

■□□ Do not miss this first event in Europe where ENUM registries, telcos, ISPs and ITSPs talk about their experiences and expectations with ENUM!

IETF ENUM WORKING GROUP, USA

BT GROUP PLC, UK

DEUTSCHE TELEKOM AG, GERMANY

OEFEG/TELEKOM AUSTRIA, AUSTRIA

ENUM FORUM AUSTRIA, AUSTRIA

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SILVER SERVER GMBH, AUSTRIA

EVOLVING SYSTEMS INC., USA

DNS- MODA, SCOTLAND

SIPGATE, GERMANY

NASK, POLAND

DENIC EG, GERMANY

FREENET AG, GERMANY

XCONNECT GLOBAL NETWORKS LTD, UK

TOPLINK GMBH, GERMANY

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ENUM

Enabling telecom - IP network convergence to reduce operating costs and offer new services

“WHERE IS THE ENUMONEY?”

Benefit from first-hand information from the leading experts from the ENUM landscape and hear the latest update of the IETF ENUM Working Group!

- Hear **lessons learnt** from global **ENUM trials** to develop a successful **implementation** strategy
- Get to know the **benefits** and **challenges** of **carrier ENUM** to reduce costs
- Learn about **requirements** and **benefits** of **IP interconnection** to offer new services and increase revenue
- Discover **successful ENUM business models** to decide which market segment to address
- **Identify** and **master** the technical **challenges** to guarantee **quality of service**
- Discover how ENUM will **change** the telecommunication landscape to **select** your future **deployment strategy**
- Learn how to solve crucial **privacy** and **security issues** to prevent **data corruption**



■□□ Highlight



Key Note:

Richard Shockey
IETF, USA

Pre-conference workshops:

Full day workshop

- Understanding Session Initiation Protocol (SIP)

Half day workshops

- Introduction to ENUM: Understanding the basics of Electronic Numbering
- DNS theory and practice for ENUM

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ENUM



Dear Colleague,

ENUM has the potential to revolutionize the telecommunications market as we know it today. With trials being successfully run in almost every country, ENUM is now about to move into worldwide deployment!

From carriers to ISPs, all telcos have recognized ENUM's potential to **reduce operating costs** and the possibilities it brings to **offer new services**. But there remain still a lot of crucial questions. Is there a solution to ensure privacy and security on the DNS? How to implement the lessons learnt from global ENUM trials?

IQPC is dedicating the top **international conference in Europe** to discuss and debate the crucial challenges facing ENUM. Do not miss this unique chance to hear **first-hand experiences** from **ENUM trials** presented by key-players from the ENUM landscape on this expert forum

ENUM

Enabling telecom - IP network convergence to reduce operating costs and offer new services

21st - 23rd November 2005, ArabellaSheraton Congress Hotel Frankfurt, Germany

- Understand the **potential** of **user ENUM** and **carrier ENUM** to know which form is appropriate for which **business model**
- Learn how to successfully **market** ENUM to your **customers** by promoting converged **services**
- **Stay updated** on the **standardization** and **regulatory** requirements for ENUM
- Hear how to improve **cost-efficiency** and **interconnection** of **new services** through ENUM
- Discover how to manage **authentication** and **validation** issues to **prevent unauthorized DNS access**
- Hear how ENUM brings a **solution in linking** together **VoIP islands**

High-level, international speakers from telcos, ISPs, ITSPs and ENUM registries such as **British Telecom, Deutsche Telekom, Telekom Austria, Verizon, Freenet, Telio, sipgate, Denic, Nask** and many more will talk about their experiences and expectations with ENUM!

Simply fill out the registration form and fax back to **+49 (0) 30 20 91 33 12!**

We look forward to welcoming you at our congress in Frankfurt!

