Preface

Paving the Way for an Open Service Market

We live in an age when powerful communications technology is becoming available to everyone. From our home we can send and receive not only analogue voice, but also growing volumes of digital information and even intelligence in the form of agents. We are becoming increasingly mobile and are expecting the same level of connectivity in the home, in the office, and on the road.

The regulatory and commercial environment in which we communicate is changing. The telecommunications market is becoming increasingly competitive. The Internet is erasing the borders between information technology and telecommunications. And the way we do business is ever more dominated by electronic exchanges of information.

Is our technology ready for the open market of networks and services? Can we manage the growing complexity of computing and telecommunications technology and place it at the service of the people? The challenge for the research community is to develop the tools and techniques that will ultimately bring the full power of communications and information to everyone, in a way that everyone can easily use.

The Sixth International Conference on Intelligence in Services and Networks (IS&N'99) is all about technology for paving the way to the open services market. Since the first IS&N conference in 1992 the focus of the IS&N program has continually shifted. We see existing technologies maturing while new ones emerge, but the bottom line has always been putting technology at the service of the people. The result is a fascinating mix of confirmed and new technologies.

Mobile and intelligent agents form the most manifest stream of emerging technologies, reflected in 13 papers in this volume. These include articles that deal with agent-related technical issues (5 papers), as well as papers that describe the application of agents to specific problems in telecommunications (8 papers). In fact "intelligent" and "mobile" agents can be seen as two quite distinct tracks. Both are well represented in the program (5 and 8 papers, respectively).

Projects addressing more mature technologies like CORBA, Intelligent Networks, TMN and TINA are now in a position to present confirmed results, prototypes, and in some cases, field trials. TINA and CORBA form the subject of about 10 papers while at least 5 address the management of networks and services.

In a world of new and legacy systems that must coexist, interworking enjoys significant interest (5 papers). Signaling System Number 7 (SS.7) is considered in 2 distinct articles as a possible carrier of both CORBA and agent-based communications, thus providing a new form of "intelligent signaling". Other papers address the evolution of IN and TMN towards open, distributed, object-oriented architectures.

An interesting observation is that *service creation* enjoys a strong interest this year: 6 papers are directly related to this subject. While telecommunications are becoming increasingly dominated by software, we seem to be becoming more and more aware of the need for methods and tools to control the "service crisis".

In addition to the more "classical" IS&N themes, we see several original new directions. The need for technologies that can manage multimedia streams has lead to

a number of new techniques, like the use of enhanced session models and Java-enabled multi-media encoding. A number of papers deal with searching and brokering of services in an open market.

In summary, this book is a unique state-of-the-art account of technologies that enable intelligent services and networks to serve the people. It is a reflection not only of key research done within the ACTS program sponsored by the European Commission, but, equally, of research from many other sources. It is the result of the cooperative effort of researchers, authors, reviewers, and editors. Use it to your advantage.

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