Advances in Telecommunications
Network Management and Service Creation

New technologies for flexible, rapid deployment

November 1998, London

Exploitable results from the world's largest interconnected trials of advanced communications - ACTS.

Presenting technical strategies and exploitable technologies in network management systems and service creation technologies, from Europe's leading players collaborating in the ACTS Programme.

- what strategies and architectures do these leading companies recommend?
- how is TMN (the ITU / ETSI Telecom Management Networks standard) evolving, to enable faster deployment of open management systems?
- what techniques are available to integrate TMN with distributed object-oriented computing tools such as CORBA (Common Object Request Broker Architecture) and JAVA?
- what methods and tools are available for rapid service creation?
- what are the benefits of TINA (Telecom Information Network Architecture) and what lessons have been learned in practical implementations?
- how can CORBA be integrated into INs (Intelligent Networks)?
- what are the emerging architectures for service brokerage?
- how can Intelligent Agent technologies be useful?
- what are the drivers for ACTS co-operation with EURESCOM and Network Management Forum?

Mission of this conference

- to present exploitable results from ACTS
- to provide a clear picture of emerging architectures and standards
- to help businesses to form technical strategies

Results of collaborative research and trials

The viability of the new architectures and technologies for open management and service creation has been tested in extensive research and trials. Europe's leading companies and research establishments, represented in this conference, are collaborating in ACTS.

Bound sets of conference papers

Complete bound sets of speakers' papers are available from:
IBC UK Conferences Ltd.
Gilmoora House, 57-61 Mortimer Street, London W1N 8JX, UK.
Telephone +44 (0) 171 453 5495 Fax +44 (0) 171 636 1976 Email cust.serv@ibcuk.co.uk
Reference: " Advances in Telecommunications Network Management and Service Creation
DAY ONE

Chair: Michael Griffith
ACTSLINE project: presenting ACTS results
TeleCommunities Ltd, UK

Keynote session: strategies for flexible management systems

Chairman's opening remarks

Keynote presentation: Challenges facing the operators
   - why we need collaborative R&D
Speaker: Peter Stollenmayer
   Project Supervisor and
   Responsible for Relations with External Bodies (ACTS, ETSI...)
   EURESCOM, Germany

Strategic Guidelines from the ACTS Projects
   ♦ context and topics covered
   ♦ progress to date
   ♦ future plans
Speaker: William Donnelly
   Chairman, ACTS Network Interoperability (Management) Chain
   Waterford Institute of Technology, Ireland

Key Drivers for Network Management Forum - ACTS Co-operation
   ♦ the Network Management Forum workplan
   ♦ results from co-operation with ACTS
   ♦ further issues and approaches
Speaker: Tony Richardson
   NMF and ACTS project DIFFERENCE
   STS Ltd, UK

Strategies for Development of Management Systems
   ♦ methodology for design of multi-domain management systems
   ♦ object-oriented methods
   ♦ application of ODP viewpoints
   ♦ life cycle of management systems
Speaker: Vincent Wade
   Editor, ACTS Guideline on Service Management Systems Development
   Trinity College Dublin, Ireland
High Integrity Service Management Interfaces

- integrity across customer premises interfaces and operator interfaces (Xuser)
- security, design / specification and testing methodologies
- robust, high performance, open interfaces
- conclusions of practical tests by the TRUMPET project

Speaker: Michel Besson
ASCOM, France

A Practical Perspective of TMN Evolution

- current status of TMN
- needs and drivers of TMN evolution
- TMN roadmap for the year 2000 and beyond

Speaker: Rob Davison
EURESCOM Project P812 "TMN Evolution"
BT Labs, UK

End-to-end Multi-domain Management Systems for ATM/SDH Networks

- the MISA trials of integrated management of SDH and ATM
- multi-provider, multi-domain co-operative management
- automated setting up and reconfiguration of broadband connections
- new exploitable management services

Speaker: Alex Galis
Visiting Professor
University College London, UK

Case study: Building and Optimising TMN-based Solutions

- practical view of TMN from operator's point of view
- implementing a TMN-based network management solution
- how to manage short lifecycle of the application
- combining CORBA/Java applications with TMN-platform

Speaker: Jukka Rantala
Project Manager
HPY/Helsinki TeleCom Deutschland GmbH, Germany

A CORBA/CMIP Gateway

- TMN used in practice
- exploiting results from the PROSPECT project

Speaker: Lars Bo Soerensen
Partner
UH Communications ApS, Denmark
JAVA, CORBA/DCOM, OSI: Concrete Telecom Management Foundations or Quicksand?

