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# HOW TO REGULATE A PLATYPUS

## INTERNET TELEPHONY REGULATION

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## Outline

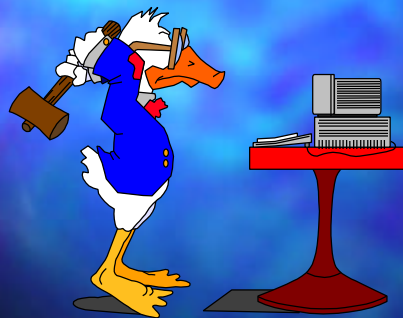
- Introduction: Murrow Center, Internet & Telecoms Convergence Consortium
- What is Internet Telephony?
  - It Is Not A Duck
- Internet Telephony as a Forcing Function for a New Technology-Neutral Regulatory Model: Open Communications Policy
- Conclusion: Leave the Platypus Alone!

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# Introduction

- **Edward R. Murrow Center**  
**Fletcher School of Law & Diplomacy**
    - Tufts University
    - Internet Modeling Project for ITC:
      - Streaming media cost & revenue model
      - 3G in Europe cost & revenue model
      - see [murrow.org](http://murrow.org)
  - **Internet & Telecoms Convergence Consortium (ITC)**
    - MIT, Tufts, CMU
    - BT, H-P, MediaOne, Motorola, Nokia, Sprint, Telecom Italia, Telefonica, Zephyr
    - research & dialog on technical, economic, and policy issues
      - See [itel.mit.edu](http://itel.mit.edu)
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## Internet Telephony is NOT a duck, but it breaks technology & regulatory models



- Ex-FCC Chairman Reed Hundt is claimed to have said: "If it walks like a duck, quacks like a duck, and looks like a duck, it must be a duck"
- **WRONG ANSWER:** Internet telephony is a harbinger of MANY new species – a platypus-like mutation - leading to many new markets.

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## IP Telephony vs. Internet Telephony?

- Internet Telephony is argued by some (eg, the ITU) to refer only to IP-based calls across the public Internet. Why?

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- Especially in Europe, the term 'Internet Telephony' has been besmirched by the poor quality of first generation software.
- So what?
- WAP Internet phones are the coolest thing outside of iMode in Japan. What are they? POTS? I don't think so.

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## What is Internet Telephony?

- Computer Telephony + VoIP + VON + IP Telephony + IP voice messaging + IP voice chat + Internet phones + etc.  
=

## Internet Telephony

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## Internet Telephony Taxonomy

- Class 1: computer to computer
- Class 2: phone to computer & vice versa
- Class 3: phone to phone

Source: David Clark, MIT ITC

## Internet Telephony = Horseless Carriage?



- It could be the horseless carriage of the 21<sup>st</sup> Century
- But it's still too soon to say, in my opinion

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## WHAT IS WAP?

- Should WAP be regulated as a voice telephony service?
- How about GPRS?
- How about CDPD (aka bits to Palms)?
- And iMode data/Internet services?
- If not, then why regulate the same technologies offering a voice interface instead of a text interface?

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## Who Wants to Kill the Duck?



- In Hungary, IP telephony must by regulation be of poor quality.
- Can we think of other services governments require to be bad?
- How can this make sense for users aka citizens?

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## Internet Protocol Voice vs PSTN

	Net2Phone	AT&T
Monthly charge	.99	\$7.95
US night	.039	.05
UK	.079	.10
China	.25	.32
Australia, France,Ireland	.079	.17
Philippines	.21	.27

Source: Interactive Week, June 5, 2000

## IP Telephony Restrictions from A to Z

Albania	Egypt	Mexico	Thailand
Argentina	Estonia	Nepal	Turkey
Bahrain	Ghana	Pakistan	Uganda
Botswana	India	Panama	Venezuela
Bulgaria	Israel	Philippines	Vietnam
Cuba	Jordan	Slovakia	Yemen
Cyprus	Kenya	South Africa	Zimbabwe

Source: C. McTaggart & T. Kelly, ITU, IPTEL/03, My 29, 2000, p. 22

## Regulating Internet Telephony Means Regulating What?

- Essential public services?
  - Eg, universal service mechanisms – reasonable.
- Voice services?
  - Must we regulate email with real-time voice attachments/instant voice messaging, etc.?
- Is there significant delay?
  - Why should it be required to be bad?
- Is service priced?
  - If it is given away, who cares?
- Is the PSTN involved?
  - If it is, then that use is already regulated & tariffed at some level.
- Is an ordinary telephone used?
  - What is an ordinary vs an extraordinary phone?

Source/Key: \* = ITU, IPTEL/03;  
- = Lee McKnight's response

## Open Communications Infrastructure

- With convergence, old regulatory models serve mainly to confuse and confound debate.
- Maybe we need a new term, Voice over Phone (VOP?)
- Radio on the Internet is what?
- TV on the Internet is regulated by whom?
  - What is TV on the net anyway? Streaming Media? Digital TV?
  - If email is displayed on a TV, should it be regulated?

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## Open Communications Policy

- Eliminate regulatory distinctions between:
  - Content & Conduit
  - Fixed & Mobile
  - Apply uniform regulatory framework, irrespective of technology:
    - Open access
    - Universal access
    - Flexible access

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## Conclusion

- Leave the Duck – or is it a Platypus – alone.
- The Internet and mobile services are essential for 21<sup>st</sup> Century economic growth and socio-political development.
- Governments should focus mainly on enabling access, and ensuring fair competition – *especially for the new entrants, such as Internet Telephony Service Providers.*
- This is the best approach to overcome digital divides within and between countries.

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## References

- For more information on the Open Communications Infrastructure Policy Model, see W. Russell Neuman, Lee McKnight, Richard Jay Solomon, *The Gordian Knot: Political Gridlock on the Information Highway* (MIT Press, 1997, 1999)
- For more information on Internet Telephony, see Lee W. McKnight, William Lehr, and David D. Clark, eds., *Internet Telephony* (MIT Press, forthcoming, fall 2000)

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