1. Record Nr. UNINA9910768445903321 Embedded systems design: the ARTIST roadmap for research and Titolo development / / Bruno Bouyssounouse, Joseph Sifakis (eds.) Pubbl/distr/stampa Berlin; ; New York, : Springer, c2005 Edizione [1st ed. 2005.] Descrizione fisica 1 online resource (XVI, 496 p.) Collana Lecture notes in computer science, , 0302-9743 ; ; 3436. Tutorial Altri autori (Persone) BouyssounouseBruno SifakisJ <1946-> (Joseph) Disciplina 004.16 Soggetti Embedded computer systems - Design and construction Lingua di pubblicazione Inglese Formato Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di bibliografia Includes bibliographical references and index. Nota di contenuto pt. 1. Hand real-time development environments -- pt. 2. Componentbased design and integration platforms -- pt. 3. Adaptive real-time systems for quality of service management -- pt. 4. Execution

Sommario/riassunto

platforms.

Embedded systems now include a very large proportion of the

advanced products designed in the world, spanning transport (avionics, space, automotive, trains), electrical and electronic appliances (cameras, toys, televisions, home appliances, audio systems, and cellular phones), process control (energy production and distribution, factory automation and optimization), telecommunications (satellites, mobile phones and telecom networks), and security (e-commerce. smart cards), etc. The extensive and increasing use of embedded systems and their integration in everyday products marks a significant evolution in information science and technology. We expect that within a short timeframe embedded systems will be a part of nearly all equipment designed or manufactured in Europe, the USA, and Asia. There is now a strategic shift in emphasis for embedded systems designers: from simply achieving feasibility, to achieving optimality. Optimal design of embedded systems means targeting a given market segment at the lowest cost and delivery time possible. Optimality implies seamless integration with the physical and electronic environment while respecting real-world constraints such as hard deadlines, reliability, availability, robustness, power consumption, and

cost. In our view, optimality can only be achieved through the emergence of embedded systems as a discipline in its own right.