♦ analysis carried out by ACTS project DIFFERENCE
♦ developments in the fora: NMF, SIF, ECIC, OMG
♦ concrete experience in ACTS and elsewhere

Speaker: Sean O'Sullivan
VP Professional Services
Iona Technologies, Ireland

DAY TWO

Chair: Vincent Wade
Trinity College Dublin, Ireland

Service creation - INs, TINA and mobile

The Role of Architecture, the Dynamics and Issues
♦ Contexts of architecture - communities, markets, structure & infrastructure
♦ types and owners of architecture
♦ evolution drivers
♦ the reality of integration and convergence

Speaker: Keith Start
Chairman of ACTS Service Architecture Chain
Orca Research, UK

A Practical Implementation of TINA
♦ TINA concepts and functionality
♦ an open distributed architecture for fast service deployment
♦ proving TINA in the extensive trials of the VITAL project
♦ re-usable components developed

Speaker: Johan Zuidweg
Project Manager, VITAL
Alcatel, Belgium

Rapid, User-friendly Open Service Creation
♦ methods and tools for rapid creation and validation of distributed services
♦ TOSCA trials focused on the TINA service architecture
♦ exploitation of existing tools (e.g. interfaces specified in ODL and behaviour in SDL)
♦ potential products for service creation environments

Speaker: Fiona Lodge
Research Officer
Teltec DCU, Ireland
CORBA-IN Integration
♦ integration of CORBA object-oriented technology into INs
♦ results of practical trials
♦ replacement of IN Service Creation and management by mainstream CORBA-based application development and management
Speaker: Helge Armand Berg
Software Architect
IONA Technologies, Ireland

Seamless Tool-supported Approach for Service Creation
♦ a coherent and complete service creation path
♦ based on re-use of service components
♦ focusing on TINA/CORBA and Internet based services
♦ tool support for all the service creation phases, from requirements capture to implementation
Speaker: Anders Olsen
SCREEN project
Tele Danmark R&D, Denmark

INs and mobility

Architecture for Mobile - Fixed Integration
♦ Service Architecture as a framework for a long-term global IN
♦ integration of fixed and UMTS mobile communications systems
♦ support for roaming users in a global TINA system
♦ practical experience gained in the DOLMEN trials
Speaker: Sebastiano Trigila
Project Manager, DOLMEN
Fondazione Ugo Bordoni, Italy

Migration to UMTS
♦ multimedia terminal and personal mobility
♦ IN migration towards UMTS
♦ ATM core network enhancements
♦ results of extensive trials by the EXODUS project
Speaker: Brian Philips
ACTS project EXODUS
Marconi Communications, UK

Brokerage and Intelligent Agent Technology

Brokerage Architecture for On-line Services
♦ an enterprise model for brokerage from ACTS
♦ three phases of brokerage
♦ a functional architecture from the GAIA project

Speaker:  
**Jenny Hands**  
Software Development Manager  
Fretwell-Downing Ltd, UK

**Intelligent Mobile Agent based Service Environments - Collaborative Work in ACTS**
♦ basic issues of an agent-based middleware
♦ overview of CLIMATE (ACTS collaborative work)
♦ agents in IN-based and mobile environments and telecom management
♦ end-to-end agent systems

Speaker:  
**Thomas Magedanz**  
Chairman of CLIMATE Collaborative Work in ACTS  
IKV++, Germany

**Brokerage: From Technologies to Services and Applications**
♦ The path from basic technologies to services and finally applications
♦ ABS - architecture based on OMG, TINA, implementation on CORBA and JAVA
♦ ABROSE - intelligent multi agent systems
♦ lessons learned in trials by ABS project

Speaker:  
**Eleutherios Athanassiou**  
Project Manager  
Deutsche Telekom Berkom, Germany