Best regards,

Your telecom IQ team



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VOIP-Info.de VoIP-Info.de is a well known Voice over IP-information website in german language with more than 150.000 visitors per month. Started in march 2003 the website provides information about all issues regarding VoIP. The web presence is a well known source of information where visitors get important information about technical and market issues. VoIP-Info.de provides daily news, informational articles for business and private readers, links to technical resources and online articles from other sites. A project database provides business-information about new VoIP-projects for manufacturers and service providers. The web site provides a yellow page database with information about several kinds of VoIP-Providers. www.voip-info.de

SIP-CENTER The SIP Center is a public resource for the commercial development of SIP (Session Initiation Protocol.) Serving both the SIP developer community as well as the wider industry since July of 2000, The SIP Center offers technical and market resources as well as a 24 x 7 public SIP proxy for testing SIP implementations. There are free SIP User Agent downloads, a comprehensive products and services directory, the latest SIP news and special interest articles, tutorials, white-papers, developers tools and resources and much more. Visit The SIP Center for information on all things SIP www.sipcenter.com.

PORTUNITY The german speaking portal "enum-center.de" provides information about ENUM-Domains for interested newcomers and for users who already use ENUM. Besides introducing articles in the ENUM-Howto you find a step by step tutorial, so end users can register their own phone number as ENUM-Domain within minutes. Publisher of ENUM-Center is the german isp Portunity GmbH, which already offers a fully automated way to register an ENUM-Domain. For more information visit the Enum Center or Portunity: www.enum-center.de/www.portunity.de

TeleTalk TeleTalk - The magazine for successful business communication. TeleTalk is Germany's leading trade magazine for professional telephony, value added services and customer communication. The publication addresses general managers, IT- and telecommunication managers, call center managers as well as marketing and sales executives across many industries. www.teletalk.de

DENIC DENIC eG is the registry for domains under the Top Level Domain (TLD) .de, and is a central and important interface of the Internet. Established in 1994, and organized as a cooperative in 1996, DENIC has successfully managed the rapid growth of .de domains over the past decade - with .de registrations now numbering more than eight million. Under DENIC's stewardship, .de has grown to become the most requested country code TLD (.ccTLD), and the world's second largest TLD after .com. www.denic.de

SIP Forum The SIP Forum is an industry organization with members from the leading SIP technology companies. Its mission is to advance the adoption of products and services based on SIP. The SIP Forum directs technical activities aimed at achieving high levels of product interoperability, provides information on the benefits and capabilities of SIP, and highlights successful applications and deployments. Information at www.sipforum.org

ETSI ETSI is Europe's officially-recognized standardization body for Information and Communication Technologies (ICT), including telecommunications and broadcasting. The almost 700 members include all the key players in the ICT arena. ETSI's prime objective is to support global harmonization by providing a forum in which all the key players can contribute actively. ETSI is officially recognized by the European Commission and the EFTA Secretariat. Complementary services offered by ETSI include interoperability testing and forum management. www.etsi.org

ITtoolbox ITtoolbox supports decision making throughout the IT lifecycle by linking together millions of IT experts and information from thousands of leading sources. Powered by collaborative tools such as discussion groups, blogs, and wiki, the ITtoolbox network provides practical solutions from the IT community for use in the IT workplace. www.ITtoolbox.com

COMPUTERWELT COMPUTERWELT is the leading Austrian IT-weekly covering the whole area of information technology and telecommunication. It primarily targets decision-makers in companies for whom IT and telecommunication plays a strategically decisive role. Together with the printed edition COMPUTERWELT is also published online at www.computerwelt.at, where also a daily online news service is offered, which can be subscribed as a daily e-mail-newsletter.

Who will you meet?

International telecom operators (fixed and mobile), ISPs, ITSPs, ENUM registries and registrars, regulators, hard-and software manufacturer, consultants

Job function: CEO, CTO, Heads, Directors, Engineers, Program Managers, Project Leaders of the following departments:

- Network Design/ Architecture
- Naming, Numbering, Addressing
- IP Technology
- Domain Services
- Interconnection
- Standardisation
- Technology Strategy
- Network Convergence & Control
- Regulation
- Marketing
- Business Development
- Sales

Certificate of attendance:



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■□□ **Full day workshop** Workshop A | 9:00 - 16:30
Lunchbreak | 12:30 - 13:30

Understanding Session Initiation Protocol (SIP)

The Session Initiation Protocol (SIP) is the proposed standard by the Internet Engineering Task Force (IETF) for telephony, instant messaging, presence and other applications. This tutorial will explain what SIP does and how it works.

