

April 20, 2005

Ex Parte

Via electronic filing

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: In the Matter of IP-Enabled Services, WC Docket No. 04-36

Dear Ms. Dortch:

On April 20, 2005, Jim Shepard and Rob Smith conducted a telephone conference with Julie Veach, Christi Shewman, Carol Simpson, Nick Alexander, Tim Stelzig and Michelle Carey of the Wireline Competition Bureau

During this phone conference, HBF discussed its current and future products for supporting 911 services for VoIP. In particular, HBF discussed its current solution which is deployed in the U.S. and Canada that overcomes some of the pitfalls of a strict "10 digit dialing" approach. HBF also discussed future product plans and the impact of future solutions on PSAPs, customers, and VoIP Providers.

HBF is pleased to submit information to the FCC which will assist in advancing public safety through 911 services, especially with regards to VoIP technologies.

Best Regards,



Jim Shepard
Executive Vice President
HBF Group, Inc.

Cc: Michelle Carey
Julie Veach
Christi Shewman
Carol Simpson
Tim Stelzig
Nick Alexander

VoIP & 911: *The Good, The Bad, and The Ugly*

Discussions with the FCC

Jim Shepard
Executive Vice President

HBF Group, Inc. April 20, 2005



A Quick Background

- 21 Years in the E9-1-1 Industry
- A Number of “Firsts” for a E9-1-1 Database System Provider:
 - First WAN E9-1-1 System in the US: Sprint (US-Wide – 18 states)
