

This document includes some recent decisions of the EPO in 2012 with regards to software related inventions and shows relevant extracts from the respective decisions.

T 2220/09 (Transposed file access/MITSUBISHI) of 13.9.2012
File managing method

Clarity of claims - yes

Sufficiency of disclosure – yes

Applicant name: MITSUBISHI DENKI KABUSHIKI KAISHA
Application number: 98121286.3
IPC Class: G06F 17/00
Cited decisions: T 0630/93

<http://www.epo.org/law-practice/case-law-appeals/pdf/t092220eu1.pdf>

The invention relates to a file managing method for managing a data file contained in a database.

The refused claim 1 reads as follows:

"A file managing method for managing data contained in a database, said method comprising the steps of:

subdividing an original file, including a plurality of records, each record including a plurality of fields respectively associated with corresponding kinds of field, into a plurality of blocks, each block including a plurality of fields associated with a same kind of field and subdivided from a plurality of the records; and

coupling the blocks into groups of blocks."

The examining division relied substantially on two objections: claim 1 did not meet the requirement of clarity, Article 84 EPC 1973, and the disclosure of the claimed invention did not meet the requirements of Article 83 EPC 1973 and Rule 27(1)(e) EPC 1973.

The reasons given in the decision for the objections with respect to clarity in claim 1 and sufficiency of disclosure of the invention may be summarised as follows.

(a) The application did not meet the requirements of Article 83 EPC 1973. The core of the invention, improving access time in retrieving data from a database by reducing the travel distances of the read/write head of the storage medium on which the data was physically

stored, was closely connected to the actual data structure and storage location of the data to be retrieved.

The skilled person when trying to carry out the invention had to know the "true physical layout of the data" as existent on the storage medium and the "real physical operations" to be implemented for reducing the access time. The application disclosed the visual presentation of data structures showing the correspondence between records and fields of a table in a relational database. Such a representation, however, was "not physically existent on the storage medium", nor could "any conclusion be drawn (therefrom) about the actual data structure". The application did not provide the necessary technical details and information about the "actual implementation" of any of these operations.

(b) The application did not meet the requirements of Rule 27(1)(e) EPC 1973. The embodiments of the invention as described in the application neither disclosed the "physical actions carried out on the stored data" nor the "true physical layout of the data". The application merely described abstract concepts from a logical/conceptual point of view. Rule 27(1)(e) EPC 1973 demanded an enabling disclosure showing a "real example" how the invention is carried out in practice and "what is going on on a lower level".

Moreover, the application was considered not to meet the requirements of Article 84 EPC 1973 for the following reasons:

(c) The expressions "subdividing an original file (...) into a plurality of blocks" and "coupling the blocks into groups of blocks" as used in claim 1 specified concepts rather than real physical operations on data like reading, writing, and deleting data items physically stored on a storage medium. These expressions, therefore, were unclear.

(d) In addition, since the claims did not define real physical data operations, it was not possible to distinguish a subdivided file from the original file, coupled blocks from non-coupled blocks. Accordingly, it was not clear which data operations fell within the scope of the claims and whether any physical data operation took place at all.

(e) The term "original file" was unclear as to when a file was "original", and when not.

The examining division was apparently guided by an assumption that an invention should be claimed and disclosed on the basis of "real physical" data operations and the "actual data structure" as used to store the records, tables, and fields and as "physically existent" on a real storage medium. According to Rule 27(1)(e) EPC 1973, a "real example" should be described, showing how the invention is carried out in practice "on a lower level".

With those demands, the examination division set too high a standard in respect of the formulation of claims and the disclosure of an invention. An invention is not a practical guide or recipe featuring the details for setting up and running a machine or carrying out a process, but rather a piece of general teaching, i.e. a more or less abstract concept, indicating a feasible way to solve a technical problem. The requirements of Article 84 EPC 1973 are met if the claims define such a concept in a manner that is clear, concise and supported by the description, and the requirements of Article 83 EPC 1973 are met if the application enables the skilled person to put such a concept into practice without undue burden. **Claiming and disclosing the invention in conceptual terms is not per se**

objectionable. A broad claim is not a priori unclear (see Case Law of the Boards of Appeal of the EPO, 6th edition 2010, section II.B.1.1.5, referring inter alia to decision T 630/93, not publ. in OJ EPO).

