on 14 September 2010, the appellant advised the Board that it would not be represented in the oral proceedings.
- VI. The Board held oral proceedings in the appellant's absence and pronounced its decision at the end of the oral proceedings.

Reasons for the decision

1. *The application*

- 1.1 A specific object of the invention is to provide a computer-based system and method for detecting risks emerging in geographical areas without having to

collect measurements of risk indicators in all of the geographical areas (A1, paragraph 0004, last sentence).

1.2 To this end, the system proposed by A1 comprises means for detecting a risk emerging in a first geographical area and spreading to one or more second geographical areas (original claim 1) based on stored correlation factors of the geographical areas and/or stored spreading patterns (A1, paragraph 0008; original claim 5).

1.3 Detecting a risk emerging in a first geographical area and spreading to a second geographical area has the advantage that emerging risks can be detected in the second geographical area even if the detection system has not received any risk information from the second area. Consequently, emerging risks can be detected even in geographical areas where no or only a limited risk detection infrastructure is implemented and/or operational (A1, page 3, lines 4 to 8).

Auxiliary request 5

The Board has examined only the narrowest version of claim 1, i.e. the version according to the fifth auxiliary request, because even that version lacks novelty and, therefore, all broader versions of the claim (main request, auxiliary requests 1 to 4) fail *a fortiori* for the same reason.

2. *Article 123(2) EPC - Admissibility of amended claim 1*

The Board is convinced that the amended claim 1 is within the content of the application as filed.

Paragraphs [a] and [b] of the claim are based on original claim 1 (A1, page 8, line 44) and the original description (A1, page 2, lines 23 to 28).

Paragraph [c] is based on original claim 1 (A1, page 8, lines 46 to 49) and Figure 1 as described in A1, paragraph 0030, for example.

Paragraph [d] is based on original claim 1 (A1, page 8, lines 50/51).

Paragraph [e] is based on original claim 5 (A1, page 9) and the original description (A1, paragraphs 0032/0033).

Paragraph [f] is based on original claim 1 (A1, page 8, lines 52 to 54), original claim 5 (A1, page 9) and the original description (A1, paragraph 0025).

Paragraph [g] is based on original claim 1 (A1, page 8, lines 55/56).

For completeness, the Board notes that no feature has been omitted from original claim 1.

3. *Article 52(1)(2)(3) EPC - Eligibility for patent protection*

The computer-based risk detection system comprises technical features, namely a server, a communication network, means for receiving data from geographically distributed computerised data sources, means for storing correlation factors and/or spreading patterns, detection means, and signalling means.

Hence, claim 1 relates to an invention within the meaning of Article 52(1) EPC (see e.g. decision T 258/03-*Auction method/HITACHI*, Headnote I, OJ EPO 2004, 575).

4. *Article 54(1)(2) EPC 1973 - Novelty*

4.1 D2 discloses an early warning system for natural and manmade disasters (title), including dam breaks (column 11, lines 51 to 55). The system detects disasters in real time and determines the type, magnitude, speed, direction, and the expected geographic area to be impacted (abstract). One of the objects of D2 is to provide a means to determine and analyse the location, magnitude, and movement patterns of disasters to allow a determination of exactly which areas are to receive warnings (column 4, lines 21 to 25). Another object of D2 is to provide a means to continually upgrade early warnings with information about location, intensity, direction, and speed of disasters (column 4, lines 51 to 53). Wind patterns and/or features of a landscape can be used to predict hazard zones where people should receive warnings (column 4, line 56 to column 5, line 3).

D2 teaches means for detecting disasters in real time as they occur, and to then determine the exact expected geographic area that will be impacted (column 7, lines 40 to 43). Figure 1 of D2 shows a multiplicity of geographically distributed remote sensing, detection, and reporting sources (10A, 10B, ..., 10N). Data from those data collection sources is transmitted to a receiving station (12) and a computer-based central

processing site (13) (column 7, line 61 to column 8, line 6; column 8, lines 32 to 48; column 9, line 47 to column 10, line 61; Figure 2). A primary function of the system is to determine (second) geographical areas expected to be impacted by a disaster observed in an initial or first area (see in particular column 10, lines 22 to 41; column 12, line 36 to column 13, line 8).

4.2 D2 and the present application have in common that a sensor infrastructure in a second geographical area is not required to predict how that area is going to be affected by a disaster occurring in a first area. Once sensors in the first area have detected an emerging risk, the potential hazard to a second area is estimated based on experience (event archives) and natural criteria (such as landscape and wind patterns). In other words, the advantage asserted by A1 (page 3, lines 4 to 15) is anticipated by the early warning system of D2.

4.3 As the early warning system of D2 estimates the potential hazard to a second area based on experience (event archives) and natural criteria (landscape, wind patterns), that system uses known correlations between geographical areas for particular types of risk. For example, a landscape (co-)determines the path of a storm or flood between contiguous areas and, thus, represents a correlation which is used to detect a risk spreading from a first area to a neighbouring area using preprogrammed decision analysis software and predetermined event decision matrices (D2, column 13, lines 2/3 and 39/40).

- 4.4 Paragraph [a] of claim 1 requires the risk detection system to be objectively suitable for detecting emerging risks in specific networks or structures (such as a dam). This feature is anticipated by D2 whose early warning system is designed to detect chemical, biological or nuclear accidents, for example (D2, column 1, lines 39 to 41; column 11, lines 51 to 55: broken dam).
- 4.5 Paragraph [b] of claim 1 requires the existence of a server for receiving the risk information from the geographically distributed data sources. D2 does not use the term "server" but it teaches the use of a central data receiving station (12) which receives data and information from all local, regional, and national sources as well as all other appropriate geographic networks (D2, column 10, lines 22 to 32). A central processing site may function for many different regions and geographic areas (D2, column 13, lines 30 to 32). This effectively constitutes the function of a server.
- 4.6 D2 includes means to determine the "magnitude" of a disaster (see e.g. column 4, lines 21 to 27). The magnitude of a storm, earthquake etc is usually expressed as a value from a defined set of values with different levels and, thus, implies a *rating* of the risk involved. Hence, the feature that the risk information includes a rating of the specific risk in relation to a first geographical area is anticipated by D2.
- 4.7 The Board's conclusion is that claim 1 of auxiliary request 5 does not provide any new feature over D2.

Thus, the risk detection system as claimed lacks novelty.

4.8 As the other versions of claim 1 (main request, auxiliary requests 1 to 4) are broader than claim 1 of auxiliary request 5, the above objection applies to all requests.

Order

For these reasons, it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

T. Buschek

S. Wibergh