 - First Statewide System in the US: Verizon – New Jersey
 - First Province Wide System in Canada
 - *First Nationwide VoIP 911 provider in Canada*
- An Industry Leader:
 - Fully supportive of Wireless Phase I & II
 - Support multiple selective routing switches: CML, Rockwell, Nortel, Lucent
 - Support all PSAP types and manufacturers
 - Active participation on NENA and ATIS/ESIF technical committees including NENA’s NG-911

What does everyone want?

- Consumers
 - 9-1-1 service on par with existing wireline service
- VoIP Providers
 - A marketable solution
 - Access to selective routers without the encumbrance of other state and federal regulations
- PSAPs
 - Funding for VoIP generated traffic
 - No operational changes (i.e., the ability to jump to an I-2 solution)
- ILECs
 - Want to protect market share and network integrity

The Good

- Disruptive technology
- Cheaper (?) service
 - IP Phones displace 6,000 traditional business phones each business day
 - IP Communications Systems are used by over 14,000 organizations worldwide
 - 60% of Fortune 500 companies use IP Communications
- More efficient than circuit-switched voice
- Huge potential for enriched emergency response model

The Bad

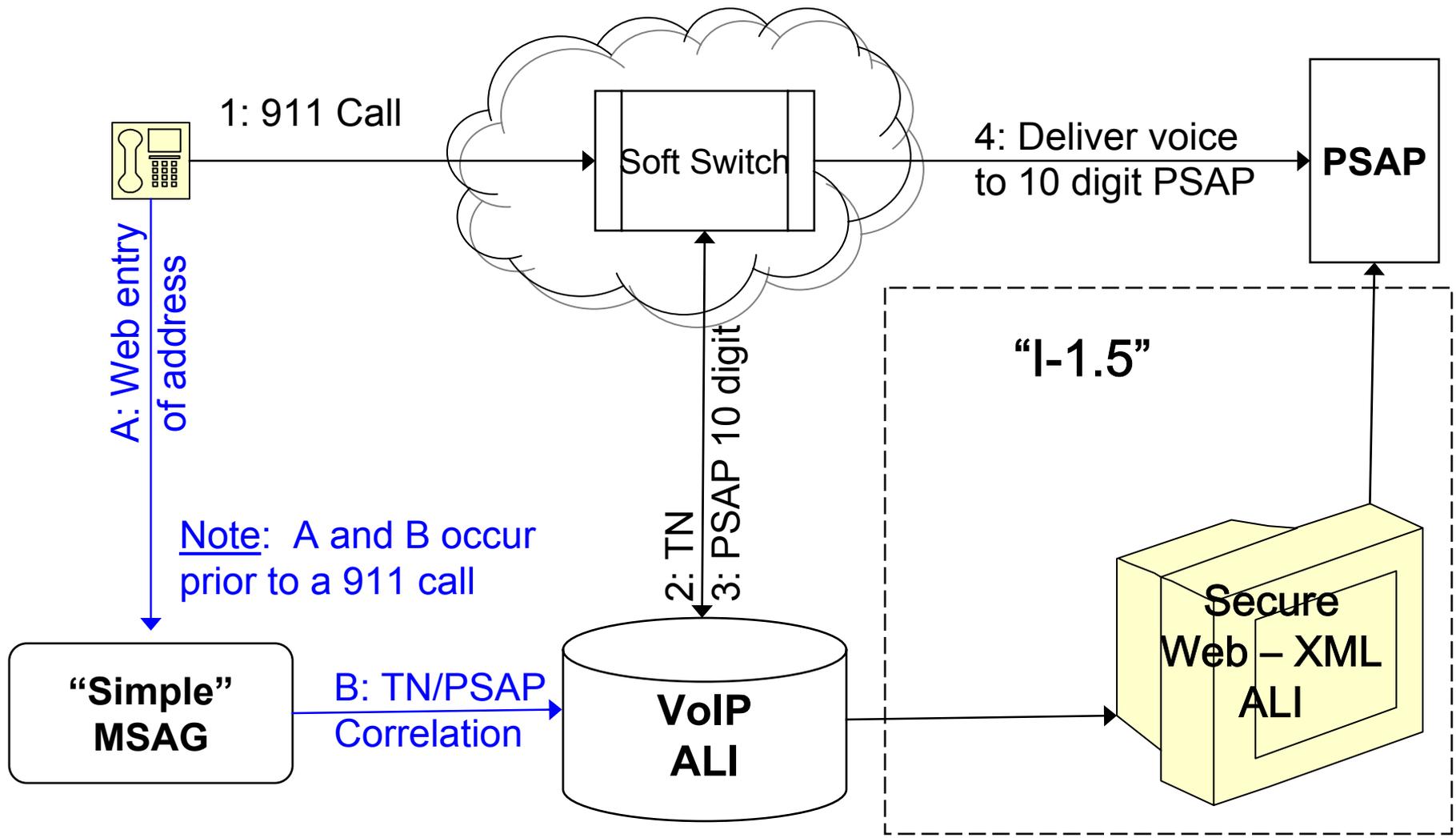
- Regulation not structured to deal with this technology
- Nobody likes 10 digit dialing (more on that later), but, for now, it is the best some carriers can do
- No “always available” dial tone
- Security issues
- Funding issues