The Board finds that the disclosure of the logical scheme of the file managing method is clear and complete. The skilled person would clearly understand how and for what purpose the data are processed according to the invention.

In the context of database systems, terms like "file", "record", "field", "block" have a clear technical connotation, albeit on a broad conceptual level of definition. The expressions "subdividing an original file" and "coupling blocks" correspond to physical operations on stored data. The Board has no doubt that the skilled person would know how to implement such data operations in any concrete database system.

T 0506/08 (Online-Auktion / Volkswagen) of 16.8.2012 **Verfahren und Vorrichtung zum Durchführen einer elektronischen Auktion in einem Kommunikationsnetz**

Erfinderische Tätigkeit - verneint (nichttechnischer Zweck)

Anmeldenummer: 01982220.4

IPC-Klasse: G06F 17/60

Name des Anmelders: Volkswagen Aktiengesellschaft

Angeführte Entscheidungen: G 0006/95, G 0003/08, J 0014/87, J 0020/89, J 0004/94,
T 0072/95, T 0641/00, T 0258/03, T 1242/04, T 0164/06

<http://www.epo.org/law-practice/case-law-appeals/pdf/t080506du1.pdf>

Anspruch 1 gemäß Hauptantrag lautet:

"1. Verfahren zum Durchführen einer elektronischen Online-Auktion in einem virtuellen Auktionsraum auf einem Server und mit dem Server über ein Kommunikationsnetzwerk verbundene [sic], einem Bieter zugeordnete [sic] Bieterstationen zur Beschaffung eines von einem Käufer benötigten Produkts, wobei eine Anzahl von Bietern, die das benötigte Produkt bereitstellen können, ausgewählt und über den Zeitpunkt, den vorgesehenen zulässigen Zeitraum der Auktion und den Online-Auktionsraum der Auktion benachrichtigt werden,

wobei die elektronische Online-Auktion die folgenden Schritte aufweist:

Durchführen der Auktion zu dem angegebenen Zeitpunkt, wobei jeder Bieter über seine Bieterstation seine Gebote innerhalb einer vorgegebenen bieterseitigen Auktionsoberfläche während des zulässigen Zeitraums an den Server abgeben kann und jede Bieterstation in der

bieterseitigen Auktionsoberfläche mindestens das geringste Gebot der anderen Bieter in anonymisierter Form und die verbleibende Auktionszeit vom Server übermittelt bekommt,

zum Vergleich der Gebote der einzelnen Bieter online für jedes Gebot der Server eine Vergleichsgröße Gesamtkosten als Funktion des jeweiligen Preises und weiterer geeigneter Kriterien berechnet und in der serverseitigen Auktionsoberfläche des Servers darstellt,

die zulässige Zeitdauer der Auktion vor deren Ablauf seitens des Servers um ein Verlängerungsintervall verlängert und eine neue zulässige Zeitdauer bestimmt wird, und die verbleibende Auktionszeit basierend auf der neuen zulässigen Zeitdauer in der bieterseitigen Auktionsoberfläche dargestellt wird."

Im Licht des Artikels 52 (2) (3) EPÜ verlangt Artikel 56 EPÜ 1973 einen nicht-naheliegenderen technischen Beitrag, siehe die Entscheidung T 641/00-Zwei Identitäten/COMVIK, Leitsatz I (ABl. EPA 2003, 352). Naheliegende Beiträge und nicht-technische (insbesondere geschäftsbezogene) Beiträge können somit die Erfordernisse dieses Artikels nicht erfüllen.

2.1 Die Kammer stimmt mit der Prüfungsabteilung überein, ein Netzwerk von Universalrechnern als nächstkommenden Stand der Technik zu betrachten. Auch die Beschwerdeführerin definiert ihre Aufgabenstellung gegenüber einer herkömmlichen computerisierten Netzwerk-Auktion. Die Beschreibungseinleitung der Anmeldung geht von bekannten elektronischen Auktionen, insbesondere Internet-Auktionen, aus. Nachteilig sei, dass die verwendeten Auktionsformen noch keine optimalen Ergebnisse für den Veranstalter der Auktion hinsichtlich des Bieterverhaltens und der Auswahl des geeignetsten Bieters für ein benötigtes Produkt liefern würden (A2, Seite 2, Absatz 3 bis Seite 4, Absatz 1). Daher liege der Erfindung die Aufgabe zugrunde, ein verbessertes Auktionsverfahren zu schaffen (A2, Seite 4, Absatz 2).

