



Nezar Nabil Sami  
nsami@nileuniversity.

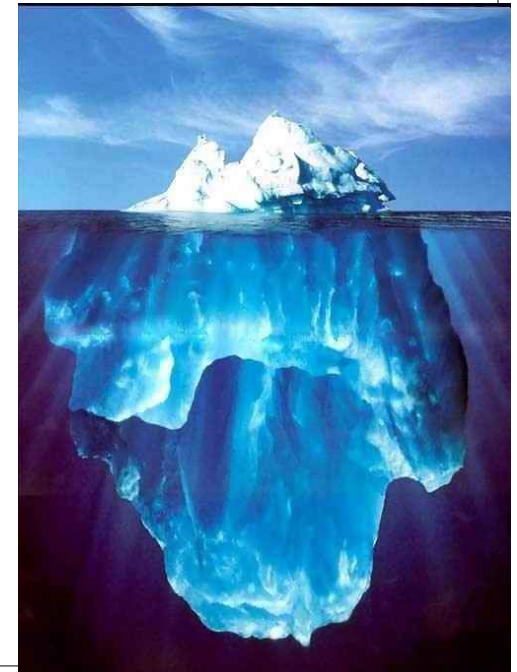
edu.eg

# Egypt IPv6 Task Force; Progress, Challenges and Future Trends

AfrINIC-10 Master subtitle style

# Agenda

- Global vs. Local Trends
- IPv6 Task Force Progress
- The Leap Frog!!





## Global vs. Local Trends

Click to edit Master subtitle style

# Global Trends

- Internet users grew 183% from 2000. 1 billion users last year. 2 billion by 2011.
- 2 billion cell phones in 2006. 3 billion by 2009.
- Wireless “hotspots” grew 87% in on 100,000. 200,000 by 2010.



