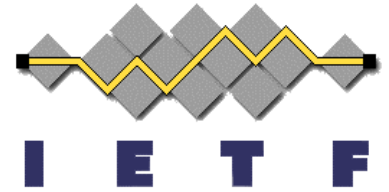




IETF LEMONADE

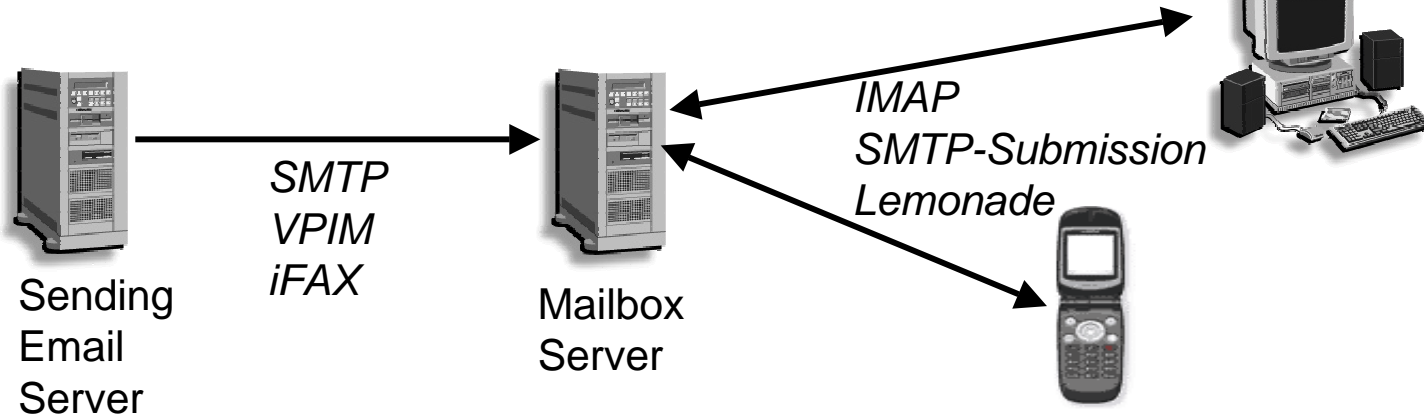
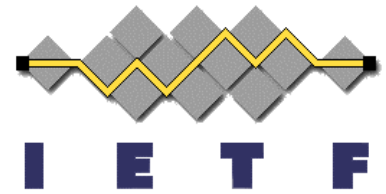
Greg Vaudreuil
(630) 328-7328
GregV@lucent.com

What is IETF, and Why Drink Lemonade?



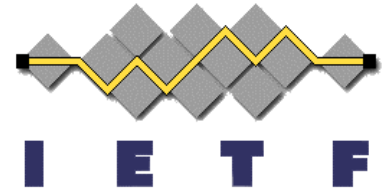
- Internet Engineering Task Force (IETF) provides forum and process for developing Internet protocols.
 - IETF is the creators of SMTP, MIME, VPIM and the rest of Internet messaging protocols
- LEMONADE working group chartered with “License to Enhanced Mobile Oriented And Diverse Endpoints”
 - Smart phones
 - Set-top boxes
 - Other memory, processor limited devices
 - Bandwidth, latency challenged networks

What is Lemonade



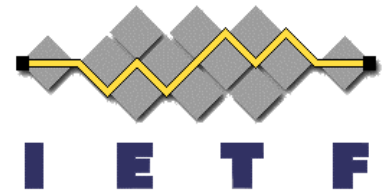
- VPIM addressed messaging server-to-server
 - Standard formats, standard audio, standard addressing
- LEMONADE addresses client-to-server needs
 - Enhance IMAP and SMTP submission
 - Streaming and conversion support
 - Forward without download, quick connect