Die Beschwerdebegründung präzisiert die Aufgabenstellung dahin, dass die zeitliche Ausgestaltung einer Online-Auktion optimiert werden solle.

2.2 Nach Auffassung der Beschwerdeführerin sei das Lösungsmerkmal, dass die zulässige Zeitdauer der Auktion vor deren Ablauf um ein Verlängerungsintervall verlängert und eine neue zulässige Zeitdauer bestimmt wird, ein Merkmal mit technischem Charakter, das im virtuellen Auktionsraum, d.h. auf dem Server, ausgeführt werde und nur bei einer Online-Auktion durchführbar sei; es existiere kein Vorbild bei realen Auktionen.

Die Verlängerungsmöglichkeit lasse die Bieter über das tatsächliche Ende der Auktion im Unklaren, so dass auf die Bieter ein Druck erzeugt werde, weitere Gebote bald abzugeben, anstatt die äußerste Endphase der Auktion abzuwarten. Auf diese Weise werde die herkömmliche Gebotshäufung zum Ende der Auktion vermieden und somit der Datenverkehr im Kommunikationsnetz zeitlich entzerrt und eine Überforderung der vernetzten Rechner vermieden.

erfinderische Tätigkeit

Nach Ansicht der Kammer kann eine Gebotsfrist sowohl bei einer elektronischen als auch bei einer Präsenzauktion verlängert werden, sobald der geschäftliche, psychologische oder administrative Wunsch des Veranstalters nach einer zeitlichen Verlängerungsoption

aufkommt und diese von den Teilnehmern als Geschäftsbedingung der Auktion akzeptiert wird. Diese möglicherweise innovative **Auktionsregel ist kein Ergebnis von in der Anmeldung offenbarten technischen Überlegungen**. Nachträglich (in der mündlichen Verhandlung) machte die Beschwerdeführerin geltend, dass ein offenes Auktionsende im Vergleich zu einem herkömmlichen, festgelegten Auktionsende den Netzdatenverkehr zeitlich entzerren und den Auktionsserver vor Belastungsspitzen bewahren würde. Nach dem Urteil der Kammer wird jedoch das zugrunde liegende technische Problem, nämlich der Leistungseingpass des Kommunikationsnetzes und der vernetzten Rechner, durch die neue Auktionsregel nicht behoben, sondern nur administrativ umgangen. Die **Umgehung eines technischen Problems macht aber einen geschäftlichen Verfahrensschritt noch nicht zu einem technischen Mittel** (T 258/03-Auktionsverfahren/HITACHI, Leitsatz II, ABl. EPA 2004, 575).

Dementsprechend argumentiert die Beschwerdeführerin, dass eine innovative Auktionsregel dadurch zum technischen Mittel erhoben werden solle, dass die Kammer Online-Auktionen generell zu einem modernen technischen Gebiet mit technischem Zweck erklären möge, so wie dies bei Verschlüsselungsverfahren geschehen sei, deren mathematische Schritte seitdem als technische Mittel mitberücksichtigt würden. Die Kammer folgt dieser Anregung nicht, denn der **Gesamtzweck der Auktion, den geschäftlich geeignetsten (günstigsten, lieferfähigsten etc) Bieter zu ermitteln, wird auch nicht dadurch technisch, dass die Bieter der Online-Auktion möglicherweise Zulieferer von Autoteilen sind**.

Der technische Gesamtzweck der Computer-Implementierung der Auktion besteht in deren Automatisierung und damit in ihrer schnelleren und einfacheren Handhabung. Dies ist jedoch der **übliche technische Zweck** jeder computer-gestützten Automatisierung und rechtfertigt daher keinen patentrechtlichen Sonderweg zugunsten einer bestimmten Art von Geschäftsmethoden (Auktionsverfahren). Der wirtschaftlich motivierte Wunsch, Geschäftsmethoden vor Nachahmern zu schützen, reicht als Zugangskriterium zum patentrechtlichen Schutz ebenfalls nicht aus.

