Title: PRODUCTION OF COLOR COATINGS GRADIENTS, APPLICATION METHODS AND USES THEREFOR

Abstract: This invention pertains to the production of color coatings gradients to be used for color composition customization and for visually displaying alphanumeric data/information on 2D and 3D surfaces. This invention integrates gradient specific programmable computer digital processes to function as internal editors, manipulate information and present the operator with multiple options and production overrides. This invention will make data analysis more interactive by utilizing existing external software applications as editors and expanding the process of visual communications for multiple purposes. While the production of color coatings gradients can be performed manually, it can also be combined with a programmable computer.
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AMENDED CLAIMS
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1. A method for converting colour coated gradient related information, the said information loaded into a programmable computer from a selectable source for purposes of manipulations through computer software information specific selectable editors, the said method comprising steps:
   a) selection;
   b) security checking;
   c) manipulation using computer software digital processes;
   d) conversion and verification of integrity,
   e) comparison against another selected layer;
   f) process of layer visualization and manipulation using computer software digital processes;
   g) conversion and verification of layer integrity; and
   h) saving.

2. A method according to claim 1, consists of selecting a colour coatings gradient related information where a surface gradient and a physical gradient are comprised of colours, where the said colours have colour space values and are markup instructions containing alphanumeric expression content,

3. A method according to claim 1, consists of selecting a colour coatings gradient related information where a surface gradient and a physical gradient are comprised of alphanumeric expressions where the said expressions are markup instructions containing colour space value content.

4. A method according to claim 1, consists of allowing an operator to interact through input means.
5. A method according to claim 1, consists of programmable computer sending a signal to another digital process operating elsewhere.

6. A method according to claim 1, consists of sending signal to blender apparatus.

7. A method according to claim 1, consists of sending signal to coating applicator.

8. A method according to claim 1, where said process can be overridden by an operator functioning in manual mode.

9. A method according to claim 1, where said process can be optimized by a programmable computer.

10. A method according to claim 1, where digital layer manipulation includes physical layer characteristics which are incorporated in digital mode, so that physical layer produced is a colour coatings gradient displaying the said characteristics.

11. A method for continuously producing colour coated gradient layers with a blender apparatus, where the said method integrally comprises of;
   a) controlling coatings blender apparatus;
   b) controlling the coatings applicator;
   c) controlling applicator movement;
   d) controlling internal monitoring parameters;
   e) controlling external monitoring parameters;
   f) controlling calibration; and
   g) controlling gradient information digital processes.

12. A method according to claim 11, said method sequentially compares gradients to determine a gradient's characteristics by analysing selected gradient against gradient populations and their definitions,
13. A method according to claim 11, said method allowing an operator to deviate from a defined gradient by implementing gradient manipulation digital process.

14. A method according to claim 11, for calibrating components, performed by a programmable computer, involved in production of colour coating gradient layers, said method comprising steps:
   a) determining the components needed to produce specific gradients;
   b) determining calibration differences between components; and
   c) using a common calibration framework.

15. A method according to claim 11, where calibration is a digital process performed by a programmable computer and added components are recognized with a plug-and-play method.

16. A method according to claim 11, for continuously producing colour coatings gradients where production is optimized by a programmable computer highest level digital processes monitoring change in delta layers, said process comprising steps:
   a) determining a position of, and setting up equipment for, monitoring delta sequences;
   b) monitoring blender component assembly sequences;
   c) monitoring blender apparatus related signal sequences;
   d) monitoring coating applicator configurations;
   e) monitoring coating applicators positions;
   f) monitoring coating applicators related signal sequences;
   g) monitoring operator and coating applicator independent or joint movements;
   h) monitoring immediate environment specific parameters;
   i) monitoring signal sequences from external monitoring devices;
   j) monitoring adjustments required to calibrate appurtenances; and
   k) monitoring project specific interactions.
17. A method according to claim 11, for continuously producing colour coatings gradients where the production sequence, monitoring, integration, calibration and signal processing are optimized and verification performed by selected means.

18. A product as a result of the method as disclosed in claim 11 wherein the product is a colour coatings gradient layer.

19. A product according to claim 18, where the said colour coatings gradient layer is created during organizational ritual events.