Appendix F. SCAT Model Parameters

Input Parameter	Description
Size:	
New SLOC or Equivalent SLOC	New or total equivalent logical source lines of code
Requirements Evolution and Volatility (REVL) Percent	Percentage of code thrown away due to requirements volatility
Initial Adapted SLOC	Size of inherited or adapted code before modifications in logical SLOC
Reuse Parameters:	
Assessment and Assimilation (AA)	Availability and accessibility of inherited source code and resources
Software Understanding (SU)	
SU -Structure	Code organization and structure
SU- Application Clarity	Level of correlation between application and program
SU- Self-Descriptiveness	Source code documentation availability and clarity
Programmer Unfamiliarity (UNFM)	Developer (un)familiarity with software
Percent Design Modified	Percentage of inherited design to be modified
Percent Code Modified	Percentage of inherited code to be modified
Percent Integration Modified	Percentage of effort required to integrate and test the inherited code
Effort Multipliers:	
Required Software Reliability (RELY)	Safety-criticality of the software that dictates the level of reliability
Test Database Size (DATA)	Database development size requirements
Documentation Match to Lifecycle Needs (DOCU)	Level of documentation match to life cycle needs
Product Complexity (CPLX)	
CPLX - Control Operations	Level of code structure complexity
CPLX - Computational Operations	Level of computational numerical analysis complexity
CPLX - Device Dependent Operations	Level of particular processor or I/O dependency
CPLX - Data Management Operations	Level of files, data structures, and objects complexity
CPLX - User Interface Management Operations	Level of user interface implementation complexity
Developed for Reusability (RUSE)	The extent of effort put into making the software reusable
Execution Time Constraint (TIME)	Degree of usage of available execution time
Main Storage Constraint (STOR)	Degree of main storage constraint imposed on the software system
Platform Volatility (PVOL)	Degree of complexity of hardware and software OS dependency
Analyst Capability (ACAP)	Level of analyst experience
Application Experience (APEX)	Level of development team experience with the application
Programmer Capability (PCAP)	Level of experience, ability, efficiency, and thoroughness of the development team
Platform Experience (PLEX)	Level of development team experience with the platform
Language and Tool Experience (LTEX)	Level of development team capability and experience with the programming language and development tools
Personnel Continuity (PCON)	Average annual personnel turnover
Use of Software Tools (TOOL)	Degree of complexity, integration, and sophistication of software tool usage
Required Development Schedule (SCED)	Schedule flexibility and constraints
Multisite Development (SITE)	Location and communication of the development team
Scale Factors:	
Precedentedness (PREC)	Similarity of the developed product to its predecessors
Development Flexibility (FLEX)	Degree of flexibility allowed during development
Architecture/Risk Resolution (RESL)	Level of risk-proneness and design maturity of the architecture
Team Cohesion (TEAM)	Level of synchronicity between users, developers, stakeholders, maintainers, and inter-facers
Process Maturity (PMAT)	CMMI process maturity level