Die Implementierung der Fristverlängerung mag technische Gesichtspunkte (Zeitmessung, -vergleich) umfassen, erfordert aber keinen erfinderischen Beitrag. Dies räumt implizit auch die Anmeldung ein, die Einzelheiten der Implementierung dem fachmännischen Leser überlässt. In der Anmeldung sind technische Gesichtspunkte nur angedeutet und als fachmännisches Wissen vorausgesetzt. Ausführlich und ausdrücklich dargestellt sind nur die Regeln zur Durchführung der angestrebten Auktion.

Insgesamt löst das beanspruchte Verfahren kein technisches Problem in technisch erfinderischer Weise und erfüllt somit nicht die Erfordernisse des Artikels 56 EPÜ 1973.

T 1218/08 (User controlled image for simulating physical movements/MACRI) of 13.7.2012

Processing system for interactive, personal and idiosyncratic control of images and devices

Inventive step - Yes (after amendments)

Application number: 00929667.4
IPC Class: G06F 3/00
Applicant name: Macri, Vincent J.

<http://www.epo.org/law-practice/case-law-appeals/pdf/t081218eu1.pdf>

This is a case where a **claim on a simulation has been allowed**.

Claim 1 of the appellant's main and sole request reads as follows:

"A method of providing at least one user with at least one user controllable image for simulating physical movements, said method comprising the steps of:

generating, storing and maintaining in a memory means (210) of a processing system apparatus (200) at least one user controllable image responsive to inputs from said at least one user, said user controllable image being constructed to perform movements which simulate physical movements instead of said at least one user performing corresponding actual physical movements;

receiving, at said processing system apparatus, said inputs (206) from said at least one user to control said at least one user controllable image;

sending outputs from said memory means, such that said constructed user controllable images performs said simulated movements on a display means (204); the method being characterized by:

said inputs being input controls;

maintaining a maintained record being a pre-stored summarization of past user controls together with pre-programmed controls for constructing image movements which maintained record is retained as an antecedent maintained record for modification by subsequent user input controls; and

synchronously augmenting the maintained record by replacing the maintained record by a new record being the maintained record which has been integrated with subsequent input controls input by said at least one user, thereby obtaining a maintained record that is idiosyncratic of the user."

Inventive Step

The differences between the subject-matter of claim 1 and the prior art are the features of maintaining a record of pre-stored summarization of past user controls together with pre-programmed controls and augmenting the maintained record by integrating subsequent user input controls into the maintained record.

The technical effects of these differences are that not only the movements of the user-controllable image are recorded but also the integration of pre-programmed controls, past user controls and subsequent user controls which led to the stored movements. This enables further refinements of the whole sequence of movements of the image by integrating further input controls, entered by the user during a further session, with the maintained record, using a variety of algorithms for calculating how the further input controls are integrated into the maintained record. For instance, a weighted average of the user input controls giving more importance to the last session may be considered.

The objective technical problem, based on these technical effects, can thus be seen as how to enable the user to refine a stored sequence of movements of the user-controllable image. In that respect, the board notes that the fact that the claimed invention may be used mainly for user training purposes, or for user amusement, does not preclude it from being technical and solving a technical problem.

Said technical problem is not addressed in the prior art since the systems disclosed in these documents do not provide the user with the ability to modify a sequence of movements of the user-controllable image once it has been generated.

Therefore, the skilled person, starting from the closest prior art, would not find any hint in these documents to maintain a record of integrated input controls, as defined in the characterizing part of claim 1. Although it may be considered as obvious for the skilled person to record the collection of the user input controls leading to a stored sequence of movements, recording the integration of these user input controls with the previously record of integrated user input controls is not derivable from the teaching of the prior art, or from the common general knowledge of the skilled person. In particular, the skilled person was not able to derive such features by analogy with the "save" function of text processing systems, as mentioned in the decision under appeal (see Grounds for the decision, section 3.5). In that respect, the board considers that such a save function maintains a record of the last version of a text document, but does not store the commands input by the user in the text processing system and, a fortiori, does not store the integration of all the user commands leading to the last version of the text document.

For these reasons the board judges that the subject-matter of claim 1 involves an inventive step (Article 56 EPC 1973), having regard to the prior-art documents on file.