Modivation

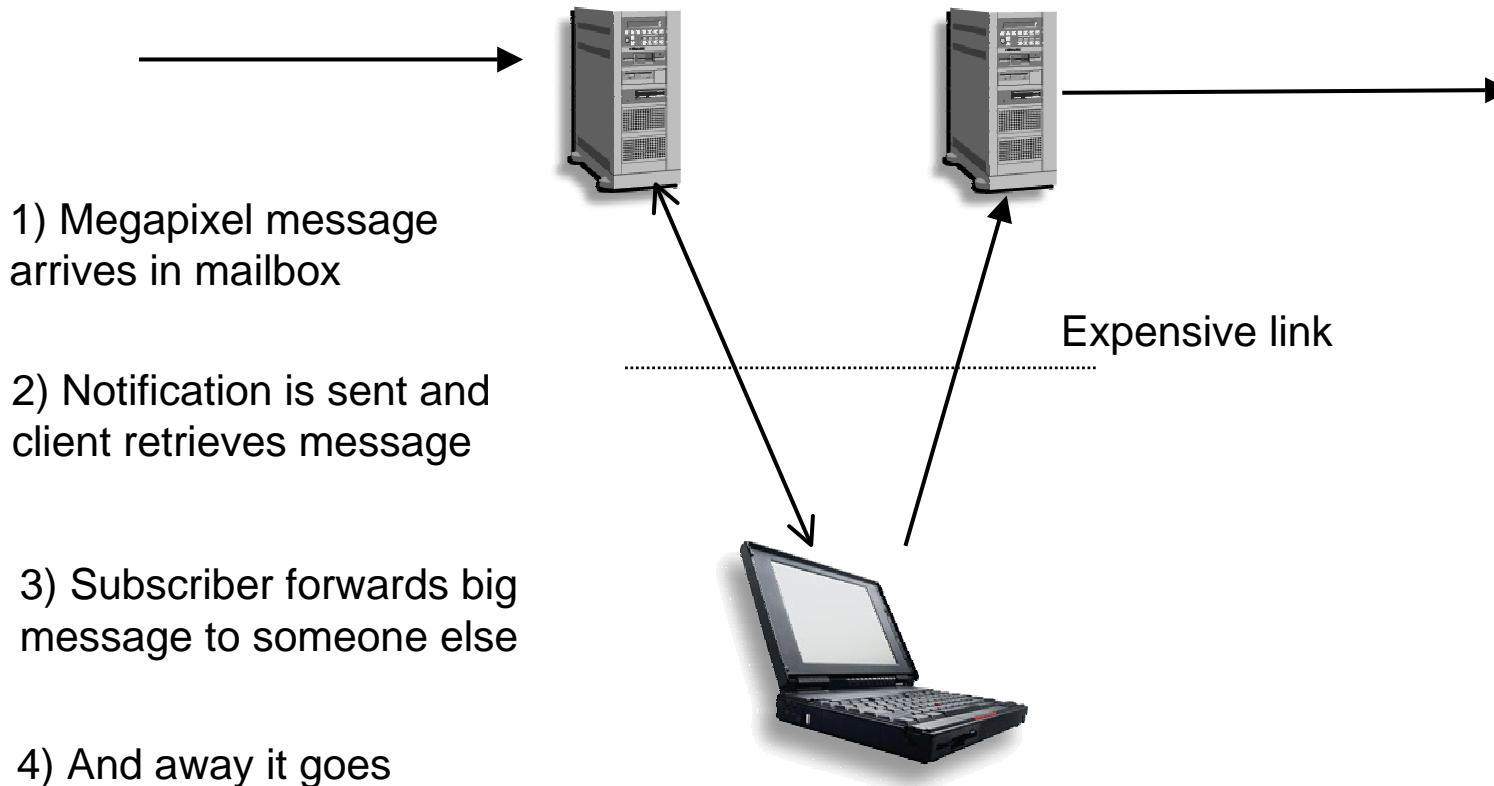


- Mobile messaging is proven market
 - SMS short text
 - MMS picture messaging
 - Blackberry text email
- Current solutions are narrowly purpose-built
 - SS7-based SMS
 - WAP-based MMS
 - Many proprietary technologies
- More powerful handsets driving need for more flexible, more unified, and more efficient solutions
 - Bandwidth efficient communication
 - Multiple clients to same mailbox, Synchronization w/ server
 - Require audio and video streaming
 - Client controlled media conversion