Various topics will be covered: After a first overview of the protocol, the participants will hear about the use of Uniform Resource Identifiers (URIs). The tutorial takes a look at how to deal with NAT and Firewalls. Participants will also learn about the infrastructure requirements to run SIP and hear about the pitfalls and how to avoid them. **The audience should have a background in computer networking.**

Topics to be covered:

- Protocol overview
- Uniform Resource Identifiers (URI)
- Requests and Responses

- Proxies and User Agents, B2BUA
- Dealing with NAT and Firewalls
- Security aspects
- SIP extensions
- SIP and ENUM

Participants will learn:

- How the protocol works
- Infrastructure requirements to run SIP
- Pitfalls and how to avoid them

Dr. Christian Stredicke, CEO/CTO
SNOM TECHNOLOGY AG, GERMANY



Dr. Christian Stredicke is founder and CEO/CTO of snom technology AG, Berlin, Germany. He is the architect behind the snom phones and the snom SIP proxy. Dr. Stredicke is active in the SIP area since 2000 and co-author of several IETF documents. He has degrees in Computer Science and Business Administration and a Ph.D. degree in Engineering.

Workshop B | 9:00 - 12:30

■□□ **Half day workshop** **Introduction to ENUM:**
Understanding the basics of
Electronic Numbering

This workshop covers all topics and issues related to ENUM and will answer all open questions. After a short history of ENUM, the workshop explains how it works and how it can be implemented both for end-users and carriers.

Areas to be covered include:

- What is ENUM?
- DNS overview
- ENUM history
- ENUM trials and their results
- The benefits of ENUM in e164.arpa
- ENUM commercial deployment
- The "other" ENUM

Participants will learn:

- What is ENUM and how it works
- Who should implement it and why
- What are the benefits
- How it should be implemented
- What are the issues to be taken into account

Richard Stastny, Senior Analyst
OEFEG/TELEKOM AUSTRIA
and Chair **ENUM FORUM AUSTRIA, AUSTRIA**



Richard Stastny, Senior Analyst, Telekom Austria, studied Physics and Mathematics at the University of Vienna and has over 25 years of experience in computing and digital switching, working for Schrack and later OefEG. He was involved in the adaptation of the digital switching system OES-D (DMS-100) and the introduction of OAM and billing systems within Telekom Austria. He is participating actively in various international standard bodies and for a such as ETSI, ITU-T and IETF. Richard Stastny is also the chair of the Austrian ENUM platform.

Workshop C | 13:30 - 17:00

DNS theory and practice for ENUM

The Domain Name System is crucial to the operation of the Internet and ENUM in particular. It is also not very well understood and broken DNS configurations are depressingly common. Large-scale deployment of ENUM will make substantial demands on all areas of the DNS: hardware, software, data management & validation, query rates, APIs, infrastructure,.... The workshop will explain how the DNS works, what the common pitfalls are and how to avoid them. The challenges to the DNS from ENUM deployment will be discussed during the workshop. It will outline the operational requirements that ENUM deployments will need to consider. The impact of emerging DNS protocols like Secure DNS (DNSSEC) and their potential role in ENUM will also be discussed.

Topics covered in the workshop include:

- Overview of the DNS architecture and its components
- An explanation of DNS jargon
- How DNS lookups are done

- Choosing hardware and software platforms
- Performance considerations
- Security and validation issues
- Operational and technical constraints
- Impact of emerging DNS technologies

Jim Reid, Acting Executive Director
DNS- MODA, Scotland



Jim Reid is Acting Executive Director for the DNS Manufacturers Operators & Developers Association, DNS-MODA, a neutral, not-for-profit membership organisation dedicated to advancing the Domain Name System. He has been working in the DNS area for over 15 years, managing and configuring DNS servers, assisting in protocol development, writing software and tutorial material. He chairs the DNS Working Group at RIPE and founded the ENUM Working group there. Jim chaired the UK ENUM Trial Group and was a founding member of the UK ENUM Group. He was Technical Manager for the UK ENUM Trial and one of the co-ordinators of the first ETSI ENUM Plugtest which was held in June 2005. Jim has over 20 years of experience of writing and presenting tutorials.