T 0755/08 (PDA system/MOTOROLA) of 25.6.2012
Mobile personal digital assistant

Inventive step – yes

Application number: 01916975.4
IPC Class: G06F 15/02, G06F 17/30
Applicant name: Motorola Limited
Opponent name: Cross, Rupert Edward Blount

<http://www.epo.org/law-practice/case-law-appeals/pdf/t080755eu1.pdf>

The independent claims of the sole request read as follows:

Claim 1

A personal digital assistant system, having

a data recording means (8);

means for receiving, via a radio link between the data recording means and a mobile station, voice data input by a user of the mobile station after initiating an information finding process at the mobile station;

means (1) for assigning an identifying marker to the voice data, the identifying marker including a marker indicative of the location of the mobile station; and

means, associated with the data recording means (8), for retrieving information relevant to the identifying marker and the voice data from external data sources (10-14), the system being characterized by:

the identifying marker and the voice data are stored as a digital bookmark (9) associated with the mobile station or the user of the mobile station in the data recording means (8), and

the digital bookmark (9) is subsequently accessible by the mobile station or the user of the mobile station.

Inventive Step

The subject-matter of claim 1 differs from the disclosure of the closest prior art by the storage of voice data, together with the identifying marker, as a bookmark. This solves the **problem** of making it easier for the user of the mobile communication system to retrieve, at a later time, information of interest to the user at a particular location whilst the user is moving around.

There is no apparent reason why the skilled person would introduce said distinguishing feature in the system of the prior art. It does disclose an interactive voice response. There is

however no need, in the prior art, to store the voice data (for later retrieval), given that the voice data is merely used to interface with the telecommunications transceiver.

The subject-matter of claim 1 is therefore considered to involve an inventive step. For the same reason, the subject-matter of the independent claims 2 and 13 is also considered to involve an inventive step.

T 0531/09 (Checkpoint simulation/ACCENTURE) of 3.5.2012 **SECURITY CHECKPOINT SIMULATION**

Inventive step (no)

Application number: 03776901.5
IPC Class: G06F 17/00
Applicant name: Accenture Global Services Limited
Cited decisions: T 0208/84, T 0306/04, T 1227/05, T 1265/09

<http://www.epo.org/law-practice/case-law-appeals/pdf/t090531eu1.pdf>

This is another case on simulation (rejected).

According to the appellant the invention provided a simulation tool, which allowed specific security systems to be simulated. It allowed, for example, an assessment of machine and staff requirements, particularly when some change was envisaged, such as the introduction of special checks on liquids carried by air passengers. The skilled person was an industrial engineer, who was in a position analogous to that of the designer of a production line in a car manufacturing plant. With both the present invention and the production line, the engineer was concerned with arranging mutually dependent tasks in an efficient way. In the security checkpoint, the tasks involved screening people and their belongings, and each task was characterised by a delay; delay being a technical matter, at least when technical equipment was involved. The screening process involved such equipment in the forms of a walk-through metal detector and an x-ray device. The effect of individual delays on the overall time it takes to screen one person was not easy to assess, because the resolution of alarms raised during one screening task may need to wait for other tasks to be completed, and the invention provided a technical tool which allowed such effects to be determined.

The simulation, on a computer, was a technical simulation of a technical entity, in terms of specified variables and specified relations between them. It was not an abstract simulation, but a concrete one implemented in a specified manner.

Claim 1 according to the main request reads as follows.

1. A system for simulating a security checkpoint for screening passengers and their carry-ons, the system having:

Examples of recent 2012 Board of Appeals decisions related to Software Innovations

a. a security checkpoint model (200) representing time spent in the security checkpoint as a series of probabilistic events, and

b. a simulation application for simulating said security checkpoint model (200), said simulation application operating on a computer system,

whereby the improvement in the security checkpoint simulation system comprises:

said security checkpoint model (200) including separate sets of probabilistic events representing:

a security checkpoint entrance process (110) referring to a process in which a person enters a security checkpoint entrance (110),

a personal screen process (120) referring to a process in which one or more personal scans (120a) of the person who has entered the security checkpoint entrance (110) are carried out, the one or more personal scans (120a) being performed by a walk through metal detector,

an item screen process (130) referring to a process in which one or more item scans (130a) of the items belonging to the person who has entered the security checkpoint entrance (110) are carried out, the one or more item scans (130a) being performed by a scanning device, in particular, by an x-ray device, and

