

# ***The Early History of the Israeli Internet***

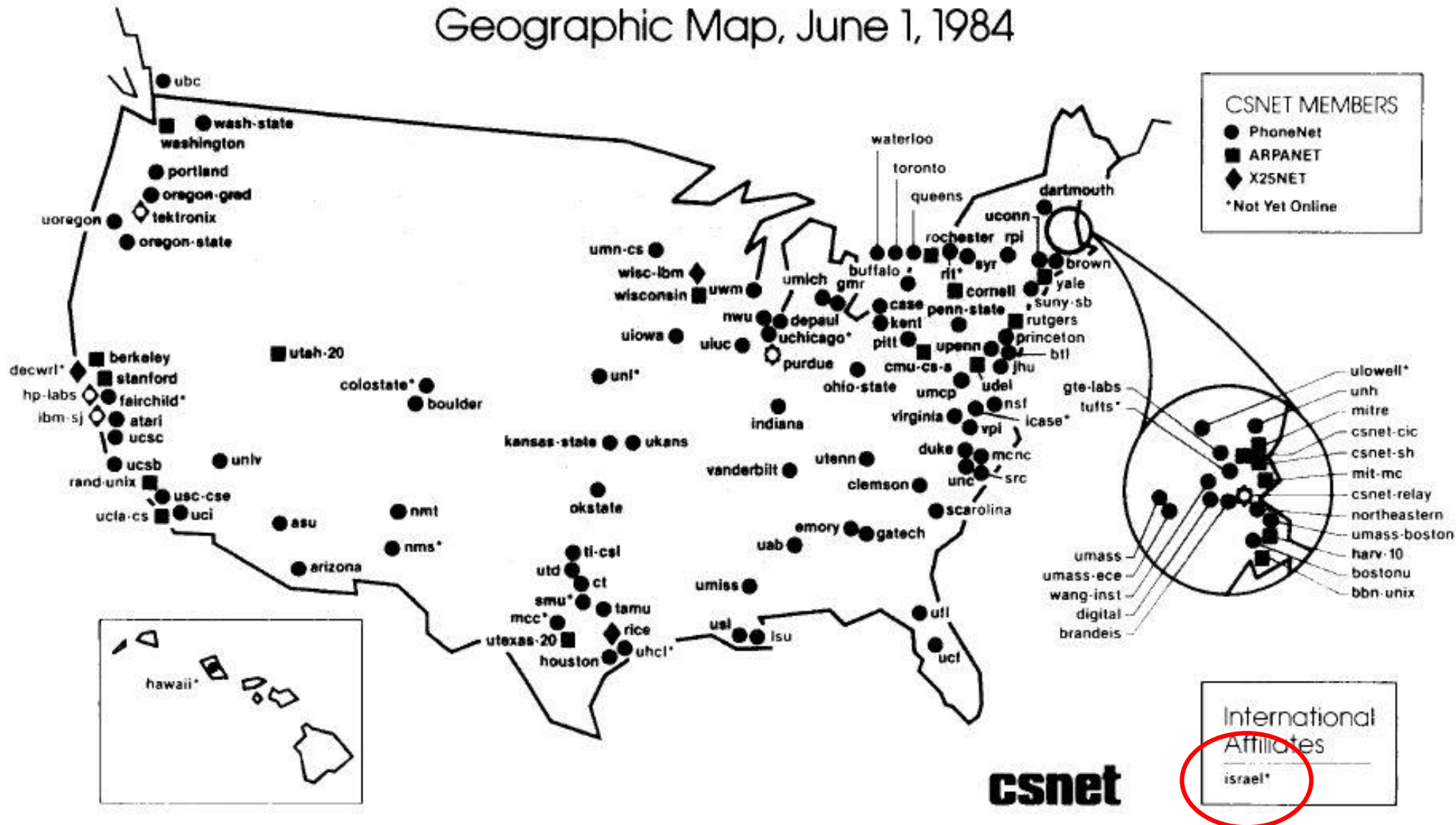
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Tel Aviv  
July 2010

## *Internet precursors*

- **Csnet – April 1984**
  - **9.6kb IP/x.25 connection**
- **Bitnet/EARN – August 1984**
  - **9.6kb leased line to Europe**
- **Email access to Internet hosts via gateway in USA**

Geographic Map, June 1, 1984



## Csnet

- Israel first international affiliate
- 9.6Kb X.25 link to CSNET via HUJI
  - On demand connection
- Full Internet (TCP/IP) access to CSNET X.25 Internet hosts
- IP access to Arpanet/Internet hosts not permitted - DARPA policy
  - Policy relaxed in 1986
  - Israel becomes part of Arpanet - 1989
- Email (CSNET/Arpanet – Israel) via HUJI and CSNET gateways
- Prof. Shmuel Peleg and Danny Braniss