Standard Email Use Case Today: Received and forward picture

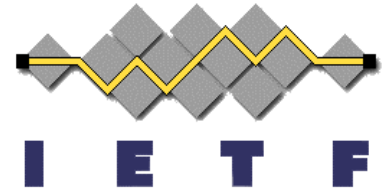


Mailbox Server Submission Server



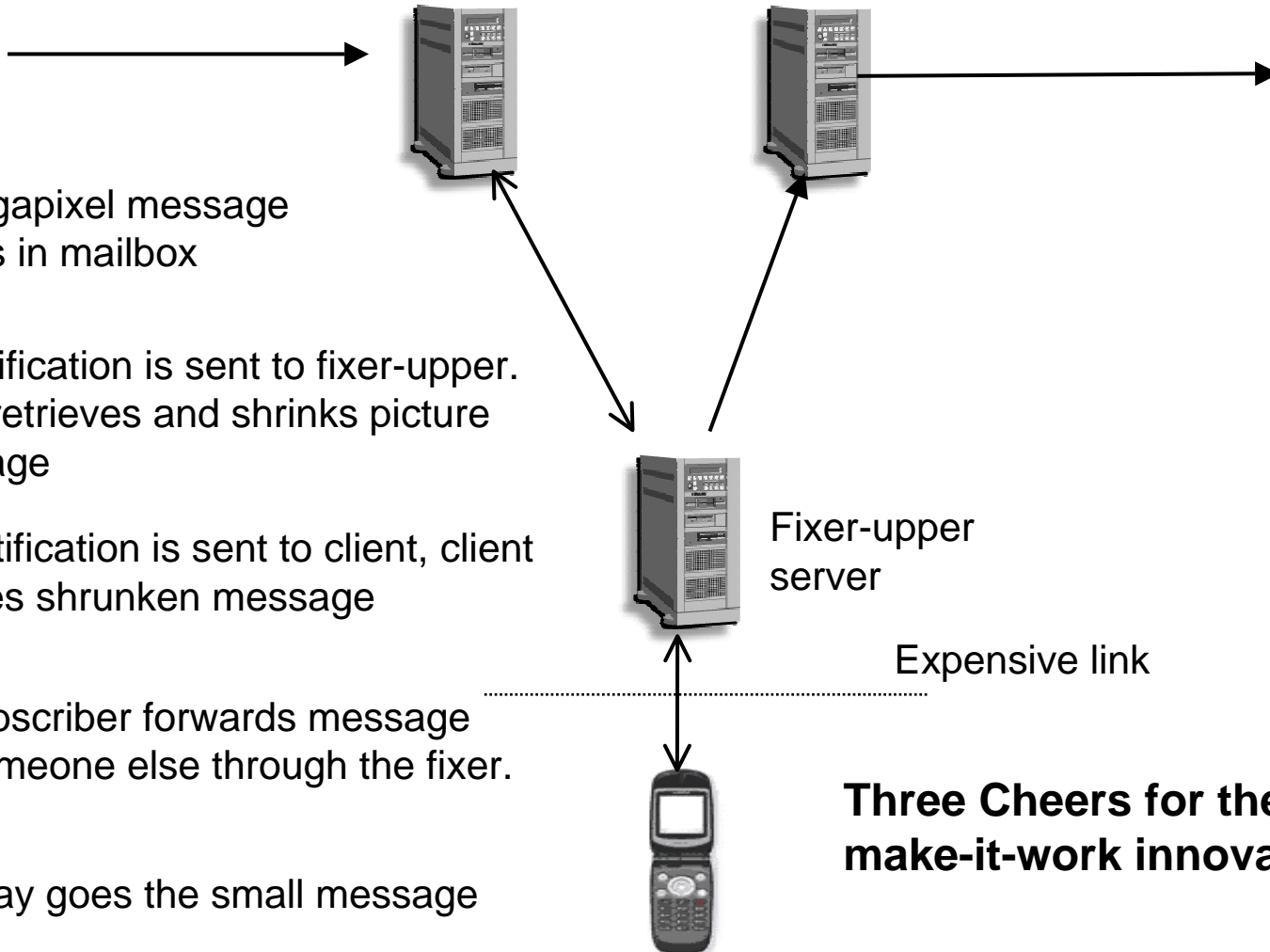
Works great if you have money and patience

Work-around Approaches



Mailbox Server

Submission Server



1) Megapixel message arrives in mailbox

2) Notification is sent to fixer-upper. Fixer retrieves and shrinks picture message

3) Notification is sent to client, client fetches shrunken message

4) Subscriber forwards message To someone else through the fixer.