XConnect Europe
145 - 157 St John Street, 2nd Floor
London EC1V 4PY, UK
www.xconnect.net

XConnect is the world's first provider of 'Plug and Peer' VoIP interconnection services, dedicated to connecting disparate IP communications entities and bypassing the legacy PSTN. Based on innovative technology from Kayote Networks, XConnect comprehensively address all the main issues of bridging the VoIP islands; numbering, multi-protocol interoperability and security with both bi-lateral settlement and, through the XConnect Alliance, multi-lateral zero-cost arrangements. It is a neutral and trusted provider, with a globally distributed network of voip peering and exchange points, to broadband telephony operators, voip-enabled carriers, enterprises and enhanced service providers, for both multi-media ip and standard pstn traffic. WebSite: www.xconnect.net



Lisa Abbott, Marketing
+1-650-381-6140,
lisa.abbott@nominum.com

Nominum is the leading provider of Network Naming and Addressing solutions for communication service providers and large enterprises. Nominum DNS and DHCP solutions enable migration to converged IP networks for services such as VoIP, IMS, ENUM and triple-play. Nominum solutions guarantee connectivity, service delivery, and integrate with existing business processes. WebSite: www.nominum.com

CONFERENCE AGENDA

Day one | Tuesday 22nd November 2005


8:30 Registration & coffee

9:00 Chairman's welcome & opening address

Richard Stastny, Senior Analyst
OEFEG/TELEKOM AUSTRIA
and Chair **ENUM FORUM AUSTRIA, AUSTRIA**


ENUM: Status Quo and impact on the telecommunications market

9:10 **ENUM's impact on the future telecommunications market**

- 
- How will ENUM change the telecommunications landscape?
 - Understanding the impact of ENUM on service providers
 - Public ENUM and carrier ENUM: Functionality and benefits
 - Benefits of carrier ENUM to save costs for telcos and ISPs

Richard Stastny, Senior Analyst
OEFEG/TELEKOM AUSTRIA
and Chair **ENUM FORUM AUSTRIA, AUSTRIA**



9:50 **ENUM Status Quo: How far are we today?**

- 
- Why ENUM has not been widely deployed into European markets and when it will come?
 - How ENUM will impact the Spanish and European telephony market in a near future?
 - Does converged service success depend on ENUM deployment?
 - Can the industry drive new revenue growth without ENUM?
 - Where is the ENUMoney?

Xavier Casajoana, CEO
VOZTELECOM SISTEMAS S.L., SPAIN


10:30 Refreshment break & networking

11:00 **IETF ENUM Working Group update- Reviewing the status of RFC 3761 goals and milestones**

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- 
- How did we get here?
 - Where are we at?
 - Where are we going?
 - The emerging debate on public vs private vs. carrier ENUM
 - Economic and technical imperatives driving the debate
 - Relationship to VoIP peering and Network to Network Interfaces (NNI)
 - Emerging questions on provisioning, privacy and security
 - ENUM's effect on the existing intelligent network
 - The beginning of the end of SS7?

Richard Shockey, Co-Chair
IETF ENUM WORKING GROUP, USA


11:40 **A successful business case for ENUM**

- 
- How an ENUM domain fits into a successful business?
 - What do customers say, what are they afraid of?
 - Problems in the ENUM business
 - ENUM - not only for VoIP
 - ENUM and beyond - what comes next?

David Lindner, CEO for VoIP
SILVER SERVER GMBH, AUSTRIA

Lessons learnt from global ENUM trials and first deployments

12:20 **ENUM implementation in the UK - lessons learnt!**



The UK was one of the first countries to consider how ENUM should be implemented within the national environment. Being at the forefront of the debate and having a 'hands off' approach towards regulation in the internet space, brought its own set of problems and issues.

