
SMART NETWORKS

IFIP - The International Federation for Information Processing

IFIP was founded in 1960 under the auspices of UNESCO, following the First World Computer Congress held in Paris the previous year. An umbrella organization for societies working in information processing, IFIP's aim is two-fold: to support information processing within its member countries and to encourage technology transfer to developing nations. As its mission statement clearly states,

IFIP's mission is to be the leading, truly international, apolitical organization which encourages and assists in the development, exploitation and application of information technology for the benefit of all people.

IFIP is a non-profitmaking organization, run almost solely by 2500 volunteers. It operates through a number of technical committees, which organize events and publications. IFIP's events range from an international congress to local seminars, but the most important are:

- The IFIP World Computer Congress, held every second year;
- open conferences;
- working conferences.

The flagship event is the IFIP World Computer Congress, at which both invited and contributed papers are presented. Contributed papers are rigorously refereed and the rejection rate is high.

As with the Congress, participation in the open conferences is open to all and papers may be invited or submitted. Again, submitted papers are stringently refereed.

The working conferences are structured differently. They are usually run by a working group and attendance is small and by invitation only. Their purpose is to create an atmosphere conducive to innovation and development. Refereeing is less rigorous and papers are subjected to extensive group discussion.

Publications arising from IFIP events vary. The papers presented at the IFIP World Computer Congress and at open conferences are published as conference proceedings, while the results of the working conferences are often published as collections of selected and edited papers.

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SMART NETWORKS

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Preface

Smartnet'2002 is the seventh conference on Intelligence in Networks arranged by the IFIP TC6 Working Group 6.7. The development in the contents of the conference series closely reflects the developments in networking. In the beginning, the focus was on Intelligent Networks (IN) and how to find solutions that would allow the quick creation and deployment of value-added programmable services in telecommunication networks. In the IN approach, intelligence was mostly centralized in the networks. Later on, research primarily focused on distributing intelligence over different parts of the network. The challenge was to apply the new developments of modern information technology in telecom service creation, deployment and management.

We are currently facing two conflicting trends: The increasing popularity of the Internet and the growth of mobile communications, which poses challenges for developing and distributing the intelligence in networks. The traditional Internet approach is to regard a network as a dummy pipe of bits and place all the intelligence in the end-devices. The traditional telecom approach is to regard the end-devices as dummy senders or receivers of bits and to put all the intelligence in the network. For fixed line access to Internet using a powerful PC, the Internet approach is plausible. However, for a nomadic user, who sometimes accesses the services through a fixed-line Internet connection and, at other times, through a wireless connection using a restricted-capability access device, the situation becomes intolerable. Intelligence needs to be distributed and partially replicated in end-user devices, access networks and the core network. The papers in this proceedings reflect these new trends.

The present research papers fall into three major topics: platform software, services and protocols. The sessions on platform software address various aspects of software infrastructure in networks including object-orientation, components, agents and plug-and-play. The session on services includes interactive TV, group communication and location awareness. The session on protocols discusses bandwidth brokers, authentication and protocol testing.

The editors express their sincere thanks to the reviewers for the evaluation of the manuscripts and to all the authors who submitted papers to the conference and contributed to the success of the event.

December, 2001

Kimmo Raatikainen, Olli Martikainen, and Jari Porras.

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