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Nota di contenuto	Autonomic Networks; Table of Contents; Introduction; Chapter 1. Artificial Intelligence and Monitoring of Telecommunications Networks; 1.1. Introduction; 1.2. Network management goals; 1.3. Monitoring needs of telecommunications networks; 1.4. The telecommunications management network (TMN); 1.4.1. TMN management functions; 1.4.2. TMN architecture; 1.5. Control in telecommunications networks; 1.6. Some AI techniques for monitoring telecommunications networks; 1.6.1. Chronos: an expert system generator for monitoring telecommunications networks; 1.6.2. Monitoring with model-based techniques 1.6.3. Agent technology 1.6.3.1. Intelligent agent principles; 1.6.4. Example of agent-based telecommunications network monitoring architecture; 1.6.5. Telecommunications network management with mobile agents; 1.6.5.1. Overview; 1.6.5.2. Mobile agents; 1.6.5.3. Example of telecommunications network monitoring in the case of routing by ant colonies; 1.7. Conclusion; 1.8. Bibliography; Chapter 2. Adaptive and Programmable Management of IP Quality of Service; 2.1. Introduction; 2.2. Open and programmable network technology; 2.3.

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### Sommario/riassunto

As the Internet becomes larger and larger, and consequently more difficult to control and to manage, telecommunication operators, manufacturers and companies require tools to perform management and control tasks. A large number of tools coming from different areas have been proposed, but these are not sufficient to handle an evolving and dynamic environment. This book presents and explains all the techniques which integrate a certain level of intelligence (through intelligent software agents for example) in order to represent knowledge, take appropriate decisions, communicate with other enti

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