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## EXTENDING CUSTOM VIRTUAL CONTROL PANEL COMMANDS

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## Extending Custom Virtual Control Panel commands

**Abstract:** The number of available VESA display monitor commands is extended by creating sub-Virtual Control panel (VCP) codes using 1 byte of the data field.

This disclosure relates to the field of electronic monitors.

A technique is disclosed that uses indexing to extend the number of display monitor commands creating sub-Virtual Control panel (VCP) codes.

A virtual control panel (VCP) code is a binary code that represents a single command entity in the display. Only 32 commands are allowed as custom commands for a display monitor by the VESA standard. Unfortunately, this is a very small number for all the advanced features in modern display monitors. Due to this limitation, only a maximum of 32 commands can be exposed by a display monitor for control by a software application. As a result, this limits the features list. In many cases, only the most important and critical features of the monitor are exposed as custom commands to be controlled by software applications.

According to the present disclosure, the number of custom commands allowed for a display monitor is extended. This is done by replacing part of the data with a sub-command instead.

Normally there is a command followed by data. A command is a 1-byte value with 2-byte data. However, most commands only require data that can be accommodated in 1 byte. The disclosed technique instead uses the first byte of the data as a sub-command, and the second byte is used for the actual data.

The disclosed technique advantageously enables each command to have up to 128 sub-commands. As a result, the total number of custom commands can be increased from 32 to 4096. Using this technique, all the features of a display monitor can be exposed for control by software applications.

***Disclosed by Syed S. Azam, Tim Guynes, and Santosh Prabhakaran, HP Inc.***