

35. The component integration engine of claim 32, further comprising one or more component assemblies for creating interactions between said software components to accomplish a specific task.

36. The component integration engine of claim 35, further comprising one or more persistence engines for storage and retrieval of configuration and state data of said software components and of said component assemblies.

37. The component integration engine of claim 32, wherein said plurality of instances includes at least one enumeration instance.

38. The component integration engine of claim 32, wherein said plurality of instances includes at least one role instance.

39. The component integration engine of claim 32, wherein said plurality of instances includes at least one hint instance.

40. The component integration engine of claim 32, wherein said plurality of instances includes at least one datatype instance.

41. The component integration engine of claim 32, wherein said plurality of instances includes at least one constraint instance.

42. The component integration engine of claim 32, wherein said plurality of instances includes at least one attribute instance.

43. The component integration engine of claim 32, wherein said plurality of instances includes at least one otherelement instance.

44. The component integration engine of claim 32, wherein said plurality of instances includes at least one parameter instance.

45. The component integration engine of claim 32, wherein said plurality of instances includes at least one method instance.

46. The component integration engine of claim 32, wherein said plurality of instances includes at least one signal instance.

47. The component integration engine of claim 32, wherein said plurality of instances includes at least one interface instance.

48. The component integration engine of claim 32, wherein said plurality of instances includes at least one model instance.

49. The component integration engine of claim 32, wherein said plurality of instances includes at least one package instance.

50. The component integration engine of claim 32, wherein said component integration engine is stored in a computer system.

51. A computer system having a meta-implementation layer stored therein, wherein said meta-implementation layer comprises:

a metamodel repository containing a plurality of descriptors;

a plurality of implementations for providing access to software components described by said plurality of descriptors;

a metamodel repository including a plurality of metamodel descriptors for describing said descriptors and a plurality of metamodel implementations for describing said implementations, wherein said meta-implementation layer provides access to an implementation of said plurality of implementations to thereby allow a user to have access to said software components of a software program.

52. The computer system of claim 51, wherein said computer system has a component integration engine stored therein, wherein said computer integration engine comprises:

said meta-implementation layer;

a plurality of component integration instances for providing access to software component instances to thereby allow said software component instances to be assembled in said software program;

communication means for allowing said user to communicate with said component integration engine; and

assembly means for assembling said component integration instances to build said software program.

53. A machine readable medium including instructions stored thereon that when executed by a computer system produce a meta-implementation layer, wherein said meta-implementation layer comprises:

a metamodel repository containing a plurality of descriptors;

a plurality of implementations for providing access to software components described by said plurality of descriptors;

a metamodel repository including a plurality of metamodel descriptors for describing said descriptors and a plurality of metamodel implementations for describing said implementations, wherein said meta-implementation layer provides access to an implementation of said plurality of implementations to thereby allow a user to have access to said software components of a software program.

54. The machine readable medium of claim 53, wherein said instructions when executed by said computer system produce a component integration engine, and wherein said computer integration engine comprises:

said meta-implementation layer;

a plurality of component integration instances for providing access to software component instances to thereby allow said software component instances to be assembled in said software program;

communication means for allowing said user to communicate with said component integration engine; and

assembly means for assembling said component integration instances to build said software program.

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