# Power Trend



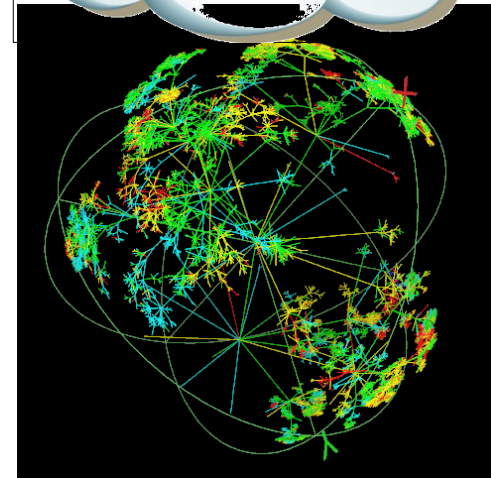
**Global  
Connected  
Economy**



**Internet**

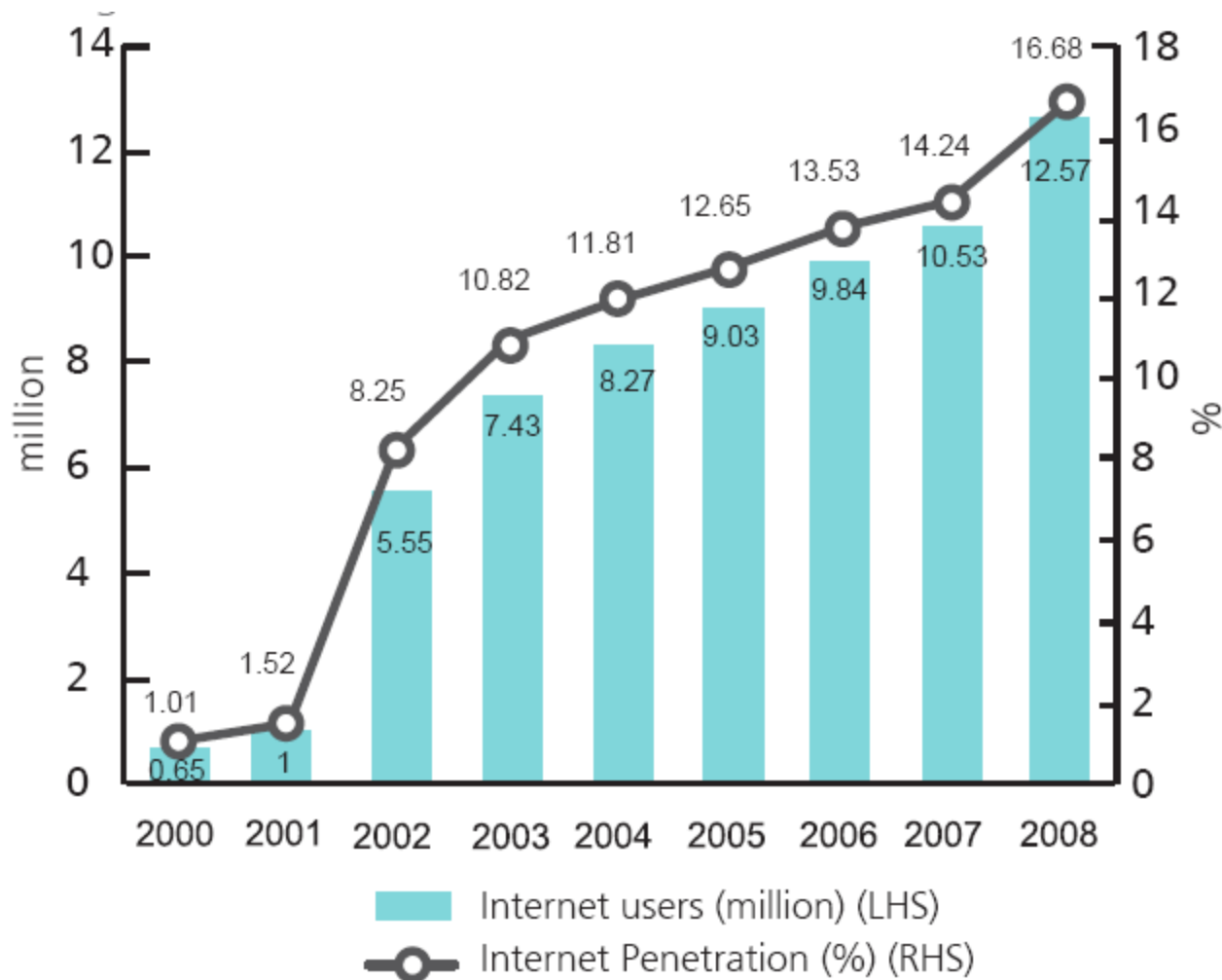


**Commoditization of  
Technology**

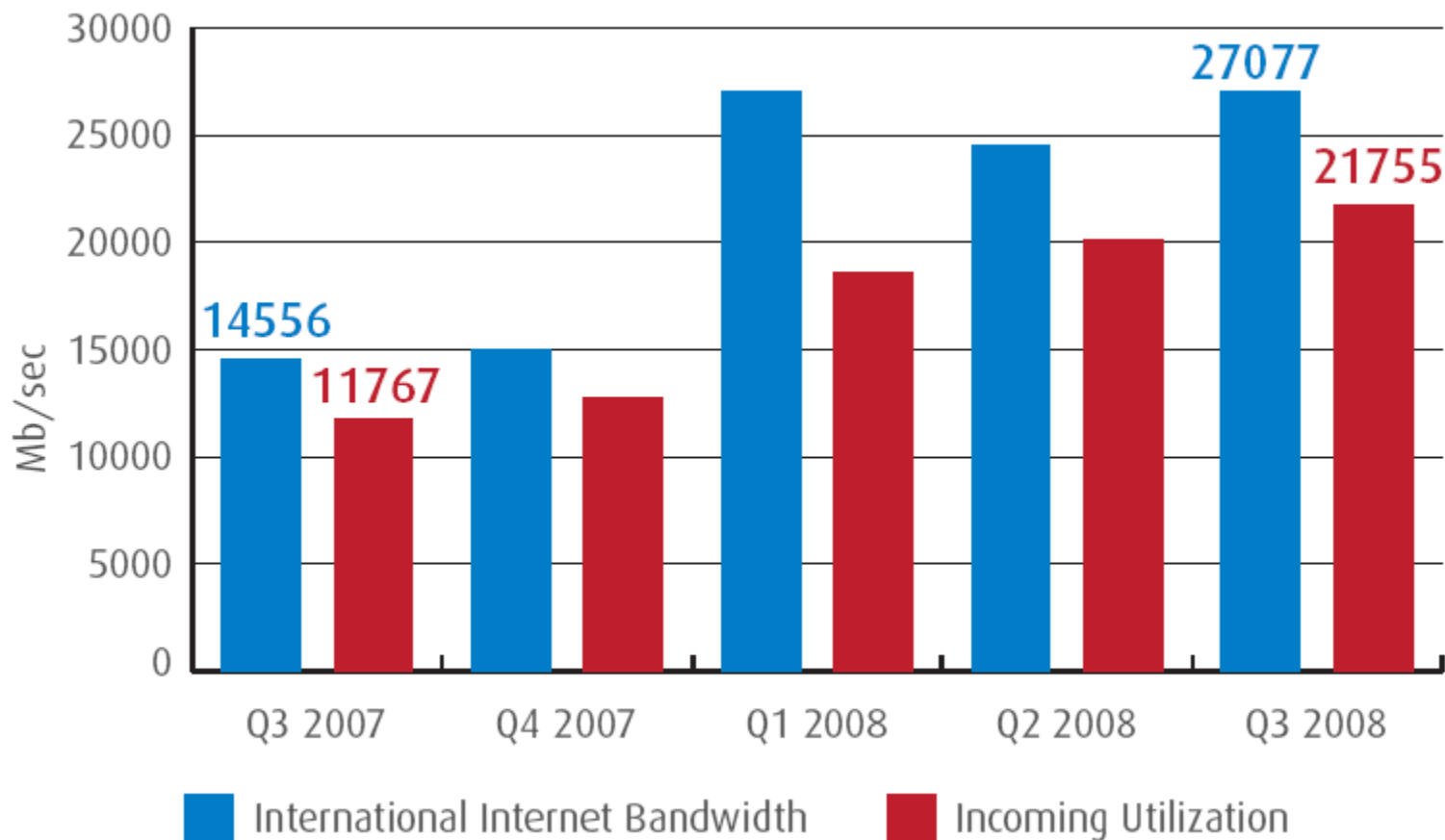


**Complexity and  
Challenge!**

# Egypt: Internet Users & Internet

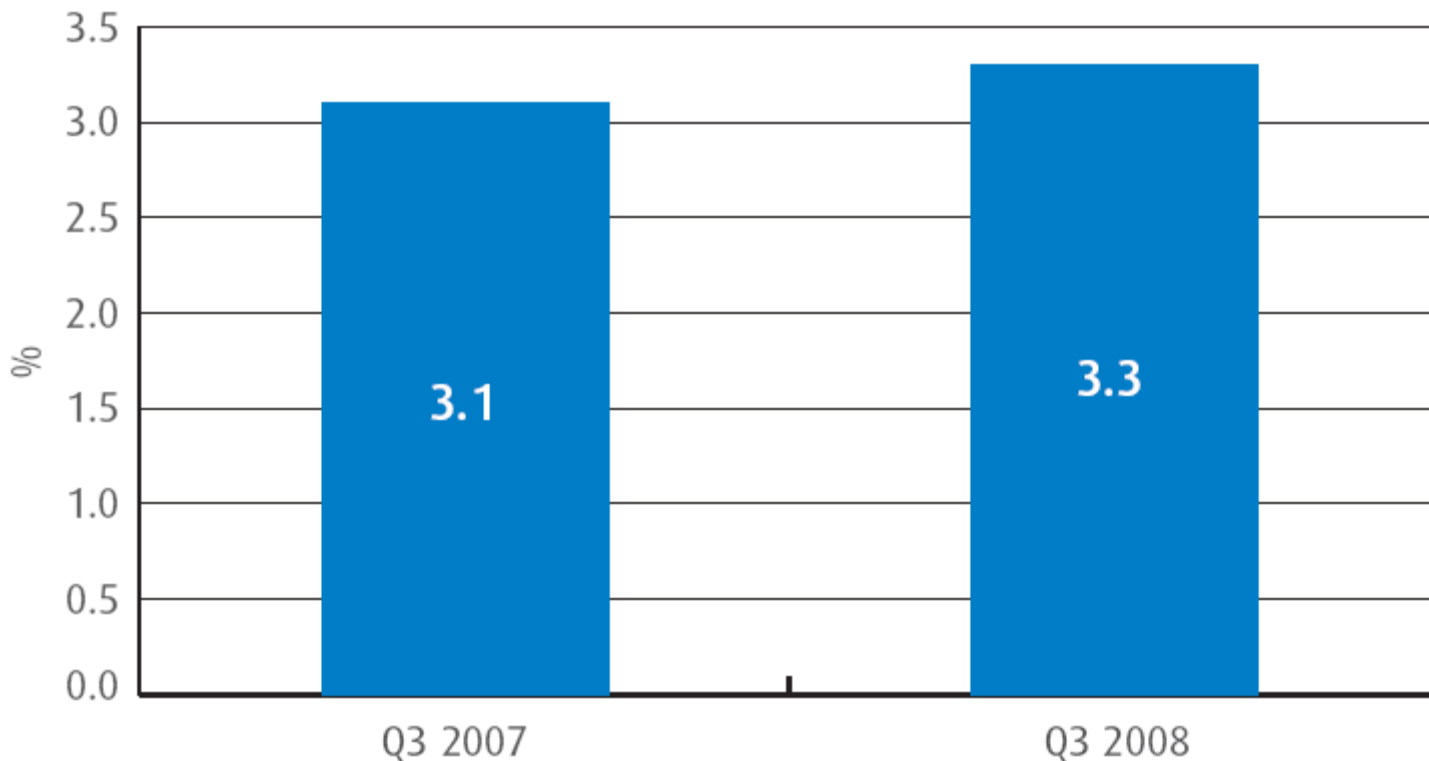


# Egypt: International Internet Bandwidth



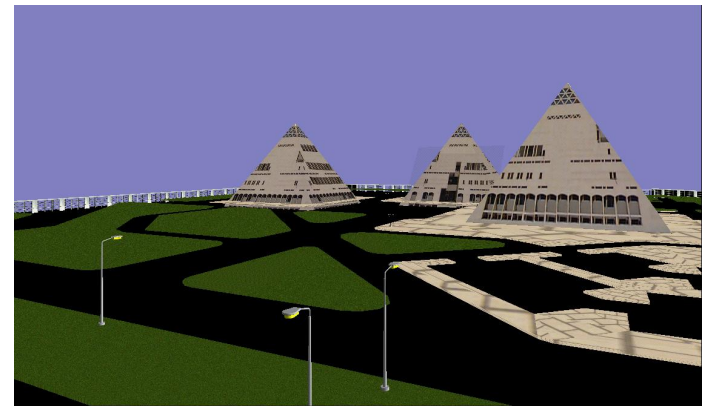