The Ugly

- Privacy Issues
- Voice quality, reliability
- Ongoing value proposition?
- Lot's of providers...who will survive?

***Where Are
We Going?***

General Approach to "I-1" Solution



PSAPs hate 10 digit solutions

- While no different from how ACN and 3rd party security calls are received, the potential volume threatens to wreak havoc on PSAP operations
 - May not get handled on existing CPE thus making dispatching, recording, etc. more difficult
 - Availability of PSAP numbers has been limited due to questionable business arrangement
- Lack of CBN and location is viewed as a serious flaw
- Represents a financial double whammy:
 - Increase in workload
 - Decrease in funding
- On the flip side, PSAPs are charged with serving and protecting their constituents regardless of delivery mechanism

In the eyes of PSAPs, VoIP providers are “guilty by association” because of “i1” solutions

ILECs have a hard time with “I-2”

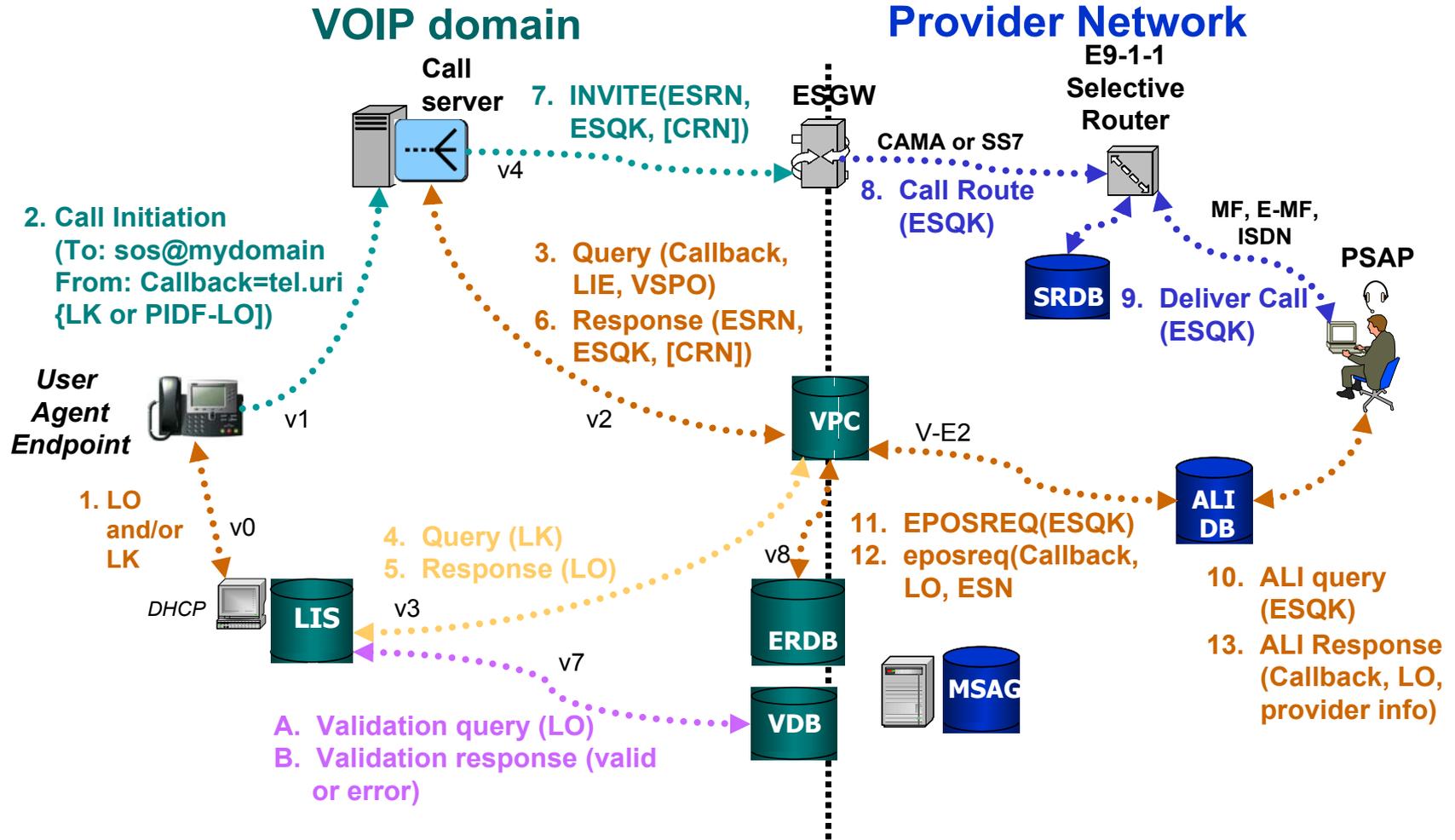
- Access to selective routers is only “guaranteed” for certified carriers
 - Concerns over DoS attacks and other security issues is limiting S/R port access
- Validation of location is difficult
 - Most VoIP addresses will be self-reported at time of log-in or provisioning
 - ILECs have limited incentive (and sometimes limited legal ability) to provide MSAG data and/or validation

CLEC Model: A solution with a limited life

- CLEC-like solution -Best with stationary users (e.g. cable companies)
 - Similar to CLEC operation today
 - VoIP provider sends NENA files to ALI database provider in batch files
 - MSAG validation
 - ALI database updates Selective Router database with TN to ESN mapping
 - VoIP gateway terminates 9-1-1 calls at ILEC 9-1-1 tandem via CLEC
 - 9-1-1 PSAP receives CBN and original customer location at signup
- Drawbacks
 - No real-time updates. User moves require new update to ALI and SR.
 - Worst Case: User moves and updates address with VoIP provider; Provider submits data via CLEC who passes to ALI provider; a day later the ALI and S/R are updated. User dies from lack of 911 during that day – who's gets sued?
 - Cannot handle NPA-NXX outside of tandem configurations, eliminating a major reason for having VoIP.
 - Provider must have local infrastructure and interconnection agreements with Telco for SR and ALI updates. Difficult to get ubiquitous coverage
 - Shared usage is still under regulatory and competitive review
 - Not in line with NENA / VON Coalition and NENA Future Path Plan