a defined relationship between the security checkpoint entrance (110), personal screen (120), item screen processes (130),

wherein the system is adapted to define one or more tasks in a security checkpoint,

each task having an associated output time value representing a delay caused by undertaking that task, and wherein the delay value for a task can be altered as necessary to represent changes in the tasks, and wherein the delay value is dynamically linked to other checkpoint conditions, and wherein the delay time value associated with a task is conditionally determined by the results of a previous task,

the system further being adapted to run a checkpoint simulation using security checkpoint data (321) and security checkpoint demand data (331) and to produce the simulation results (630);

and wherein

the system further comprises a display device (500) for graphically displaying the results of the security model (200) along with a graphical representation of events and positions in the security checkpoint (100).

The invention concerns the simulation of a security checkpoint. It could be the sort of familiar security checkpoint used at airports, but is not limited to that. The simulation is carried out by computer. According to claim 1 of the main request, tasks at the checkpoint are modeled as probabilistic events, each taking a certain time to perform, which may depend on what

happens in preceding tasks. Two of the tasks simulated involve technical equipment, namely a walk-through metal detector and (possibly) an x-ray device.

The appellant seeks to rely on T 1227/05, which concerned the simulation, on a computer, of an electronic circuit. The basis of the appellant's argument is that the organisation of a security checkpoint, at least in so far as it comprises technical scanning devices, is a technical problem, because it lies in the field of "industrial engineering". As a technical problem, and following T 1227/05, this contributes to inventive step.

In decision T 208/84 the board held (at point 5 of the reasons) that a **technical process is different from a mathematical method in that the technical process is carried out on a physical entity and provides, as its result, a certain change in that entity**. That definition of technical processes **seems to exclude simulations**, whose very purpose is to replace **physical entities by virtual ones**. T 1227/05 goes beyond the earlier decision in holding (at point 3.1.1 of the reasons) that the simulation of an adequately defined class of technical items could be a functional technical feature. In T 1265/09 Call center/IEX, not published in the OJ EPO, the Board (at point 1.13 of the reasons), referring to T 1227/05, left open the question whether it is a sufficient condition for a simulation to be patentable that the simulated items be technical, noting that the simulated system (in that case, call handling in a telephone call center) was not technical, so that the condition did not hold. The present Board finds itself in a similar situation and will proceed in the same way. For the reasons set out below, the Board finds that the condition is not fulfilled in the present case, and so there is no need to decide whether or not it is sufficient.

Simulation of a checkpoint is not inherently technical. It can be carried out by asking people to queue and undergo various checks. **The simulations of the metal detector and the x-ray device are the same as that of any other task at the checkpoint, whether they involve technical equipment or not**: a probabilistic delay, dependent on the results of earlier tasks, and variable to allow for changes in tasks. The idea is that each task at the checkpoint takes some time, but that later tasks may take more or less time depending on what happens in earlier tasks. The metal detector and x-ray device are not modeled any differently from any non-technical tasks, and it is not a technical delay which is modeled, but a non-technical: the queuing of people, rather than, say, the length of time the metal detector and x-ray device take to react to a stimulus. **The Board does not see how any technical delay of the detectors contributes to the delay of a person in the queue**. That might happen if, for example, a person had to stand in the scanner for any length of time, but that is not so with a walk-through detector. **The delay to the person results rather from standing in a queue and waiting for an operator to respond**. The same goes for the x-ray device. The Board, therefore, rejects the appellant's arguments that the simulations of the metal detector and of the x-ray device make a technical contribution to the invention. They would not count in favour of inventive step, even if T 1227/05 were followed. For the same reasons, consideration of T 306/04, also cited by the appellant, does not lead to any different conclusion.

The Board sees claim 1 according to the main request as **defining a simulation, on a computer, of a non-technical process, which happens to include some technical devices, and considers that the only feature that makes a contribution to inventive step is the fact that the simulation is performed on a computer**.

It is common ground that simulation on computers was well known, and that software for that purpose was commercially available at the priority date. The Board concludes that **to run this particular simulation on a computer would have been obvious.**

Thus, the main request cannot be allowed due to lack of inventive step (Article 56 EPC 1973).
