1.	Record Nr.	UNINA9910143222603321
	Autore	Doldi Laurent
	Titolo	Validation of communications systems with SDL [[electronic resource]] : the art of SDL simulation and reachability analysis / / Laurent Doldi
	Pubbl/distr/stampa	Chichester ; ; Hoboken, NJ, : Wiley, c2003
	ISBN	1-280-27197-3
		9786610271979
		0-470-29983-5
		0-470-86482-6
		0-470-01415-6
	Descrizione fisica	1 online resource (312 p.)
	Disciplina	621.382
		621.38450113
	Soggetti	Wireless communication systems - Computer simulation
		Mobile communication systems - Computer simulation
		SDL (Computer program language)
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references (p. [289]-291) and index.
	Nota di contenuto	Validation of Communications Systems with SDL; Contents; Preface; Foreword; 1 Introduction; 1.1 Validation of Communications Systems; 1.2 SDL, Language to Master Complex Systems Development; 1.2.1 Overview of SDL; 1.2.2 Benefits provided by SDL; 1.3 Simulation Life Cycle; 1.4 Contents of the Book; 1.5 Tools and Platforms Used; 2 Quick Tutorial on SDL; 2.1 Structure of an SDL Model; 2.1.1 System, block and process; 2.1.2 Scope of declarations; 2.1.3 Process; 2.1.4 Procedure; 2.2 Communication; 2.2.1 Signals; 2.2.2 Channel; 2.2.3 Signal route; 2.3 Behavior; 2.3.1 Structure of a transition
		2.3.2 Start2.3.3 States; 2.3.4 Input; 2.3.5 Save; 2.3.6 Variables; 2.3.7 Stop; 2.3.8 Task; 2.3.9 Create; 2.3.10 Output; 2.3.11 Decision; 2.3.12 Timers; 2.4 Data Types; 2.4.1 Predefined data; 2.4.2 Array; 2.4.3 Synonym and syntype; 2.4.4 Newtype; 2.5 Constructs for Better Modularity and Genericity; 2.5.1 Package; 2.5.2 Types, instances and gates; 2.5.3 Specialization; 3 The V.76 Protocol Case Study; 3.1 Presentation; 3.2 Specification of the V.76 Protocol; 3.2.1 Abbreviations

used; 3.2.2 Exchange identification procedures (XID); 3.2.3 Establishment of a data link connection
3.2.4 Information transfer modes3.2.5 Release of a DLC; 3.3 Analysis MSCs for the V.76 Protocol; 3.4 The SDL Model of V.76; 3.4.1 The simulation configuration of V.76; 3.4.2 The package V76; 3.4.3 The block dataLink; 4 Interactive Simulation; 4.1 Principles; 4.2 Case Study with Tau SDL Suite; 4.2.1 Prepare the Simulator; 4.2.2 Validate against the main scenarios; 4.2.3 Detect a bug in the SDL model; 4.2.4 Detect nonsimulated parts; 4.2.5 Validate against more scenarios; 4.2.6 Write a script for automatic validation; 4.2.7 Other Simulator features; 4.3 Case Study with ObjectGeode
4.3.1 Prepare the Simulator4.3.2 Validate against the main scenarios; 4.3.3 Detect a bug in the SDL model; 4.3.4 Detect nonsimulated parts; 4.3.5 Validate against more scenarios; 4.3.6 Write a script for automatic validation; 4.3.7 Other Simulator features: watch, trace, filter etc; 4.4 Errors Detectable by Interactive Simulation; 4.4.1 Dynamic errors detected by Tau SDL suite Simulator; 4.4.2 Dynamic errors detected by ObjectGeode SDL Simulator; 4.4.3 Dynamic errors not checked; 5 Automatic Observation of Simulations; 5.1 Principles; 5.1.1 Automatic checking of model properties
5.1.2 Specificity of observation with MSCs in Tau SDL Suite5.2 Case study with Tau SDL Suite; 5.2.1 Simulate with user-defined rules; 5.2.2 Simulate with a basic MSC; 5.2.3 Simulate with an MSC containing inline operators; 5.2.4 Simulate with an HMSC; 5.2.5 More details on MSCs; 5.2.6 Simulate with observer processes; 5.2.7 More details on observer processes; 5.3 Case Study with ObjectGeode; 5.3.1 Simulate with stop conditions; 5.3.2 Simulate with a basic MSC; 5.3.3 Simulate with a hierarchical MSC; 5.3.4 More details on MSCs; 5.3.5 Simulate with GOAL observers
5.3.6 More details on GOAL observers

Sommario/riassunto	Validation of Communications Systems with SDL provides a clear practical guide to validating, by simulation, a telecom system modelled in SDL. SDL, the Specification and Description Language standardised by the International Telecommunication Union (ITU-T), is used to specify and develop complex systems such as GSM, GPRS, UMTS, IEEE 802.11 or Hiperlan. Since the downturn in the telecom industry, validating a system before its implementation has become mandatory to reduce costs. This volume guides you step by step through the validation of a simplified protocol layer, from interactive