This document includes some recent decisions of the EPO in 2011 with regards to software related inventions and shows relevant extracts from the respective decisions.

T 1937/07 (Gaming machine/WMS GAMING) of 8.9.2011
Gaming machine having targeted run-time software authentification

Added subject-matter – no
Clarity – yes
Novelty – yes
Inventive step – yes

http://www.epo.org/law-practice/case-law-appeals/pdf/t071937eu1.pdf

The invention in this case relates to a gaming machine using a novel mechanism for authentication of executable code and graphics.

The essential difference between the claimed subject-matter and the disclosure of closest prior art lies in the features "determining if the predetermined amount of data is executable code or graphic data" and "if said next predetermined amount of data is graphic data, and a predetermined number of events have occurred, then authenticating said graphic data using said second digital signature and reading a next predetermined amount of data; and if said next predetermined amount of data is graphic data and said predetermined number of events have not occurred, then reading a next predetermined amount of data".

The technical effect of these features is that the graphic data (which is less critical than the executable code) is authenticated less frequently than the executable code. This solves the objective problem of making more time available for the authentication of the most critical part, i.e. the executable code. None of the documents cited in the search report discloses these features or renders them obvious.

The interesting aspect of this decision is that in the appealed decision, it is argued that the definition of different elements in a system with different verification priorities is a well-known measure in security, for example in a car, where there are different checking periods and priorities for the different elements. The board, however, considers that **it is not appropriate to compare the checking of the different elements of a car with the authentication of data in a gaming machine.** The problem being dealt with is quite different, in that the checking of car's components is part of the maintenance program for the car, the different components being subject to wear because of their daily use, whereas the **data in a gaming machine do not "wear out"** in the normal sense of the word. Checking different data at different frequencies based on different rates of wear would, therefore, make no sense and, even if, for the sake of argument, it were assumed that a person skilled in the field of gaming machines were aware of different checking intervals in automotive maintenance, he or she would not apply that teaching in the context of a gaming machine.

Peter Bittner – European Patent Attorney

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Application number: 04015615.0
IPC Class: G06F 1/00
Applicant name: WMS GAMING, INC.

T 0336/08 (Software-Authentifikation/BMW) of 28.7.2011
Verfahren zur Authentifikation von einer insbesondere in ein Steuergerät eines Kraftfahrzeugs ladbaren Softwarekomponente

Erfinderische Tätigkeit (alle Anträge) - nein

http://www.epo.org/law-practice/case-law-appeals/pdf/t080336du1.pdf

Die Erfindung betrifft ein Verfahren zur Authentifikation eines von einem Software-Bereitsteller bereitgestellten Softwarepaketes.

Der nächste Stand der Technik offenbart ein Verfahren zur Authentifikation eines Softwarepakets, welches eine in ein Endgerät ladbare Softwarekomponente enthält. Die Software wird von einem Händler bereitgestellt. Der Händler sendet die Software an eine übergeordnete Authentisierungsstelle, die die Softwarekomponente mit einem Authentifikationsanhang versieht (und somit eine "authentisierende Maßnahme" durchführt), welcher wiederum in dem Endgerät überprüft wird.

Die Erfindung unterscheidet sich davon dadurch:

a) dass der Händler (als Software-Bereitsteller) die Software mit einem ersten Authentifikationsanhang versieht,

b) der vom Trust Center (als übergeordnete Authentisierungsstelle) geprüft wird, und

c) dass nach erfolgreicher Prüfung die Software mit dem genannten Authentifikationsanhang versehen wird, der als "zweiter" nun "an Stelle des" ersten tritt.

Im SdT ist nur die Prüfung der Signatur des Trust Centers (der "zweite" Authentifikationsanhang) vorgesehen und die genannten Unterschiede ändern diese Situation nicht (vgl. insbesondere Merkmal c). Nach Ansicht der Kammer lösen die Unterschiede a-c somit die Aufgabe, die Sicherheit des Verfahrens im SdT zu steigern, ohne dabei die Funktion des Endgerät zu verändern.

Das Trust Center ist eine von den Händlern im Allgemeinen administrativ und räumlich verschiedene Einrichtung. Der SdT offenbart, dass der Händler die zu signierende Software an das Trust Center "sendet", lässt aber die Natur dieser Übertragung offen. Es erscheint der Kammer unter diesen Umständen aus fachmännischer Sicht offensichtlich, für die Übertragung ein öffentliches Datennetz - bspw. das Internet - zu wählen.