- The initial plan
 - Initial goals - an assessment after the event
- The trial
 - What worked, what didn't, and where that left the UK


- Policy formation - responsibility and oversight
 - UK drivers, benefits and problems from an industry led environment
- User ENUM or carrier ENUM?
 - What is the best way to facilitate ENUM take-up?
 - Different perspectives and problems
 - How can they co-exist?
 - The debate in the standards world
- The way ahead
 - An overview of the way forward

Tony Holmes, Naming and Addressing Policy & Strategy Manager

BT GROUP PLC, UK

13:00 Networking luncheon

14:30 **DENIC and the German ENUM-Trial**




The German ENUM-Trial is almost running three years at DENIC eG. During this time, all necessary processes are defined and all operational systems are setup. The talk gives a survey of the successful German ENUM-Trial and states the lessons learnt during that time.

- Overview about the German ENUM-Trial
- Lessons learnt from the German ENUM-Trial
- Model for ENUM in Germany

Sabine Dolderer, CEO
DENIC EG, GERMANY


15:10 **ENUM deployment in Poland**

- 
- Deployment plan
 - Administrative aspects of ENUM in Poland
 - Role of the telco operators and NRA
 - EPP registry system for 8.4.e164.arpa

Andrzej Bartosiewicz, Head of DNS Division
NASK, POLAND


15:50 Refreshment break & networking

16:20 **Why start a national ENUM trial in Australia... in 2005?**

- 
- The presentation will examine a number of open questions that the Australian ENUM trial will seek to answer and conclude by describing the major areas of focus.
- Open issues around ENUM: commercial, consumer, administrative, technical
 - VoIP peering
 - Division between user and infrastructure uses of ENUM
 - Privacy impact assessment
 - ENUM-only numbers
 - Directions for the Australian ENUM trial

Vince Humphries, Manager Content, Credit Management & Infrastructure
AUSTRALIAN COMMUNICATIONS & MEDIA AUTHORITY, AUSTRALIA

17:00 **Implementation and launch of trial solution for Switzerland**




In April 2005 FirstCom Group started the experimental operation of a running web based fully automated registration platform "SWISSENUM.CH". The next challenge will be to expand to other European and Asian markets.

- Best practice Switzerland
 - Organisation
 - Implementation
 - Quality Standard
- Extension of trial solution to other markets
- Lessons learnt

Claudia Müller, ENUM Representative
FIRSTCOM GROUP SCHWEIZ, SWITZERLAND

17:40 **Global ENUM trials: Challenges, lessons learnt, guidelines and best practices**



Chaired by
Richard Stastny, Senior Analyst
OEFEG/TELEKOM AUSTRIA
and Chair **ENUM FORUM AUSTRIA, AUSTRIA**
Speakers of the day

18:10 End of day one and closing remarks from the Chairman

8:30 Registration & coffee
9:00 Chairman's welcome & opening address
Richard Shockey, Co-Chair
IETF ENUM WORKING GROUP, USA

Carrier ENUM: How to manage cost optimization and interconnection?

9:10 **Leveraging ENUM to drive down costs and implement routing strategies**
Today's IP based communications services can greatly benefit from infrastructure ENUM through flexible and fine-grained routing control

- ENUM by example: Real world benefits for sipgate's pan-european service
- Cost-optimization as a driver for infrastructure ENUM
- The bigger picture: inter-service routing strategies

Thilo Salmon, Managing Director
SIPGATE, GERMANY

9:50 **VoIP peering & ENUM**
The very goal of IP communications to allow end-end IP communications has not yet been achieved. Bridging the islands, on a global scale, is vital for the new IP communications industry to succeed. Is ENUM the answer? Will it solve world poverty? And is SPIT (Spam over Internet Telephony) the VoIP killer?