Source: Ministry of Communications and Information Technology, National Telecom (NTRA)

# Egypt: ICT Contribution in GDP



Source: Ministry of State for Economic Development

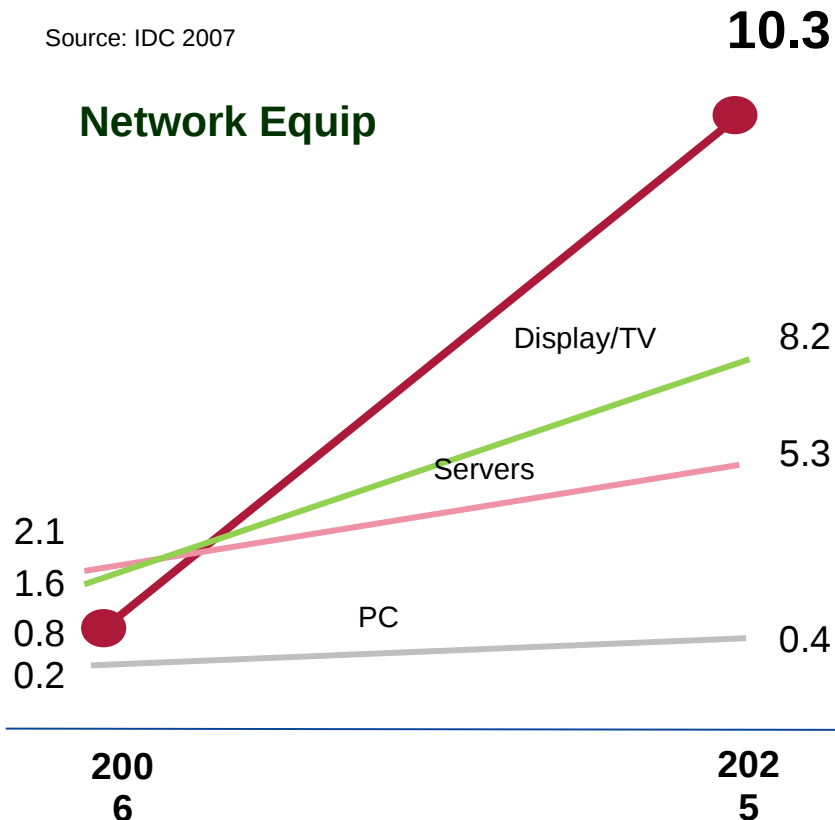




# Why care about Green?

## Power Consumption Forecast [B kWh] (2006-2025)

Source: IDC 2007



- § **Electricity costs rose 88% in US since 2003** (source: US EIA official government stats)
- § **Energy is a non-trivial OPEX item**
- § **Worldwide legislation changes and public support for energy efficiency and climate control**
  - California: reduce CO2 by 80 % in 2050
  - European Union: reduce CO2 by 20% by 2020
  - UK: reduce CO2 by 20% by 2010
  - Japan: reduce CO2 to 6% below 1990 level by 2010



