

	Moment		Period	
	Code-level	Component-level	Code-level	Component-level
Build-time	Source code, AST, Interface-Class-Attribute-Method (Class Diagram)	Package, File, Static Linking, Library, Test Case, Build Script (Component Diagram)	Code Churn	Configuration Item, Version
Run-time	Code Snapshot, Memory dump	Package, Library, Dynamic linking, Configuration, Database, Middleware, Network, Hardware (Deployment Diagram)	Execution stack trace, Concurrent multi-threads	Event log, Multi-processes, Distributed processes
			Procedure Call Graph, Message Graph (Sequence Diagram)	

三维度八视图

Three dimensions of describing a software system: 三个维度来描述软件系统

1. By phases: build- and run-time views
2. By dynamics: moment and period views
3. By levels: code and component views

transformation between views 不同视图之间的转换

1. $\emptyset \Rightarrow \text{Code} - \text{Code} \Rightarrow \text{Component}$
2. Build-time \Rightarrow Run-time
3. Moment \Rightarrow Period

Five key quality objectives of software construction 软件中的5个关键质量指标

1. Easy to understand: elegant and beautiful code / understandability
2. Ready for change: maintainability and adaptability
3. Cheap for develop: design for/with reuse: reusability
4. Safe from bugs: robustness
5. Efficient to run: performance