1 City University of New York, USA	05/05/81
2 Yale University, USA	05/05/81
3 Pennsylvania State University, USA	10/02/81
4 New Jersey Educational Computer Network, USA	01/19/82
5 Brown University, USA	01/20/82
6 Cornell University, USA	02/06/82
7 Princeton University, USA	03/29/82
8 Columbia University, USA	05/03/82
9 Rockefeller University	06/01/82
10 Boston University, USA	06/06/82
11 University of California at Berkeley, USA	07/18/82
12 University of California at San Francisco, USA	07/27/82
13 Massachusetts Institute of Technology, USA	08/05/82
14 University of Rochester, USA	08/25/82
15 State University of New York/Binghamton, USA	09/08/82
16 Harvard University, USA	09/16/82
70 IBM Israel Scientific Center, Haifa, IL	08/13/84
71 Technion - Haifa, IL	08/13/84
72 Haifa University, IL	08/13/84
73 Tel Aviv University, IL	08/13/84
74 Weizmann Institute of Science	08/13/84

## Bitnet

**The first Bitnet  
& EARN connections**

**EARN**

INTERNATIONAL LINES



## *Internet and int'l circuits*

- July 1989 – MACHBA orders the first int'l 56kb link to Nysernet in USA
- Sept 1989 – Bezeq informs Machba that a 56kb link will not be available for another 10 months
  - MACHBA orders a 9.6kb link
  - Bezeq informs MACHBA that MACHBA has to find a US carrier for the other half – MCI is selected in Feb 1990
- June 26, 1990 – 9.6kb leased line Internet link to USA becomes operational

## ***Int'l advocates***

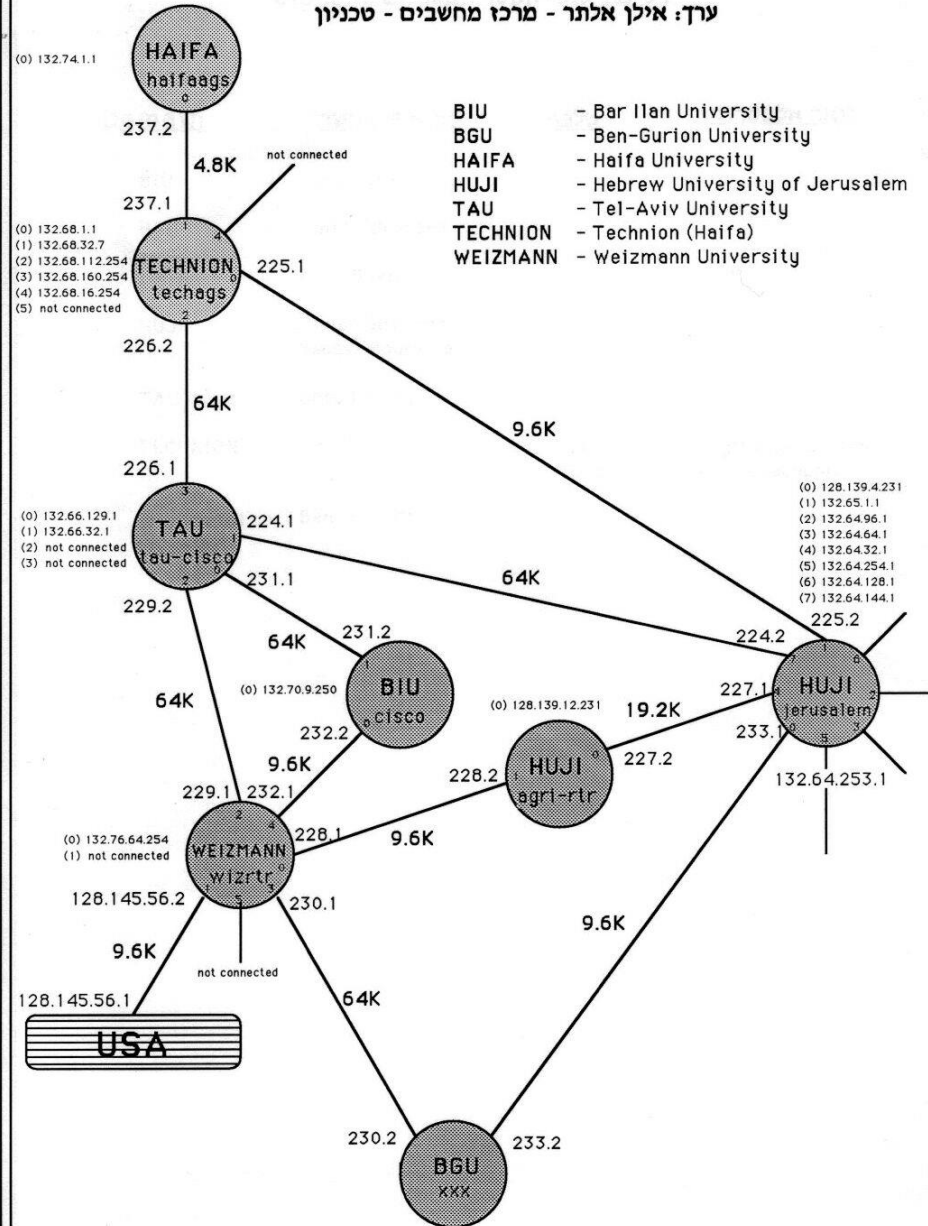
- **Larry Landweber**
- **Richard Mandelbaum**
- **Ira Fuchs**
- **Mel Ciment**
- **Steve Goldstein**



