



# VoIP E9-1-1 Update and NPRM 05-196 Response

Timothy Lorello  
SVP, Chief Marketing Officer  
TeleCommunication Systems (TCS)  
(410) 280-1275  
tlorello@telecomsys.com



# TCS Offers a Wireless Perspective

## Wireless Carriers

- Contractual relationships with over 46 wireless carriers
- Contracted to deploy E911 services to over 90 million subs for over 35 carriers (4 of top 5)
- Handling over 73,000 E9-1-1 calls daily

## Local Exchange Carriers (LECs)

- Working relationships with all of the major LECs and many CLECs and smaller telecom providers

## PSAPs

- Deployed wireless E911 in 42 states to over 4600 PSAPs
- Member of NENA, APCO and ComCARE
- Charter member of NENA Next Generation task force
- Former public safety officials on staff and in management



# Applying Wireless Mobility to VoIP

## VoIP Carriers

- Vonage, Packet8, Level(3) & VoIP Inc. announcements recently made
- Continue to work w/ deltaThree, SunRocket & others

## VoIP Solutions Being Deployed

- **I1 solution provided today**
  - Calls can be primary-routed to Administrative Lines
  - Calls can be primary-routed to TCS Response Center (RC)
    - TCS RC can delivery calls to Administrative Lines
    - TCS RC can deliver calls directly to First Responders (Fire, Police, Ambulance)
- **I2 Trials successfully completed**
  - Calls follow wireless model
  - Routing Instructions provided to VSP call server
  - Call-back number and Registered Location automatically delivered to PSAP

## PSAP Outreach Efforts

- Education & information exchange w/ 3000+ PSAPs nationwide

# Guiding Principles

- Network Neutrality
  - Apply rules equally to all players 
  - Use standard PSTN interconnection technology
  - Proper guidance through performance metrics
- FCC oversight is required 
- Focus should be on the consumer
  - The consumer is clever 
  - The consumer is motivated by the pocketbook



# Greatest Technical Challenge - Location

- **Numerous techniques being explored**
  - Self registration
  - WiFi Registration
    - Skyhook Wireless
  - Port discovery
    - Redsky, Qovia, eTelemetry
  - WiFi triangulation
  - Potential for GPS in the handset or Terminal Adapter
- **Marketplace continuing to evolve**
- **When should location delivery be mandated?**
  - When competing vendors can provide reasonably priced solutions with accuracy that matches wireless

# Selective Router Access Must Be Allowed

- **Auto Info Delivery requires Selective Routers**
  - Router access is primarily controlled by the LECs
  - Most LECs have been cooperative in allowing access to selective routers, but delays are occurring due to:
    - Requiring PSAP authorization before allowing trunk installation
    - Routine ordering and installation can take several weeks
    - LECs have no deployment mandates for VoIP competitors
    - Costs are much higher than wireless
- **FCC Order Anticipated Infrastructure Available**



**Even when access is granted,  
there will be a time of transition**

# Need Nationwide MSAG (or Replace)

- **MSAG is an antiquated location solution**
  - Data is fragmented
    - Controlled at the local level
    - Many locations do not have an appropriate address
      - E.g., corporate campus locations between buildings
  - Over 35% of E9-1-1 calls do not provide MSAG today
  - Civic Addresses may make more sense
    - Can reverse map XY coordinates to civic
  - Need Public Safety's concurrence to replace MSAG
  - Need Public Safety's help to build replacement
  - MSAG and ESN issues are slowing deployments
    - MSAG is a local issue – FCC forbearance is wise

**Public Safety must drive change**

# **TCS Reply Comments To NPRM 05-196**

# NPRM Comments

- **Apply rules to all VSPs**
- **Network neutrality should guide oversight**
- **Assist innovation in location development**
- **Apply rules to all VSPs terminating calls**
- **Leave MSAG at the local level**
- **Reporting requirements recommended**

# Apply Rules to All VSPs

- **Simple termination rule should be applied**

- Can user terminate calls to PSTN?
  - Clever consumers will mix & match origination & termination
- Could the user use service for all terminations
  - Cost-conscious consumers will cancel wireline backup



- **Rules should apply to future technologies**

- Avoid future problems by establishing rules now
- Softphones & video phones are coming
- Wireless carriers deliver calls w/o callback
  - Neutrality requires the same for VSPs



**Softphones should comply with E911**

# Network Neutrality Should Guide Oversight

- **VSPs need same access as wireless/CLEC**
- **Must have access to all elements**
  - ALI, Selective Routers, Query Keys, Data Entry
- **Neutrality encourages participation**
  - New technologies will remake public safety
    - End-to-end data connectivity
    - Other information elements delivered (pictures, video, data)
  - PSAPs have varying levels of needs and sophistication
- **Establish performance metrics**
  - Location accuracy (same as wireless=neutrality)
  - Time to deliver call/data



**Focus on metrics rather than timing**



# Questions

## **Tim Lorello**

SVP, Chief Marketing Officer

(410) 280-1275

[tlorello@telecomsys.com](mailto:tlorello@telecomsys.com)

## **Dick Dickinson**

Director, Public Safety

(206) 792-2224

[ddickinson@telecomsys.com](mailto:ddickinson@telecomsys.com)