Der SdT lässt offen, was genau geschieht, bevor und damit das Trust Center die bereitgestellte Software signieren kann. Es ist aber nach Ansicht der Kammer für den Fachmann

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offensichtlich - wie auch auf dem Gebiet der Kryptografie wohlbekannt - dass die Zertifizierungsstelle die Vertrauenswürdigkeit des Zertifizierungsauftrags und der zu zertifizierenden Informationen sicherstellen muss. In praxi geschieht das je nach Umständen und Sicherheits-anforderungen auf unterschiedliche Weise.

Es ist allgemein bekannt, dass Daten, die über das Internet (oder andere öffentliche Datennetze) übertragen werden, manipuliert werden können und es ist fachüblich, diesem Problem zum Beispiel dadurch zu begegnen, dass die Daten vom Sender kryptografisch signiert werden .

Somit ist es nach Ansicht der Kammer **naheliegend**, dass der Händler die zu zertifizierende Software vor Übertragung an das Trust Center mit einer digitalen Signatur versieht, die vom Trust Center geprüft wird. Eine solche Signatur stellt einen (ersten) Authentifizierungsanhang gemäß Anspruch dar.

Ob die Signatur des Händlers dabei an das Endgerät übertragen und dort ignoriert wird, oder aber ob es vom Trust Center entfernt wird, ist dabei unerheblich. Die **Entscheidung, das eine oder das andere zu tun, wird der Fachmann durch Abwägung von Aufwand und Nutzen (etwa Programmierungsaufwand vs. Speicherbedarf im Endgerät) auf naheliegende Weise treffen**. Die Kammer kommt daher zu dem Ergebnis, dass Anspruch 1 des Hauptantrags nicht erfinderisch ist.

Name des Anmelders: Bayerische Motoren Werke Aktiengesellschaft
Anmeldenummer: 04740198.9
IPC-Klasse: G06F 1/00

T 0311/08 (Reassigning data objects/SAP) of 21.7.2011
A method of assigning objects to processing units

Original disclosure - yes
Clarity - yes
Inventive step – yes

The invention relate to a method of assigning a given set of data objects to processing units of a cluster of processing units. The data objects are tables, arrays, lists or trees and each one of the processing units is a blade server. All blade servers have the same storage capacity.

The closest prior art disclosed a different resource distribution optimization algorithm than used by the invention and further did not disclose that the processing units are blade servers and the data objects are tables, arrays, lists or trees. None of the available documents disclose the special use of the First Fit Decreasing bin packing algorithm (FFD) for the claimed purpose. However, the FFD algorithm itself is the well-known.

The examining division concluded: "Choosing a specific resource distribution optimization algorithm over any other cannot be considered inventive" and "... the features in the

independent claims seem to define a <u>non-technical solution for solving an NP-hard problem</u>. This solution <u>cannot contribute to inventive step according to Article 56 EPC as the features are of a purely mathematical and theoretical nature</u> (see e.g. D2), thus falling under the exclusion of Article 52(2)(a) EPC."

The board considered that the present **case does not present a theoretical solution to a theoretical problem** (NP-hardness), **but rather a concrete technical solution to the technical problem of smoothing the distribution of data objects on a set of blade servers.** This is done in **_an unusual way_** **by using a _well-known algorithm_ (FFD)** **_from the different field_** of bin packing with a specially adapted input value (the virtually reduced storage capacity or first threshold).

This solution is not suggested by any of the documents on file. Therefore, the claimed invention is inventive.

Applicant name: SAP AG
Application number: 03018101.0
IPC Class: G06F 9/50

T 1579/07 (Marketing campaign/SAP) of 9.6.2011
Creating and monitoring automated interaction sequences using a graphical user interface

Inventive step - main and auxiliary requests (no)

http://www.epo.org/law-practice/case-law-appeals/pdf/t071579eu1.pdf

The invention relates to the creation and execution of a marketing campaign aided by a dedicated graphical user interface. A marketing campaign is directed at a specific "target group" of customers and defined as an "inter action sequence" (or an "interaction string") comprising actions to be executed with respect to the target group (e.g. initiate a telephone call or send an email); responses to the actions are automatically processed. The graphical user interface is organized in multiple windows: One of them, the so-called "build" window, depicts a graphical representation of the interaction sequences under development in the form of a flow chart. The other windows enable the user to define various parameters of the interaction sequences (the "filter", "launch", "action" and "template" windows) or to obtain feedback on the development process (the "alert" and "details" windows).

The board interprets the invention as providing a visual programming environment dedicated to the particular domain of marketing campaigns.