# IPv6 Task Force Progress

Click to edit Master subtitle style



# E-IPv6 Test Bed

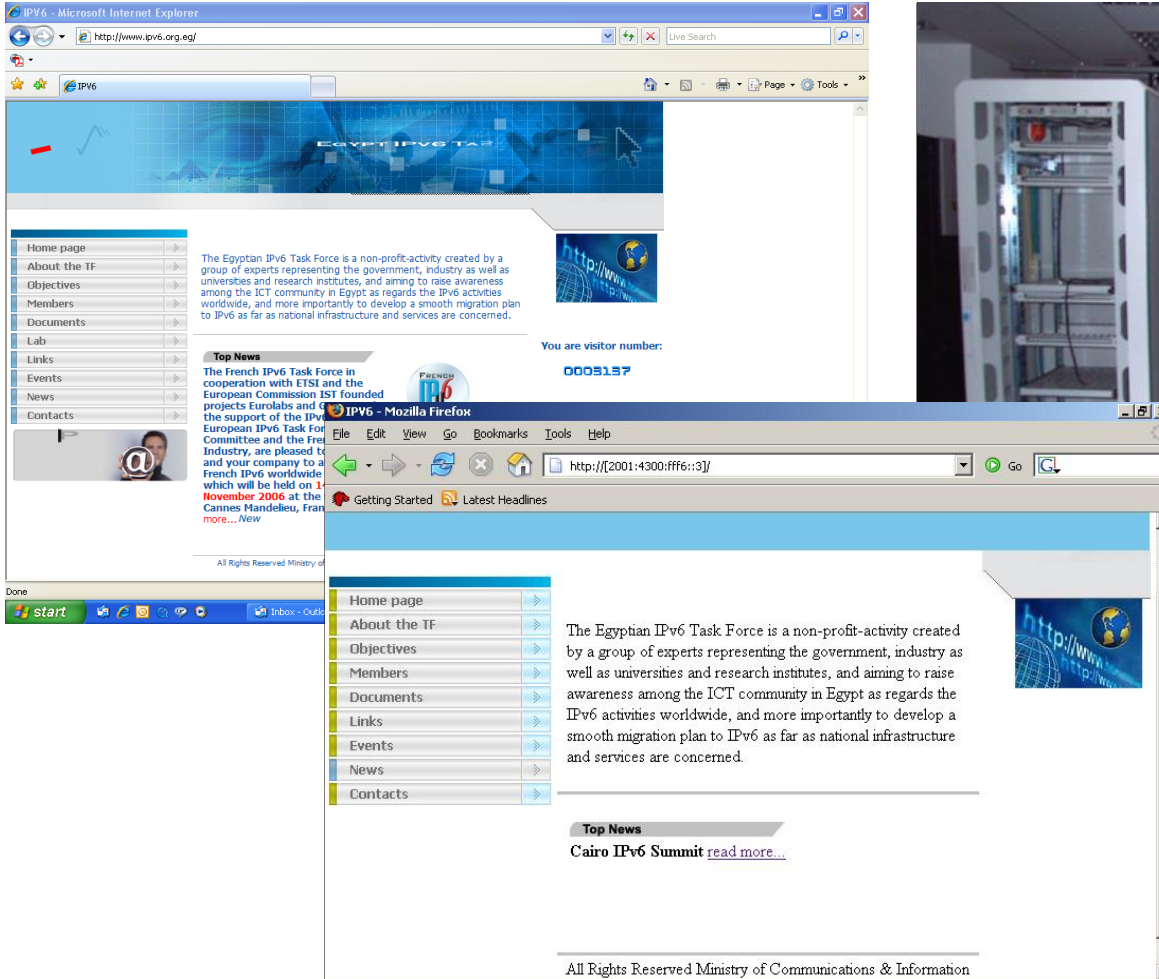
Connect them together by using IPv6 over IPv4 Tunnels



