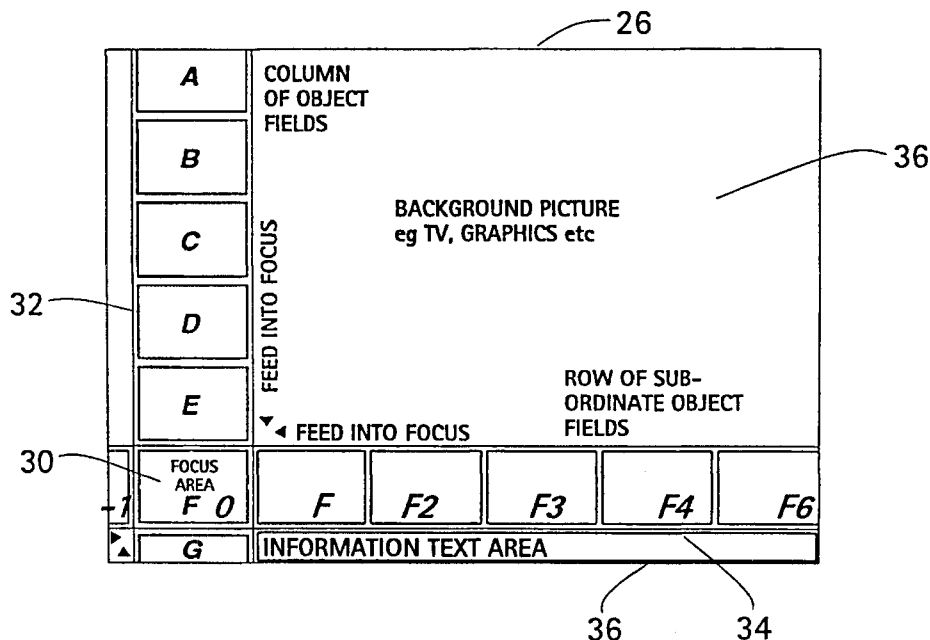




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(54) Title: METHOD AND AN ARRANGEMENT FOR SCROLLABLE CROSS POINT NAVIGATION IN A USER INTERFACE



## (57) Abstract

The invention relates to a method and an arrangement (10) for scrollable cross point navigation on a user interface (26) in order to select a feature by combining object fields. Bars (32, 34), where at least one of them is scrollable, have object fields which overlap and combine each other when scrolled or put to a visible focus area (30) in the user interface at the cross point of the bars (32, 34). Object fields in the focus area (30) select a feature connected to a combination of fields, which is chosen by a confirmation action.

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## **Method and an arrangement for scrollable cross point navigation in a user interface**

### Technical field

5 The present invention pertains to a method and an arrangement for scrollable cross point navigation in a user interface in order to select a feature by combining two object fields each belonging to each one bar.

### Prior art

10 Traditional selection of services or adjustment of, for example, TV, set-top box, domestic appliances settings, and other like device settings has the disadvantage of covering an entire display area and requiring a lot of key-presses. This constitutes a major problem for most users of such equipment, but especially for disabled persons and those who are unfamiliar with or unsecured in setting electronic devices, or in reading manuals.

15 Another problem with today device settings, relating to manuals, is the language used in the manuals. It is often written in a technical logic language easy to understand for a technician, but perhaps hard to grasp for others.

20 Furthermore, some devices sold do not have a manual teaching settings in a language of a buyer of the same, or in a language of a non-native purchaser. Still further, it is a well known fact that remote control devices, such as for the setting of TV-sets, are crowded with keys, and that the design of key pads is different between different manufactures of like devices.

Hence, it is believed that an easy interface for setting of appliances is needed to overcome drawbacks and problems related to today appliance control interfaces.

### Summary of the described invention

25 An aspect of the present invention is to provide a method and an arrangement that brings a solution to above problems and others related to the setting of appliances controlled by remote control devices such as wireless and pointing devices or even voice control devices. Suitable appliances to be controlled are amongst others, e.g. television sets, satellite receivers, set-top boxes, computers, household equipment,  
30 telephones, mobile phones, personal digital assistants, CD-players, stereo equipment etc, especially appliances provided with user interfaces such as display screens for interaction with remote control and other key pad devices.

In order to present a solution to said problems the present invention sets forth a method for scrollable cross point navigation on a user interface in order to select a feature by combining two object fields. Two bars are provided, where at least one of them is scrollable, each of them having at least one object field which overlap and  
5 combine each other when scrolled to a visible focus area in the user interface at the cross point of the bars. Thus, it is accomplished that object fields in the focus area select a feature connected to the combination of fields when chosen by a confirmation action.

In one embodiment of the invention, one feature function is defined as a sub  
10 cross point navigation method, i.e., another level of scrollable cross point navigation.

Another embodiment of the invention provides object fields that are visible, but where some may be invisible object fields in the bars, which are connected in a cyclic manner to each other.

Scrolling is accomplished by feeding or “zapping” up and down or left or right  
15 in order to move objects to the focus.

In still another embodiment an information field is displayed in the user interface comprising text describing the feature connected to the focus area.

In yet another embodiment the focus area is marked.

Yet another embodiment comprises that the bars are small thus making an  
20 image display on the screen possible even when all bars are visible. Also, the bars may be visibly transparent.

Preferably, in one embodiment, features in bar object fields are displayed in sequence in object fields in one of the bars when focus is confirmed.

An embodiment comprises that confirmation and scroll action is accomplished  
25 by actuating one of five function commands left, right, up, down, and OK or like confirmation.

In a further embodiment the focus area enables to show (bring about) all functions for any apparatus guided by cross point navigation through the function commands.

30 Furthermore, the present invention sets forth an arrangement for scrolled cross point navigation on a user interface in order to select a feature by combining two object fields, whereby it comprises:

two bars, where at least one of them is scrollable, each of them having at least one object field which overlap and combine each other when scrolled to a visible focus  
35 area in the user interface at the cross point of the bars; and

whereby object field means are used to select a feature connected to the combination of object fields in the focus area, which is chosen by confirmation and scrolling means.

5 One embodiment of the invention comprises that said object field means is an interaction interpreter between said input device and a graphic generator which is connected to a graphic library for creating the bars and by them comprised function features or finite features.

10 Another embodiment comprises that said object field means further include a content database connected to said graphic generator and a user interface objects database connected to said library and to said generator.

One embodiment includes that the arrangement according to the present invention is comprised in a set-top box.

The arrangement of the present invention is also able to accomplish embodiments of said method as claimed in the attached dependent arrangement claims.

#### 15 Brief description of the drawings

For a more complete understanding of the present invention and for further aspects and advantages thereof, reference may now be had to the following description taken in conjunction with the accompanying drawings, in which:

20 Fig. 1 is a schematic block diagram illustrating one embodiment of means used to accomplish an arrangement in accordance with the present invention; and

Fig. 2a and 2b schematically illustrating a user interface in accordance with the present invention.

#### Detailed description of preferred embodiments

25 The present invention relates to a method and an arrangement for scrollable cross point navigation on a user interface in order to select a feature comprised in a combination of two object fields. A cross point navigation ensures a creation of a system that allows a user of appliances such as digital TV set-top boxes to navigate and select different types of services in an easy way without disturbing the actual viewing experience of the user. It is also designed to assist the user in the forthcoming  
30 expansion of both TV-channels and digital TV Services. There is a clear need for a system allowing cross point navigation as described.

Henceforth describing embodiments of the present invention by way of the setting control of a digital TV set-top box, the present invention is not restricted to such appliances. All kind of appliances with key pads, wireless or other remote control

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