אוגוסט 1990  
Ver: 1.0

## מפת רשת התיקשורת הארצית (128.139.XX.XX)

ערך: אילן אלטר - מרכז מחשבים - טכניון



## *Int'l links*

- **March 1991 – 64kb satellite link via Bezeq is made operational**
- **Oct 1991 – 64kb link to Europe via Bezeq is made operational**
- **Jan 1993 – 128kb satellite link via Israsat**
- **Jan 1994 - Sat link to US upgraded to 256kb**
- **Nov 1994 – Link to Europe upgraded to 128kb**
- **Jun 2010 – 2x 2.5Gb to Europe**

## *How ISPs got started in Israel*

- June 1991 meeting with Ministry of Science, Ministry of Trade and Ministry of Communications to convince MACHBA to allow commercial companies access to this “Internet” thing
  - MACHBA requests self-limitation in license for only R&D companies as well as education
- Gov’t continues to try to convince MACHBA to handle not only leased line companies but also dialup.
  - Feb 20, 1992 – MACHBA turns down gov’t to handle dialup users and recommends that gov’t issue licenses for companies to be formed
  - Gov’t accepts MACHBA’s view and issues at end of 1992 the first ISP licenses to Actcom, Dataserv and Netmanage

## ***The birth of Israeli ISPs***

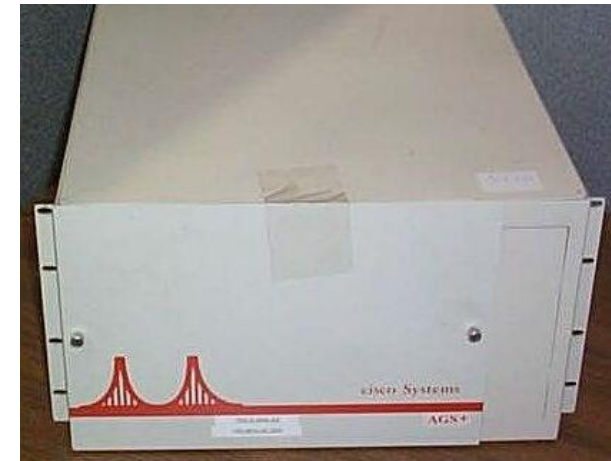
- **Inter-ministry committee decides which companies can connect to MACHBA**
  - **During 1992-1994 - 50 companies allowed to connect to MACHBA and hundreds to the new ISPs – through gov't ITEX initiative**
- **May 1994 – MoC grants open ISP licenses to Elron, Darcom, and Netmanage**
- **1995 – 5 ISPs exist – Elron, Netvision, Actcom, Shani and Dataserve**

## ***The first connections to the Internet***

- 1. KavManche connected on Dec 7, 1992 (9.6kb)
- 2. IEC connected on Dec 9, 1992 (9.6kb)
- 3. Open U upgraded to 19.2kb on Mar 3, 1993
- 4. E&M Michshoov connected on Mar 7, 1993 (9.6kb)
- 5. BRM connected on Mar 8, 1993 (9.6kb) [BRM later became Checkpoint]
- 6. Datasrv connected on Mar 21, 1993 (64kb)
- 7. RAD connected on Mar 22, 1993 (19.2kb)
- 8. BezekZahav connected on Apr 23, 1993 (19.2kb)
- 9. Fibronics connected on May 4, 1993 (19.2kb)
- 10. Lanoptics connected on May 4, 1993 (9.6kb)
- 11. Applied Materials connected on May 4, 1993 (9.6kb)
- 12. Aleph Yissum connected on May 12, 1993 (9.6kb)
- 13. Onyx connected on May 23, 1993 (9.6kb)
- 14. Actcom connected on June 10, 1993 (9.6kb)
- 15. Bahai World Center connected on July 1, 1993 (64kb)
- 16. Netmanage connected on July 21, 1993 (19.2kb)

## ***Cisco vs Lannet***

- Yehuda Zisappel pushed a new Bynet box called a “brouter”
  - **RND**
- The academic network wanted a new box called Cisco
- In the end we purchased the first Cisco AGS+ routers in Israel in 1989



## ***IIX***

- **Gov't informs MACHBA that all commercial companies have to be disconnected by May 1996**
- **Dec 31, 1995 - ISOC-IL decides to create an Israeli Internet Exchange modeled after similar US based systems**
- **The IIX is born**

## ***\*.il domains***

- Decided on co.il, ac.il, org.il, etc. in 1992
- More formalized rules published in 1996
- The 1<sup>st</sup> Israeli domains
  - All universities: huji.ac.il, tau.ac.il, bgu.ac.il, etc. – July 1990
  - Commercial
    - iec.co.il – July 1992
  - Amutot
    - matimop.org.il – Oct 1993
  - ISP
    - actcom.net.il – Oct 1994 (bought out by Bezeqint)
  - School
    - misgav.k12.il – June 1995 (gone)
  - Municipal
    - ladpc.gov.il – July 1995 (changed to ladpc.co.il)



***Thanks!***