Building the Egyptian (Native IPv6 Connectivity) work (NREN) via dedicated



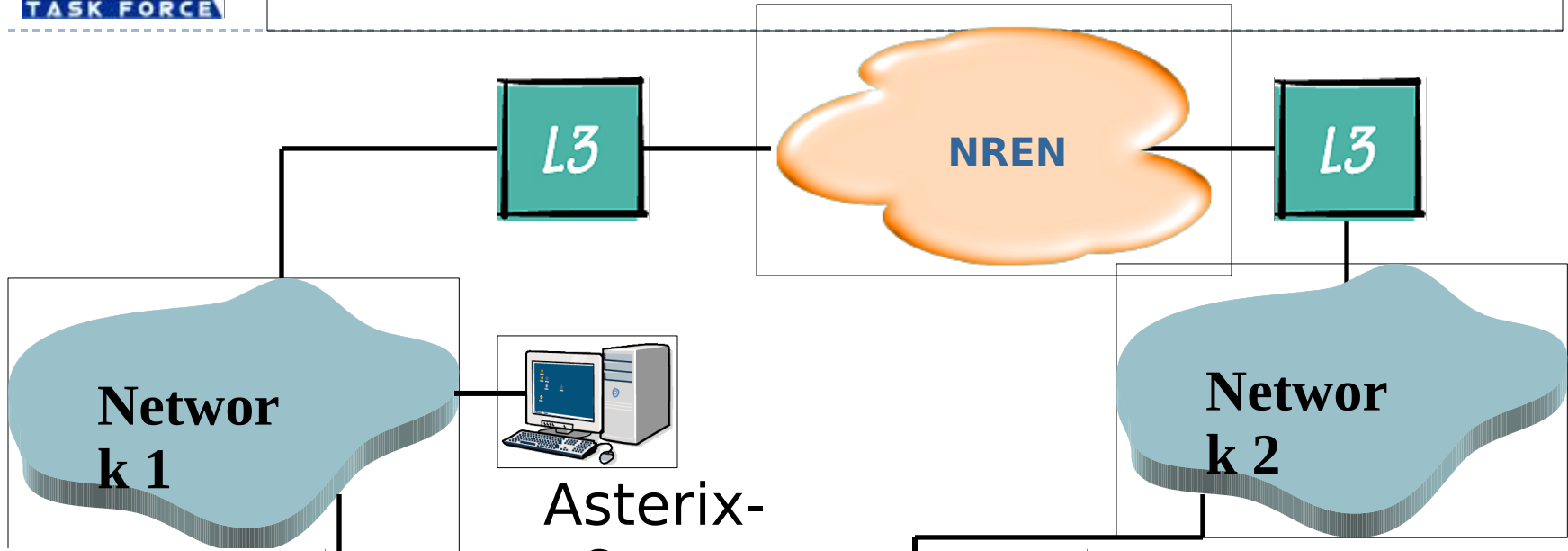
# IPv6 Test Lab



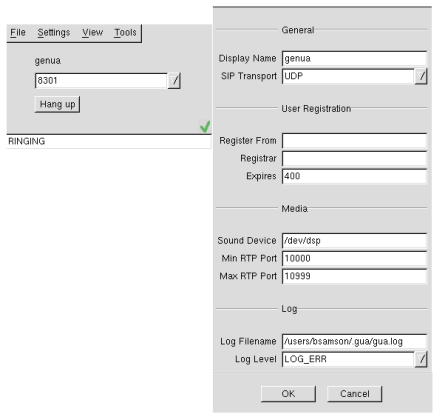
<http://www.ipv6tf.org.eg>



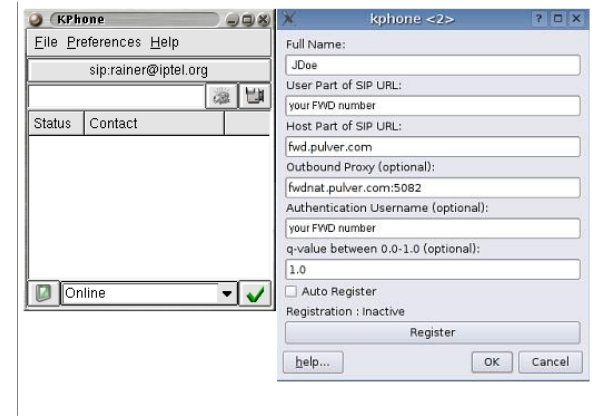
# VoIPv6



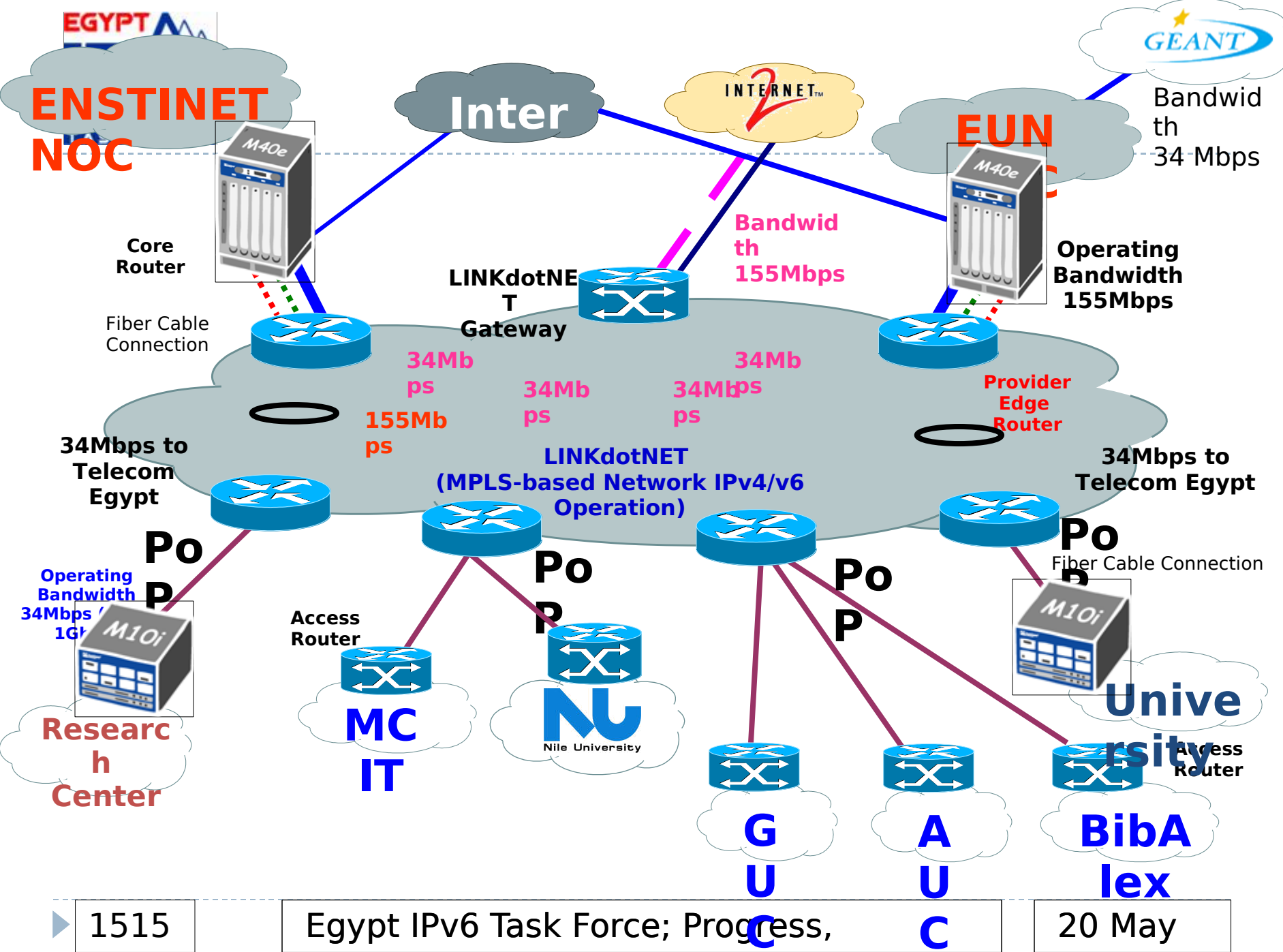
Asterix-v6 Server



SipSet Client



Kphone Client





# The Leap Frog!!

Click to edit Master subtitle style



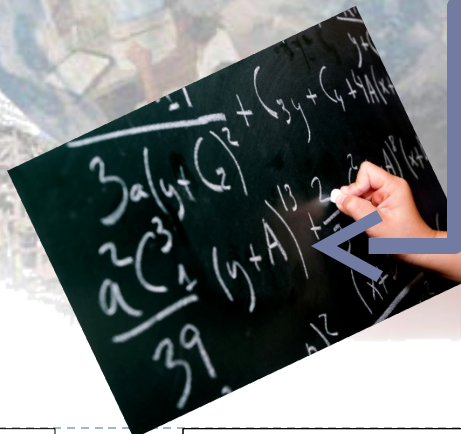
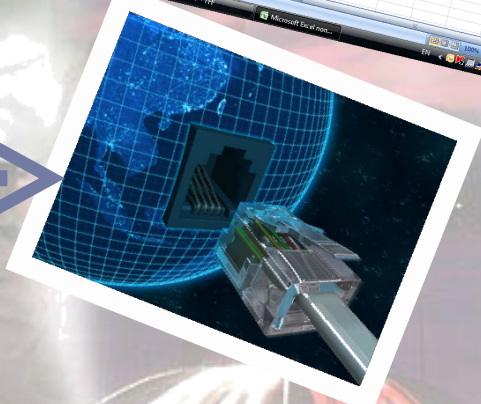
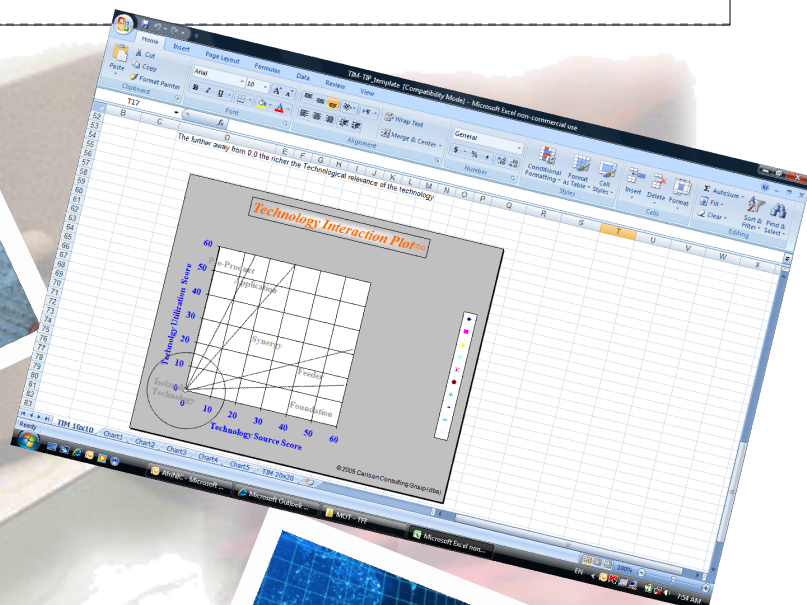
# Collaborative Work

- **Renewable & Sustainable Energy**
  - Egyptian R&E Repository
- **Medical Applications**
