

# THE PATENTABILITY OF GUIs: *Moving Goalposts at the EPO*

The patentability of graphical user interfaces (GUIs) has long been a point of contention at the EPO. Although aspects of GUI design involving the ease of use of a GUI may be based on technical considerations, other aspects may be non-technical. In particular, these aspects may be based on aesthetic considerations or may merely be designed

to convey information to a user. Evidently, such aspects may fall foul of Art. 52(2)(c) and (d) EPC (presentations of information and programs for computers respectively).

*Here we report on a flicker of hope for GUIs that briefly appeared in the 2012 Guidelines for Examination, but was quietly snuffed out in the September 2013 revision.*

## History of EPO Decisions relating to GUIs

To understand how the EPO's position has evolved, we present a brief and selective historical review the decisions of the Boards of Appeal in the field of GUIs.

One of the earliest GUI decisions before the Boards of Appeal was decision T 769/92 SOHEI - *General purpose management system*. In this decision, the Board held that a "transfer slip" textual user interface required "technical considerations" of the person implementing the claimed invention and was "neither only presentation of information nor only computer programs (or programming) as such", because "the presentation, in the claimed invention, of said "interface" in the form of said "transfer slip" is not governed only by the particular meaning of each of the information items displayed".

In T333/95, the subject patent application concerned a method of creating an animation by moving a graphics object around a graphical display under control of a pointing device (e.g. a mouse). The movement operations were then recorded in a command list for playback at a later time. A key aspect of the invention is that the graphics object itself is made the cursor. This feature was deemed to have

technical character and to have the effect of "decreas[ing] both the necessary mental and physical effort of the operator, since the direct movement of the graphics object, obviously, does not need the concentration necessary when the operation must be performed by means of a normal cursor". From this we can clearly see the inception of the idea that **lowering the cognitive burden** of a user has been considered by the EPO to be a technical effect.

The Board in T244/00 held that "the arrangement of menu items on the screen, if it is not exceptionally determined by technical considerations, is not a technical aspect of a menu-driven control system". At that time, the EPO appeared to consider the graphical design of user interfaces, at least within the narrower field of menu-based GUIs, to be **non-technical**. Furthermore, from the finding in T125/04 that "input requires compatibility with the predetermined protocol of a machine, whereas the output may be largely dictated by the more or less subjective preferences of the user", we can see that **input** and **interaction** features of GUIs have been looked upon more favourably or, at least, examined more carefully than **output** aspects.

T49/04 represented a positive development. In that case language parsing rules were used to break text into lines for display and the Board said: "The claimed device thus aims at enabling the user to read a natural language text faster" and "The present board differs at this point from the conclusions drawn in T125/04. Firstly, the board concurs with the view expressed in T643/00 that **technical aspects cannot be ruled out** in the design and use of a graphic interface. Furthermore, the board finds that a feature which relates to the manner how the "cognitive content", such as images, is conveyed to the user **can very well be considered as contributing to a technical solution to a technical problem**. This would in particular be the case when ... this particular manner of conveying the information enables the user to perform their task more efficiently..."

From the above decisions we can see there is a strong tendency to consider the design of GUIs to be non-technical but in some instances, where user interaction is involved, features of GUIs have been deemed to possess technical character.

Decision T928/03, decided in June 2006, is an interesting example in which some features of graphical indicators **output** to

a user on a screen were deemed to have technical character. The applicant in question was Konami, a Japanese video games designer with a successful series of football games. Konami sought a patent for several features of guide marks highlighting regions of interest in football and similar games, including:

1. A guide mark around a player character in possession of the “game medium” (e.g. ball) that is controlled by the user and which is also large enough that it is not obscured by other player characters on the screen
2. A guide mark around another player character to which the game medium may be passed
3. A *guide mark at the edge of the screen* nearest to a player character outside the field of view of the display *to which the ball may be passed*.



All these features were deemed to solve problems contributing to the technical function of the display (although features 1 and 2 were not considered to be inventive). In particular, feature 3 was deemed to resolve the *conflict between the technical requirements to display an image at a large scale and show an entire area of interest*.