- The what, how, where and why of VoIP peering
- The four layer challenges
- Global feedback from ITSPs
- Numbering in ENUM; the porting challenge
- Carrier ENUM & opportunities for enhancements
 - Security & privacy
 - Synchronization, intelligent caching & propagation,
 - Poisoning and other data management issues
 - Provisioning, routing, cost information

Eli Katz, Founder & CEO
XCONNECT GLOBAL NETWORKS LTD, UK

10:30 Refreshment break & networking

11:00 **Scalable and robust ENUM for Carrier-Grade VoIP**

- ENUM and DNS
- Modeling ENUM data flow
- Key ENUM technical challenges
- ENUM architectures for high-availability and performance

Anton Holleman, Senior Consulting Engineer
NOMINUM INC. USA

11:40 **Carrier ENUM and IP interconnection**
The efficiency and cost-effectiveness of IP networks are driving the transformation of the infrastructure of the world's major telecommunications carriers. However, the simplicity and ubiquity of the international telephony numbering scheme, E.164, makes it imperative that carriers find a way to use that legacy naming scheme to identify IP interconnection points for call routing. Carrier ENUM could be the common, standardized mechanism that can achieve that objective reliably and consistently.

- Requirements and benefits of IP interconnection
- Carrier ENUM versus end-user ENUM
- The ENUM archipelago
- Interconnection of operator-controlled IP-services
- Challenges in implementing carrier ENUM

James Baskin, Distinguished Member of Technical Staff
VERIZON, USA

12:20 **Carrier-ENUM production deployments by North-American mobile operators**

- Interconnecting multi-media messaging services (MMS) across GSM and CDMA networks in North America
- Using existing sources of number-portability data to fulfill the role of a Tier-0 and Tier-1 carrier-ENUM root infrastructure

- Operator requirements for origin-based routing information that cannot be returned by a Tier-2 ENUM query for a NAPTR record

Douglas Ranalli, Founder & Chief Strategy Officer
NETNUMBER INC., USA

13:00 Networking luncheon

14:30 **Taking telephone numbers into the future**

- ENUM provides a clear path to bring next-generation services to a communication market dominated by telephone numbers
- Adopting ENUM impacts ordering flows and systems such as order management and telephone number inventory
- Modeling ENUM activation flows with other 3rd party activation functions provides a clear path to add this capability
- Select central database functions may be efficiently migrated to ENUM to consolidate functions and reduce expenses

Steven Farnsworth, VP Numbering Solutions
EVOLVING SYSTEMS INC., USA

ENUM and beyond: How will ENUM change the telecommunication landscape?

Chaired by
Richard Shockey, Co-Chair
IETF ENUM WORKING GROUP, USA

Speakers:
Daniel Rüetschi, CEO
FIRSTCOM GROUP SCHWEIZ, SWITZERLAND
Carsten Schiefner, Project Manager Production Preparation IP - Technologies & Markets
DEUTSCHE TELEKOM AG, GERMANY
Andreas Jürgensen, Manager Networks
FREENET AG, GERMANY
Andreas Kock, Technical Project Lead VoIP
FREENET AG, GERMANY
Robert Schischka, CEO
ENUM.AT GMBH, AUSTRIA

15:40 Refreshment break & networking

Guaranteeing security and privacy on the DNS

16:10 **ENUM deployment on broadband telephony: Interconnection specifics and managing security and validation**

- Privacy and security concerns: Interconnects can save money, but can not be done for "any price"
- Guaranteeing validation and authentication issues
- Interconnect specifics for rich broadband communications services
- Current status and trends in peering from Telio's perspective

Alan Duric, Co-Founder and CTO
TELIO AS, NORWAY

16:50 **ENUM - Break-through or show-stopper of VoIP: Security and privacy issues**

Being reachable anytime anywhere is one of the key success stories of the end of last century and essential for the future. The advantage of electronic communications is about to be perverted to being object of mass marketing and sales activities instead of being subject of intended communication. ENUM is one key element of enhancing the general reachability of end users but might lead to disastrous communication behaviours analogous to SPAM in the area of electronic messaging.

- Advantages of directory services
- SPIT - Challenges of ENUM from end-user perspective
- Workable solution approach

Dr. Günther Schreiner, Technical Director
TOPLINK GMBH, GERMANY

17:30 End of the congress and closing remarks from the Chairman