NENA's I2

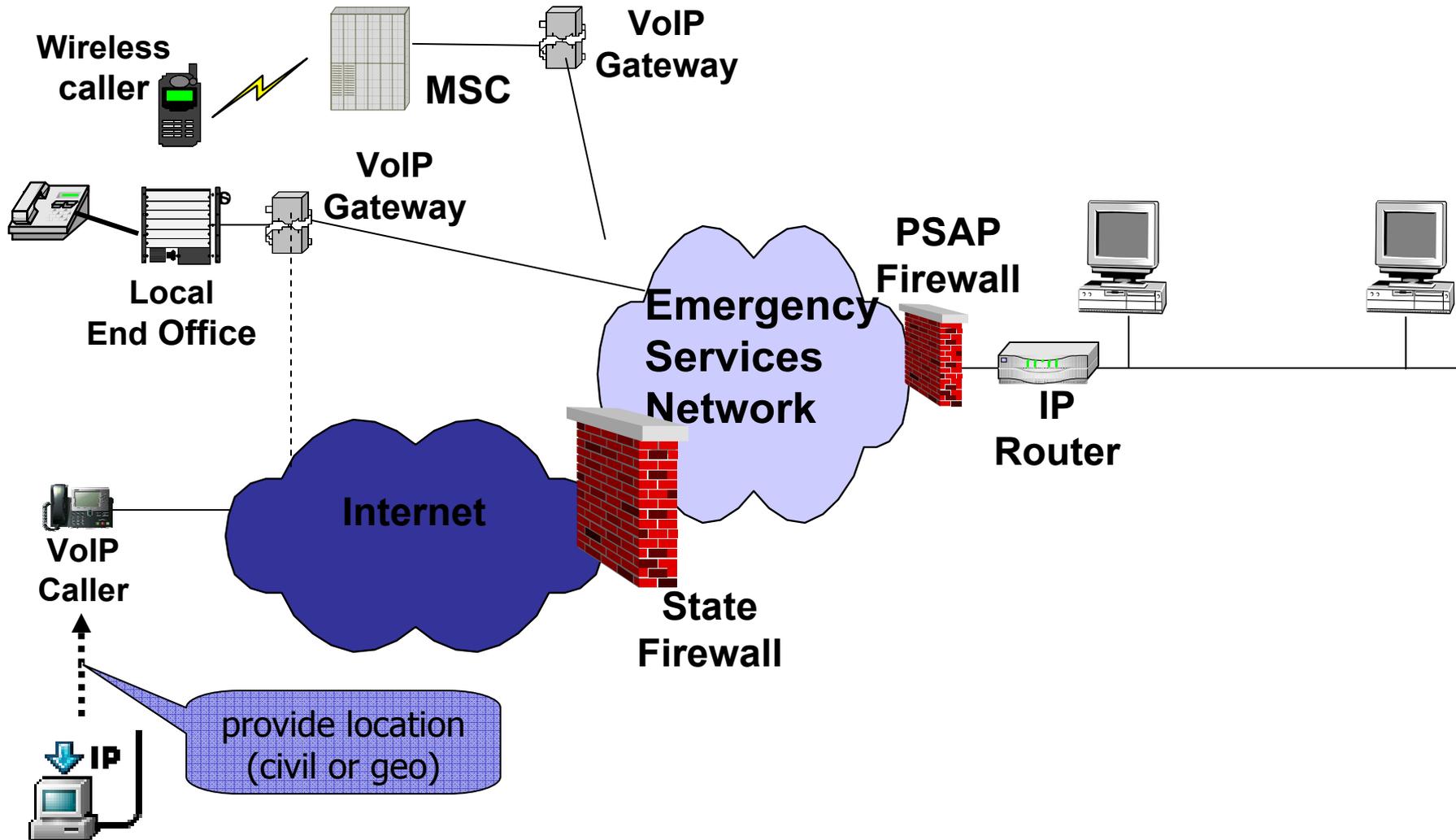
Emergency Services Provider Network



ILECs have a hard time with “I-2”

- Access to selective routers is only “guaranteed” for certified carriers
 - Concerns over security issues are limiting S/R access
 - Lack of IP connectivity to most routers
- Could be as burdensome as Wireless Phase II:
 - Multiple new systems
 - New protocols
 - With wireless, there were a limited number of carriers – with VoIP, it is unlimited.
 - No clear revenue model; no clear PSAP funding model
- Validation of location is difficult
 - Most VoIP addresses will be self-reported at time of log-in or provisioning
 - ILECs have limited incentive (& sometimes limited legal ability) to provide MSAG validation

One of View of "I-3"



“I-3” is such a huge change that its adoption may take many years and tons of money

- Will require revamping 6,000+ PSAPs throughout the U.S.
 - New Equipment
 - New Broadband connectivity
 - New Interfaces to legacy systems (dispatching, reporting, etc.)
- If access providers (ISP's) are responsible for the location via DHCP, there are big questions on location validation and funding
 - Putting the burden on access providers will likely yield marginal buy-in and accuracy

Huge Industry Questions Loom....

- How do we determine and authenticate location?
- Can we route to the appropriate PSAP?
- Can wireline, wireless, and VoIP interoperate and get along? Or will we be forced to have three separate 911 systems?
- How do we migrate between phases for VoIP? Can it even be done or should we scrap it all and start fresh?
- Who is going to fund all this?
- Who will step up and save the day?
 - Telco's? Not likely.
 - The government? Will anyone even notice if they do?
 - Third-party companies? (HBF, Level 3, Intrado, TCS)
 - An organization? (APCO, NENA, ATIS, ComCare, NRIC, IETF, etc.). Can they unite on a common goal?
 - Will The Ugly turn out to be Good after all?

Other Random Thoughts

- The CRTC ruling has given Canadian carriers some direction but no methods or structure.
 - Mandates use of a call center intermediary for nomadic users but leaves open the question of how to route calls
 - Mandates the use of traditional selective routers when possible (e.g. non-nomadic) but doesn't mandate that the ILEC's provide access
- In the U.S., funding and regulation need to go hand-in-hand
- Beware of corporate interests who view VoIP as a mechanism to monopolize emergency services with proprietary protocols