Software Architecture Design and Analysis

Spencer Rugaber

College of Computing

Georgia Institute of Technology

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Precourse Reading

David Garlan and Mary Shaw.

An Introduction to Software Architecture.

Technical Report CMU-CS-94-166, School of Computer Science, Carnegie Mellon University, January 1994

http://www.cc.gatech.edu/classes/AY2007/cs4330_spring/readings/intro_softarch.pdf

Course Outline

- Motivating exercise: produce a variety of architectures to solve the same problem. Selection factors

- Introduction and terminology

- Architectural views: Why a single representation is insufficient. Considerations to take into account when analyzing an architecture

- Architectural styles. A catalog of examples

- The role of non-functional requirements. Examples of how different constraints can influence design

- Connectors: Taxonomy and examples

- Case study: Alternative mechanisms for providing invariant maintenance

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