Calling Carol

- Alice’s UA can set up a SIP trapezoid.
  - Corners:
    - Alice’s phone,
    - Acme SIP Proxy,
    - 3rd party SIP Proxy,
    - 3rd party gateway.
  - Requires working 3rd party.
  - Enter Vonage…
Vonage Assumptions
To succeed, Vonage needs customers with:
- Broadband Internet access
  - In practice, cable modem
- Willingness to pay
- Willingness to buy a little bit of CPE
- Willingness to put up with a few inconveniences

Here's How It Works
Vonage is 3rd Party!
- SIP triangle:
  - Alice’s Vonage SIP router/gateway
  - Vonage’s SIP proxy
  - Vonage’s SIP gateway
- Proxy & gateway needn’t be close together.
- Alice’s CPE does SIP registration.

PSTN Side?
- PSTN routes calls to LNP areas (including Athens exchange).
- Carrier that routes call into LNP area must do SS7 lookup to map number to correct LEC.
- Vonage uses CLEC to complete calls and to handle LNP (including SS7).
Why is Vonage So Cheap?

• Compare to local telco
  – Vonage has no local loop expenses
    » Customer pays CableCo for these
  – Vonage has little billing expense.
    » Credit-card debit only
  – Vonage gets break on regulated expenses.
    » SLC, USF, E911, etc.
  » No phone books, no operators, no techs
  » Vonage pays no access charges.

Who Pays Whom? With PSTN:

With IP Telephony, OTOH

Some Nice Things About Vonage Service

• Portability – throw your router in the suitcase...
  – Better yet, get a USB device.
• Get a number in a distant city.
  – You live in Dallas, whole family is in Ohio...
You Mentioned Inconveniences?
• Power at home
• Power at cable company
  – Backup requirements of telcos don’t apply.
• Cable companies traditionally less service-oriented.
• E911
  – They have a workaround, but portability defeats it.

Predictions
• Decline in telephone penetration rates.
  – Rural, poor consumers in for hard time.
  – Change in USF funding mechanism.
    » More welfare-like?
• Rise of full-service companies
  – Triple play: phone (local, LD), ISP, TV
  – Quadruple play: triple play + cellular
  – Why buy from Vonage instead of T/W?

Speaking of Time-Warner...
• They’ve gotta be similar, except:
• Your POTS phone plugs directly into set top box.
  – Plus: E911 task much simpler.
  – Minus: You can’t take your router on trips.