## The 2012 Guidelines

With the trend for computing device manufacturers to design devices with more and more intuitive user interfaces, and with the large amount of case law on the subject, the EPO sought to clarify its position regarding GUIs by the introduction of Guideline G-II 3.7.1 in the 2012 Guidelines for Examination. This Guideline provided:

*Features concerning the graphic design of user interfaces do not have a technical effect, because their design is not based on technical considerations, but on general intellectual considerations as to which design is particularly appealing to a user. For example, the layout or arrangement of items on the screen is usually not a technical aspect of a graphical user interface. Also, the information contained in a message displayed on a device is not technical even if it prompts the user to perform some specific action on the device.*

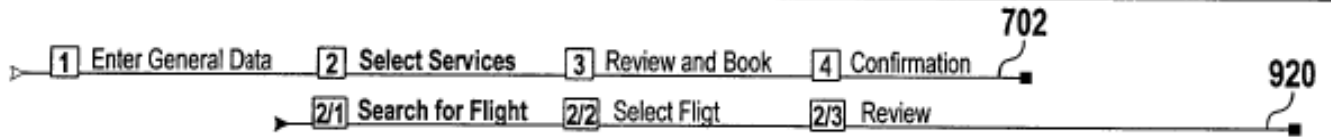
*However, when these features are combined with interaction steps or means or when they concern technical information (e.g. internal machine states), the examiner must check whether they are necessary for achieving a particular technical effect, for example by **enhancing the precision of an input device** or by **lowering the cognitive burden of a user when performing certain computer interactions**. **The technical effect achieved might be a more efficient man-machine interface.***

T928/03 does not appear to have been considered when drafting G-II 3.7.1 of 2012, perhaps because the particular facts of the case were not regarded as generally applicable to the vast majority of GUIs. For those applications with similar facts to T928/03, one would hope that the Examining Division would give that decision more weight.

The 2012 Guideline also presented examples of possible technical effects achieved by GUIs. For a year following this Guideline, we were puzzled, therefore, to receive objections that dismissed the notion that **reducing the cognitive burden** on a user can contribute to technical character. This was at odds with the Guideline. The reason such objections are being raised lies in a more recent decision, T1741/08, which was decided after the introduction of the 2012 Guidelines.

The subject patent application of T1741/08 concerned a method of entering data in a data processing system using a GUI comprising two horizontally aligned linear sequences of icons, which the appellant, SAP AG, argued achieved the technical effect of lowering the cognitive burden of the user.

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By clicking on the icon [2], the second row of icons [2/1], [2/2] and [2/3] appears. It is not immediately apparent why the elements of the second row must be aligned to the elements of the upper row, but one can envisage this might contribute to reducing the cognitive burden on the user.

It was held that “*the mere fact that a particular choice of information to display or of how to display it... “lowers the cognitive burden” of the user is not sufficient to demonstrate that the choice has a technical effect*”. Thus, it would appear that “*lowering the cognitive burden of the user*” is not considered, of itself, to be a technical effect. The Board explicitly declined to follow T 49/04, but considered itself to be consistent with other EPO case law.

Is this finding at odds with the 2012 Guidelines? The applicant thought so, and asked for a referral to the Enlarged Board of Appeal on this basis. However, that request was denied, as the Guidelines are not in any event binding on appeal boards.

With regard to the 2012 Guideline, the Board conceded that the word “*well*” in the following sentence might sometimes “*mislead applicants due to its optimistic tone*”:

*The arrangement or manner of presentation, as distinct from the information content, may well constitute a patentable technical feature (emphasis added)*

Regrettably, this wildly understates the case and does not square with the subsequent observation by the Board that it may be appropriate to replace the word “*well*” with “*exceptionally*”.

The Board made no indication that its decision might be inconsistent with G-II 3.7.1. Initially, we felt that this suggested the Board had interpreted “*lowering the cognitive burden of a user*” to only be a

technical effect “*when performing certain computer interactions*” and the particular interactions involved in T1741/08 had not been considered to qualify as one of these interactions. However, this interpretation is perhaps too subtle, and the EPO has just released a new set of Guidelines, with effect from September 2013, that has some notable changes to G-II 3.7.1. These changes suggest the EPO agrees that the previous Guideline was misleading.

## The September 2013 Guidelines

In the September 2013 Guidelines, in addition to adding to G-II 3.7.1 that “*colour, shape and size...of items on the screen is usually not a technical aspect of [GUIs]*”, the example technical effect of “*lowering the cognitive burden of a user when performing certain computer interactions*” has been **deleted**.

It therefore seems certain that an applicant relying on “*lowering the cognitive burden*” as a sole technical effect is doomed to face refusal. G-II 3.7.1 is now clear with regard to its exemplary technical effects of GUIs. Any inconsistency between Decisions T928/03 and T1741/08 can perhaps be dismissed as fact-specific or will require a reference to the Enlarged Board of Appeal to resolve.

### Comment

It is small consolation for a potential applicant that G-II 3.7.1 is no longer misleading. The goalposts have moved as close together as they have ever been, and this at a time when user interface hardware and software serve as key factors in consumer choice of electronic devices. There is surely great ingenuity ahead in the use of the limited “*real estate*” of a device screen? What can an applicant do to strengthen his (or her) position? He should seek to emphasise technical information (e.g. internal machine states), and the interaction steps or means by which the user interacts with the computer. He should then consider the technical effect achieved, stressing technical advantages of input as opposed to output if appropriate