- **Remote Sensing & Space Sciences**
  - Telemedicine (Tele-surgery, Tele-radiology, Tele-pathology ..etc)
- **High Speed Computing**
- **Astronomy & Geophysics** (Solar Research, Seismology, Geomagnetism ..etc)
- **Applied Sciences**
  - Genetics Engineering
- **Digital Library & Interlibrary Loan**
  - Nanotechnology Applications

# IPv6 Investment

Trend Coupling Matrix

Score ++ + + or 0 - --	Cell Colls	Nanotechnology	Artificial Intelligence	3D Printing	Biotechnology / Genetic Engineering	Submersible	Drug Delivery	Robotics	Drug Discovery	Biostatistics	Total	Net	Tension
Globalization of all markets	+									+	2	2	0
Increased public sector activity	+		++						+	+	7	3	4
Tech connectivity transforms how people interact			+		++			+		+	5	5	0
Consumers' role strengthens					+		+	+	+	+	6	6	0
Longevity increasing					+		+	+	+	+	4	4	0
Demand & pressure on natural resources will grow	++	+			+			+			5	5	0
Healthcare spending grows		+			+		+			++	10	4	6
Increased demand for privacy			-					+		-	5	-3	2
Access to info changing economics of knowledge		+	+	+			+	+		++	9	9	0
Strength (sum abs. values)	4	3	6	1	5	4	5	5	8	12			
Net (algebraic sum)	4	3	2	1	5	2	3	5	6	4			
Tension (Strength minus Net)	0	0	4	0	0	2	2	0	2	8			







**Thank You..**

**Nezar Nabil Sami**  
**[nsami@nileuniversity.edu.eg](mailto:nsami@nileuniversity.edu.eg)**