[0012] An improved method, system, apparatus or computer software which monitored and automatically improved the legibility or discernability or "viewability" of display elements in an MLD system and/or assisted users in assigning display elements to layers or in transferring display elements between layers of an MLD system would be of advantage. It would be preferable to have hardware or software code or a set of algorithmic instructions programmed into a computer system or other types of programmable logic devices, which when run, address the issues discussed above.

[0013] All references, including any patents or patent applications cited in this specification are hereby incorporated by reference. No admission is made that any reference constitutes prior art. The discussion of the references states what their authors assert, and the applicants reserve the right to challenge the accuracy and pertinency of the cited documents. It will be clearly understood that, although a number of prior art publications are referred to herein, this reference does not constitute an admission that any of these documents form part of the common general knowledge in the art, in New Zealand or in any other country.

[0014] It is acknowledged that the term 'comprise' may, under varying jurisdictions, be attributed with either an exclusive or an inclusive meaning. For the purpose of this specification, and unless otherwise noted, the term 'comprise' shall have an inclusive meaning—i.e. that it will be taken to mean an inclusion of not only the listed components it directly references, but also other non-specified components or elements. This rationale will also be used when the term 'comprised' or 'comprising' is used in relation to one or more steps in a method or process.

[0015] It is therefore an object of the present invention to provide a display controller or display control method or display layer transfer method which will go at least some way towards addressing the foregoing problems or which will at least provide the public or industry with a useful choice.

[0016] Further aspects and advantages of the present invention will become apparent from the ensuing description which is given by way of example only.

DISCLOSURE OF INVENTION

[0017] Accordingly, in a first aspect the invention consists in a display control method for a multi-layer display system including at least two overlapping display layers, the display control method comprising the steps of:

[0018] i) detecting that the position of a first display element to be displayed on a first display layer overlaps or will potentially overlap with the position of a second display element on a different display layer,

[0019] ii) adjusting either the position of the first and/or second display element and/or at least one visual property of at least the overlapping or potentially overlapping portion of the first and/or second display element, and

[0020] iii) displaying the first and second display elements on their respective display layers in their adjusted position or positions or with their adjusted visual property or properties in order to improve the ability of a user of the multi-layer display system to view the overlapping or potentially overlapping portion of the first and/or second display element.

[0021] Preferably, the step of adjusting is carried out manually by a user.

[0022] Alternatively, the step of adjusting is carried out automatically.

[0023] Preferably, the step of automatically adjusting comprises:

[0024] determining a level of interference as experienced by a user between the first and second display elements, and

[0025] moving the first and/or second display element within their respective display layers, to a new position or positions which reduces the determined level, and/or

[0026] changing at least one visual characteristic of the first and/or second display element.

[0027] Preferably, the step of adjusting the position of a first and/or second display element comprises moving the first and/or second display element within their respective display layers, so that there will be no overlap or reduced overlap between the first and second display elements.

[0028] Preferably, the method also includes the step of determining whether the first or second display element is currently active and the step of adjusting is carried out dependent upon this determination.

[0029] Preferably, the first display layer is nearer to the front of the multi-layer display system than the second display layer and

[0030] if the first display element is active and the second display element is not active, then at least one visual property of at least the overlapping or potentially overlapping portion of the second display element is adjusted, or

[0031] if the second display element is active and the first display element is not active, then at least one visual property of at least the overlapping or potentially overlapping portion of the first display element is adjusted.

[0032] Preferably, the step of adjusting comprises adjusting at least one of colour, saturation, brightness or transparency of at least the overlapping or potentially overlapping portion of the first and/or second display element or the contrast between overlapping or potentially overlapping portions of the first and second display elements.

[0033] Preferably, the step of adjusting comprises combining at least one visual property of the overlapping or potentially overlapping portions of the first and second display elements and the resultant combined visual property is applied to the overlapping portion of the active display element while at least one visual property of the other display element is adjusted to minimise its effect on the image provided by the active display element.

[0034] Alternatively, the step of adjusting comprises adjusting at least one visual property of at least the overlapping portion of both the first and second display elements.