Pioneering Internet in Bulgaria

An almost personal story

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Pre-Internet

- Spring 1986, first modem connections outside Bulgaria from from lab 207 of then VMEI Varna (now Varna Technical University)

- Connections to an BBS in Scotland… phone number from the BYTE magazine, thanks for Radoslav Markov

- Bulgarian modem IZOT 8004E at **300 bps** with manual dealing

- File exchange with the BBS, chat, electronic mail, discussion groups

First BBS in Bulgaria

- Fall of 1986, first Bulgarian BBS - **Danbo BBS**

- Second BBS appeared about a month or two later in the Debelt steel plant

- Running Fido in MS-DOS on a 80286 PC (16bit), internal modem up to 2400 bps … with autodial. Member of the FidoNet network 259 (Scotland)

- Beginning of 1987 - created the network 359 and Region 35 (Bulgaria) in FidoNet Zone 2 (Europe)

- Electronic mail and discussion groups in FidoNet

Electronic mail with Internet

- It was then possible to exchange e-mail with Internet. For example the FidoNet address "Daniel Kalchev 2:359/1" was represented in Internet as **daniel_kalchev@f1.n359.z2.fidonet.org**

- As diploma thesis designed software implementing the FidoNet protocol in UNIX as well as a gateway between the DOS and UNIX based systems for e-mail

- Connection between the systems via TCP/IP - KA9Q at both sides and a long serial cable (SIP)

- First customers

On the way to Internet

- Created the private company Digital Systems Co. November 1989.

- EUnet found out about us and invited us to join them in the beginning of 1990

- Very interesting schema for working around the Telecom monopoly in Europe. The European UNIX Group. You had to become member to connect. Creating the Bulgarian UNIX Group.

- Meet Piet Beertema and Daniel Karrenberg in Amsterdam, got assigned 192.92.129.0/24. RIPE NCC was an vague idea and implemented by those two in their lab.

- Electronic mail and NetNews in EUnet was available via UUCP and SMTP. No SMTP yet…

- After establishing the UUCP connection, Danbo BBS could be addressed as danbo.uucp, so my address became **daniel@danbo.uucp**

- By September 1991 the BG TLD application was completed and my e-mail address changed to **daniel@danbo.bg**

Connections in the network

- The connections with the world were done via modem and a telephone line. Periodically our system would call either Amsterdam or Crete (mcsun or ariadne) to exchange e-mail and NetNews via UUCP

- The .BG TLD primary was hosted in ForthNet (Crete) as no TCP/IP to Bulgaria was available

- Users of electronic mail would connect via an modem pool. Fixed price per call in city.

- In the beginning of 1991 an PAD connection to the X.25 network (BULPAC) was established. Users of e-mail and NetNews could connect now via the X.25 network too

- Partner with TELEBIT. Out of this world modems!

TCP/IP to Bulgaria

- During the summer of 1992 our office moved to a new place and an X.25 protocol connection was established with BULPAC.

- Invited to Interop'92 in May 1992 in Washington to speak about how we develop Internet in Bulgaria. Established relationship with BSDI, Inc. (European distributor), B&W Software, Cisco Systems (Partner for Bulgaria). Individual export license for dual-use products. Fun times..

- Developed an driver for the HDLC controller by ADAC to implement X.25 and software PAD implementation in BSD/OS.

- During Christmas of 1992, at about 8pm managed to finally fix the OSI and TCP/IP stacks in BSD/OS and the first permanent TCP/IP network between Varna and Amsterdam was established. The network 192.92.129.0/24 was now announced to the Internet. My parents were happy to see me back home.

- NSFnet in the USA had some struggle whether to allow traffic "from that post-communist country" on the US backbone, but eventually approved it.

Network growing

- First days of 1993, first customer by TCP/IP via leased line - Unimasters Logistics in Varna

- TCP/IP services by modem, X.25 and leased lines for customers

- .BG TLD primary moves to Bulgaria

- Leasing connections to other towns in Bulgaria, nodes in regional towns (28 in Bulgaria) for local access

- First www site in Bulgaria: www.digsys.bg. One of the first 100 in the world…

- 1994 - first leased line for Internet traffic between Varna and Amsterdam. Analog 28.8-33.6 Kbps

- First AS in Bulgaria: 3245

- IP address assignment from RIPE. 193.68.0.0/16 for Digital Systems, 193.200.0.0/16 for Last Resort

- Value added services such as EUnet Traveller and EUnet Fax

- First on-line casino — experiment with electronic cash

- 1994 - connecting Skopje via leased line to Internet in cooperation with the Meteorology Institute of BAS. Didn't last long…

- 1996 - first in Bulgaria international digital leased line with capacity of 64 Kbit

And growing..

- 1997 - first bidirectional satellite connection for Internet to Bulgaria: 256 Kbit via Telenor

- First web based database system in Bulgaria: **Bulgarian News**. Publishes newspapers, magazines, books, scientific publications, free access.

- 1998 - satellite channels from the USA to several towns in the country (shared capacity 2 Mbit, receive only)

- First web based tourist reservation system, TourInfo (www.tourinfo.bg), on-line laws DEJURE+

- Participation in a project to distribute NetNews via satellite and proxy objects preloading — 45 Mbps receive capacity and hierarchical system for distributing NetNews and proxy servers in all nodes across the country

- Building first radio links, using the IEEE 802.11 protocol, first FHSS then DSSS

- VOIP services

- 1999 - access to Internet via ISDN

- Internet Cards — service without contract

Summary

- It all started in Varna, undisturbed

- Infrastructure developed as users emerged

- Motto "Internet for everyone"

- Each year rented booth on the Plovdiv Fair and various scientific conferences to disseminate knowledge about Internet and technology. Information brochure every year.

- First several years, no competitors

- Then, The Internet is unstoppable

Thanks for your attention!

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