<u>Marketing Campaign</u>

The invention specified in claim 1 consists of a <u>mixture of technical and non-technical features</u>. According to established jurisprudence of the Boards of Appeal, the presence of an

inventive step can only be supported by features which contribute to technical character (T 641/00, headnote 1).

In the board's judgment, a marketing campaign in itself is a business undertaking, and so are design and execution of a marketing campaign. Marketing campaigns as considered by the application are defined by various parameters, such as:

- which "target group" of customers to address, be it predefined or "re-segmented" based on data gathered during the campaign;

- which "actions" to take when interacting with customers and their order (e.g. first send a letter, then an email reminder);

- which items to use during actions (i.e. "campaign elements" or "campaign element types" such as marketing material or feedback forms); and

- which questions to ask and which answers to anticipate (i.e. "attributes" of interactions), and how to react to individual responses.

 In the board's judgment, none of these features contributes to the technical character of the invention because and insofar as they concern the design of a marketing campaign. Its execution may, obviously, use technical means such as a letter or a telephone, **but as long as these are common-place items used in a conventional manner they are insufficient to establish an inventive step**.

The other features of the claims according to both requests relate to automation on the one hand and a graphical user interface on the other hand. The board is of the opinion that such features may, at least in some contexts, contribute to the technical character of an invention and contribute to an inventive step. However, which of the individual claimed features actually does so contribute and in what respect can be left open in view of the following analysis of the claimed invention in view of the prior art.

Applicant name: SAP AG
Application number: 03775640.0
IPC Class: G06F 9/40
Cited decisions: T 0641/00

T 0084/08 (In-line image insertion in mobile device/RESEARCH IN MOTION) of 28.4.2011
Mobile device with integrated camera operations

Keywords:　　**Inventive step - yes**

http://www.epo.org/law-practice/case-law-appeals/pdf/t080084eu1.pdf

The invention is directed to a mobile device, comprising:
a processor and associated memory, the processor being configured to run an active application and a camera application, the active application being configured to open an active document;
a camera for capturing images and providing image data for said images to said processor via said camera application; and
a camera activator responsive to user activation; wherein the mobile device further comprises a camera listener interface comprising a test module adapted to test whether said active document is open in an editable mode in response to a first signal from said camera activator, and wherein said camera listener interface is further adapted to:
cause the processor to switch from said active application to said camera application if said active document is in the editable mode, and cause the camera to capture the image data and the processor to resume said active application and to pass to said active application said image data for insertion into said active document in response to a second signal from said camera activator.

In order to incorporate a picture in a text document which is being currently edited on the display, the user of a prior art standard device has to perform manually, i.e. by activating appropriate command buttons on the device, the following sequence of steps:
- exit the active application containing the edited document,
- take a picture with the camera,
- store the picture in a memory,
- re-enter the application editing the document,
- retrieve the stored picture from the memory,

- attach or insert the picture into the edited document.

The claimed mobile device differs from the standard device by the provision of a camera listener interface which:
- comprises a test module adapted to test whether an active document, open in an active application running on the device's processor, is open in an editable mode, in response to a first signal from the device's camera activator, and
- is adapted:
- to cause the processor to switch from the active application to the device's camera application if said active document is in the editable mode, and
- to cause the camera to capture the image data and the processor to resume the active application and to pass the image data to the active application for insertion into the active document in response to a second signal from the camera activator.

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The <u>technical effects</u> of the combination of these distinguishing features are <u>that a user wishing to insert an image into a document has just to press the camera activator button</u>; the device then automatically checks if the document is open in an editable mode, and <u>automatically captures the picture only if the document is open in an editable mode</u>, thereby <u>avoiding capturing a picture for a document which cannot accept it</u>.

The <u>objective technical problem</u> may thus be formulated as <u>how to automatically insert the output of the mobile device camera smoothly,</u> i.e. in a simpler and more user-friendly manner, into an active document open in an active application.

The <u>solution</u> to this technical problem **is not provided by a mere automation of the steps performed by the user** of the standard device, as described in paragraph 2.1.2 above. The skilled person implementing a mere automation would design the device to automatically perform the steps sequentially in response to the actuation of a camera activator or button. He <u>would in no way consider designing a camera activator</u> adapted to issue a first and a second signal, the first signal triggering a test of the active document and the second signal triggering, depending on the result of the test, the capture of the image and its insertion into the document. On this basis the board concurs with the appellant's submissions that the subject-matter of the claims **represents more than mere automation of the standard device and method**.

Applicant name: RESEARCH IN MOTION LIMITED
Application number: 04251088.3
IPC Class: G06F 3/033