ITEA (Information Technology for European Advancement) released the 2nd edition of its technology roadmap for software-intensive systems, concluding a two-year strategic effort involving more than 70 high-level experts in systems and software-technology from all over Europe and representing both, industry and academic research. This comprehensive report – which is intended for both, software researchers and policy makers – maps out the future of software-intensive systems in Europe. The many detailed scenarios within the 262-page document sketch a vision of the future in which embedded and networked systems – and related software technologies – play an increasingly important role. Within the report, ITEA maps out five major application domains, all of which are crucial to European competitiveness: home, cyber enterprise, nomadic, services & software creation and intermediation services & infrastructures. Due to growing convergence, applications from different domains often share certain technologies, so ITEA merged and clustered the results of the scenarios. The four main technology areas selected to cluster several hundred basic technologies are: content, infrastructures & basic services, human-system interaction, and engineering.

Software-intensive systems bring together products and components that are controlled by, and interact with the world, through software. The software is embedded within the electronics of each product as firmware (ROM or PROM). Examples of products in which functionality is enhanced in this way include digital TV, mobile phones, cars, chip cards, aircraft control systems, and even remote control handsets and washing machines. The importance of this...
invisible, embedded, software – in which Europe leads in many areas – cannot be overstated. For European industry, this Roadmap provides an overview of the current state of the art and a baseline for the future development of software-intensive systems. It presents an overview of developments and challenges for software-intensive systems, from timely production to quality control, from standardisation to networking. The detailed chapters and appendices identify opportunities for cross-industry development of common platforms that will help raise overall productivity.