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tion, or a component of an operating system, the artifacts being representative of software components of the computing system:

wherein each of the multiple self-describing software artifacts has an associated persistently saved manifest:

wherein each manifest comprises a metadata declarative description of the manifest's software artifact:

wherein each manifest comprises a metadata declarative description of the associated executable entity,

in the event that multiple manifestations of a particular executable entity exist, a separate manifest is associated with each manifestation of the particular executable entity;

wherein each manifest exists in one of two forms:

in an event that manifests are of a static manifest form the static manifests are stored in association with software artifacts; and

in an event that manifests are of a dynamic manifest format the dynamic manifests are employed during runtime of each of their associated executable entities, such that the dynamic manifests include static metadata which is available at runtime and dynamic metadata which is constructed at runtime to connect a plurality of runtime system elements.

2. A system as recited in claim 1, wherein each of the multiple self-describing software artifacts has an associated persistently saved manifest comprising primarily declarative descriptions of the manifest's software artifact.

3. A system as recited in claim 1, wherein each of the multiple self-describing software artifacts has all associated persistently saved manifest comprising completely declarative descriptions of the manifest's software artifact.

4. A system as recited in claim 1, wherein the software components of the computing system comprise operating system elements and applications.

5. A system as recited in claim 1, wherein the software components of the computing system comprise operating system elements and applications, the elements and applications being installed on the computing system and configured for execution on the processor.

6. A system as recited in claim 1, wherein a persistently saved system manifest comprises declarative descriptions of the multiple self-describing software artifacts.

7. A system as recited in claim 1 further comprising an artifact manager configured to manage the self-describing software artifacts.

8. A system as recited in claim 1 further comprising an artifact manager configured to update the self-describing software artifacts.

9. A system as recited in claim 1 further comprising an artifact manager configured to optimize use of self-describing software artifacts for generating a set of processor-executable instructions.

10. A system as recited in claim 1 further comprising an execution gateway configured to allow execution of only processor-executable instructions associated with a self-describing artifact only if conditions for allowed execution described by the associated self-describing artifact exist.

11. A system as recited in claim 1 further comprising an execution gateway configured to limit execution of functional components of the self-describing software artifacts when a manifest associated with the functional components of the self-describing software artifacts includes a conditional declarative description that the execution gateway determines is met.

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12. A system as recited in claim 1 further comprising an execution gateway configured to audit a self-describing artifact to determine if the artifact differs from the artifact's own self-description.

13. A system as recited in claim 1 further comprising a system verifier configured to perform acts comprising:

examining the self-describing artifacts to gather information about the artifacts;

performing a verification of the self-describing artifacts; reporting results of the verification.

14. A system as recited in claim 1 further comprising an operating system configured to perform acts comprising facilitating creation of an instance of an application, wherein the source components of the application are derived from one or more of the self-describing artifacts.

15. A system as recited in claim 1 further comprising an optimization tool configured to perform acts comprising:

examining the self-describing artifacts to gather information about the artifacts;

optimizing the components of self-describing artifacts; persistently saving the self-describing artifacts with optimized components.

16. A system as recited in claim 1 further comprising an error detection tool configured to perform acts comprising:

examining the self-describing artifacts to gather information about the artifacts;

analyzing the self-describing artifacts to detect potential errors; reporting results of the analysis.

17. One or more computer storage media having processor-executable instructions thereon that, when executed by a processor, performs acts comprising:

facilitating persistent saving of multiple self-describing software artifacts on a computing system,

wherein each software artifact comprises an offline manifestation of an executable entity and is representative of functional operating system components or functional applications, such components and applications being installed on the computing system;

facilitating persistent saving of multiple manifests respectively associated with the multiple self-describing software artifacts, wherein in an event that multiple manifestations of a particular executable entity exist, a separate manifest is associated with each manifestation of the particular executable entity, the manifests comprising metadata declarative descriptions of:

the multiple self-describing software artifacts and an associated executable entity wherein each manifest exists in either a static manifest form or a dynamic manifest form such that:

in an event that a manifest is of the static manifest form storing the static manifest in association with a self-describing software artifact; and

in an event that a manifest is of the dynamic manifest form employing the dynamic manifest during runtime of an associated executable entity, such that the dynamic manifest comprises dynamic metadata which is constructed at runtime to connect a plurality of runtime system elements.

18. One or more media as recited in claim 17 further comprising examining the manifests to discover information about the multiple self-describing software artifacts.

19. One or more computer storage media having processor-executable instructions that, when executed by a processor, perform acts comprising:

examining multiple self-describing software artifacts and manifests associated with the multiple self-describing software artifacts persistently saved on a computing sys-