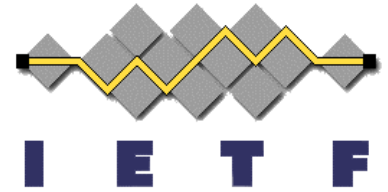
5) Away goes the small message

Fixer-upper server

Expensive link

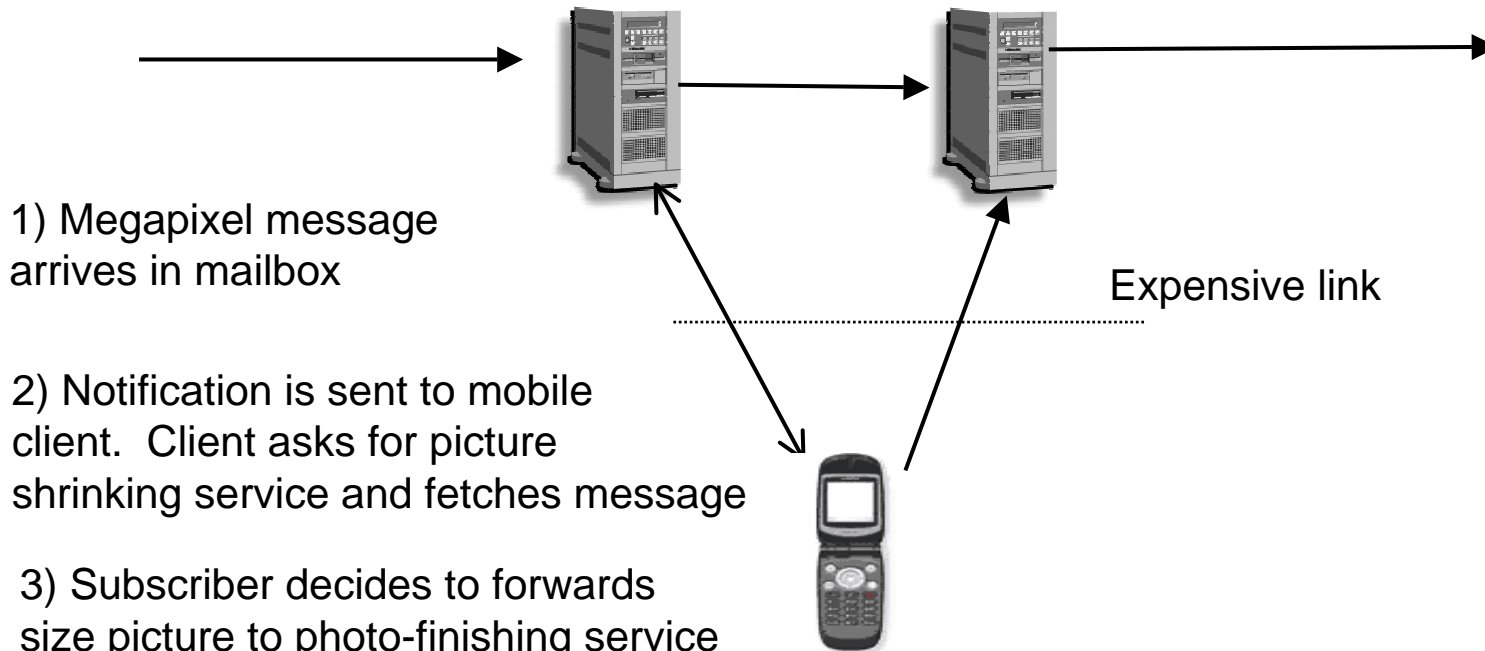
Three Cheers for the make-it-work innovators!

Lemonade Approach



Mailbox Server

Submission Server



1) Megapixel message arrives in mailbox

2) Notification is sent to mobile client. Client asks for picture shrinking service and fetches message

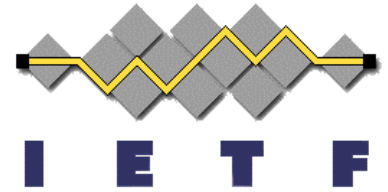
3) Subscriber decides to forwards size picture to photo-finishing service Without downloading it first

4) Submission server fetches full size Picture attachment and inserts into message

