

installation of a device made up of a variable number of components, comprising:

- at least one topology file for identifying desired components for a device, said at least one topology file defining the placement of each component within the device;
- a component task file identifying installation tasks corresponding to the possible components in the device;
- a task generator coupled to the
- at least one topology file and to the component task file for generating a list of tasks corresponding to the components in the topology file; and
- a sequencer coupled to the task generator for sequencing the tasks in the order they are to be performed for installation of the device.

28. The system of claim 27 wherein each topology file comprises a set of records, each record corresponding to a component, said records being divided into at least five versions comprising:

- a rack version for a rack component;
- a storage media version for storage media components within a rack;
- a card cage version for card cage components within the rack;
- a card version for card components within a card cage; and
- a cable version for cables connecting the racks, card cages and cards.

29. The system of claim 28 wherein the topology file further comprises a representation of the parentage of the storage media, card cages, cards and cables.

30. The system of claim 27 wherein the task generator is coupled to a first topology file for identifying components of an existing computer system, and to a second topology file for identifying components of the modified existing computer system, wherein the task generator further comprises means for determining which components need to be added to the existing computer system, which components need to be moved, and which components need to be removed from the existing device to create the modified existing computer system.

31. The system of claim 27 wherein the component task file further contains representations of pseudo tasks not associated with any particular task.

32. The system of claim 31 wherein the component task file further comprises an estimate of the time for completion of each task.

33. The system of claim 32 wherein the component task file further comprises an estimate of the time for completion of a task when it is performed in conjunction with other like tasks.

34. The system of claim 27 wherein the component task file further comprises a representation of a perspective for a task.

35. The system of claim 27 wherein the task file further indicates a subcomponent associated with a task, for which a further task is defined.

36. The system of claim 27 wherein the sequencer comprises an expert system program using a set of rules for sequencing the tasks, said rules comprising:

- arranging tasks which can be performed with the device powered on first;
- grouping tasks which are physically located together into a group to be performed together; and
- avoiding scheduling tasks which would make further tasks more difficult.

37. A system for generating installation instructions for devices made up of a variable number of specified components having different characteristics, the comprising:

- means for identifying a sequenced series of tasks related to installing each of the components;
- translator means coupled to the means for identifying the sequenced tasks for further defining the individual assembly instructions; and
- memory means for storing multiple versions of assembly instructions for some components, wherein the translator means selects one of the instructions for a component based on characteristics of the component.

38. The system of claim 37 wherein the assembly instructions stored in the memory mean comprise:

- modules of text; and
- modules of graphic representations of the components.

39. The system of claim 38 wherein the translator means selects instructions from a plurality of text and graphic modules for one a task.

40. The system of claim 37 and further comprising a task to graphics manager for creating line drawings for the instructions based on the components specified.

41. The system of claim 40 and further comprising an element description file containing a record for each component, said records identifying physical characteristics and naming information for each component.

42. The system of claim 41 wherein the task to graphics manager is coupled to the element description file, and comprises means to identify variable information from the element description file for each instruction.

43. The system of claim 42 wherein the variable information comprises the physical characteristics of a component, and the task to graphics manager further comprises means coupled to the element description file to create scaled line drawing definitions from the information.

44. The system of claim 43 wherein the task to graphics manager further comprises means coupled to the element description file for inserting names from the element description file into the scaled line drawings to identify the components therein.

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