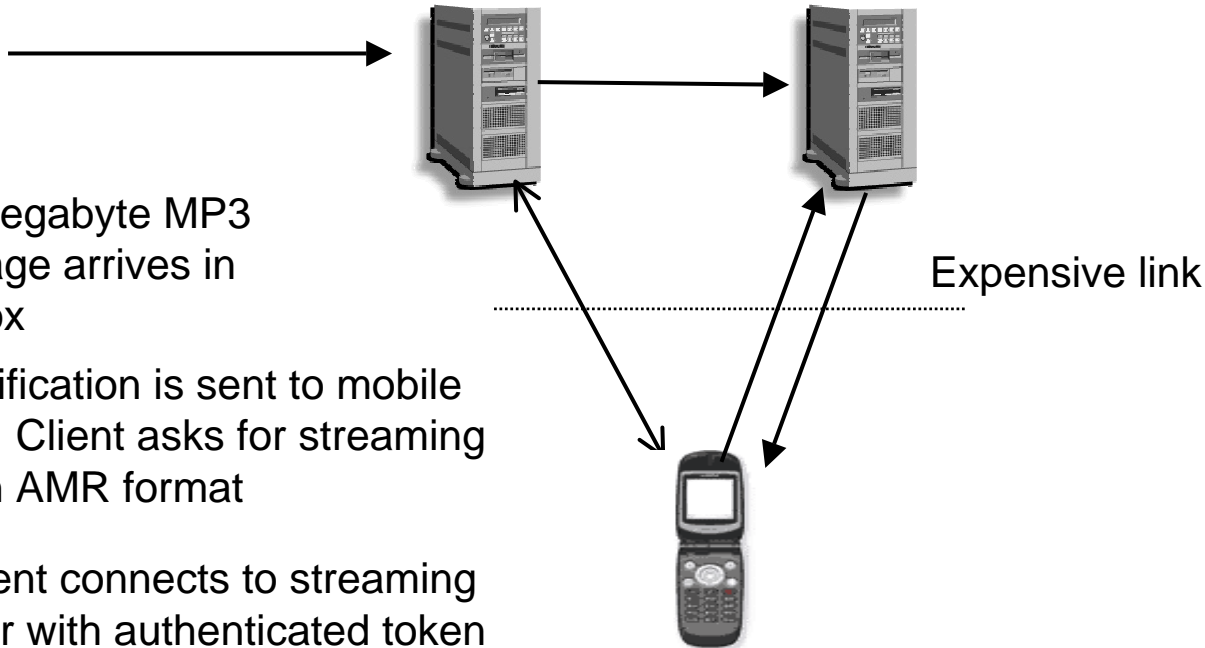
5) Away goes the full-size message

Finally, a well engineered, standard, flexible, solution!

Preview MP3



Mailbox Server Streaming Server



1) 4 megabyte MP3 message arrives in mailbox

2) Notification is sent to mobile client. Client asks for streaming play in AMR format

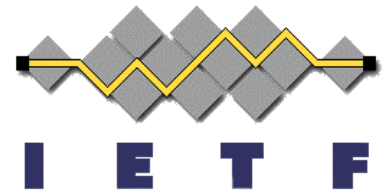
3) Client connects to streaming Server with authenticated token

4) Streaming server grabs MP3, Transcodes it, and streams to client

5) Subscriber deletes or saves song for later Retrieval by broadband computer into their iPod.

Flexible, powerful!

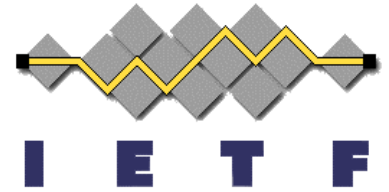
LEMONADE: Spaceplane or Dud?



- Mobile Messaging Market Demand Established
- Current generation of standard protocols too limiting
- Proliferation of proprietary solutions to proven need
- Strong support from SP vendor community

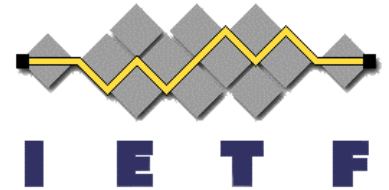


Timing and Next Steps



- Plan for Protocol Completion: Spring 2005
- Initial Implementations Expected: mid-2005
- Marketing and Interoperability support required
 - Maybe TMIA?

For More Information:



- Mail List:

- General Discussion: lemonade@ietf.org
- To Subscribe: lemonade-request@ietf.org
- In Body: in body 'subscribe'
- Archive: <ftp://ftp.ietf.org/ietf-mail-archive/lemonade/>

- Supplemental Work Group Page

- <http://flyingfox.snowshore.com/i-d/lemonade/>