Telecommunications Relay Service (TRS)
Emergency Call Handling

Federal Communications Commission
Emergency Access Advisory Committee
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Types of TRS Relay Services

The relay services is divided into 2 categories:

• Traditional (landline)
• Internet Based

Deaf, Deaf-Blind, and Hard of Hearing individuals and people with speech disabilities are using emerging technologies other than TTY.

Many of them are cutting off their land line telephone services. The technologies allow them to use internet-based relay services.

INTERNET BASED RELAY SERVICES
(WIRELINE & WIRELESS)

• Video (VRS)
• IP (Internet Protocol)
• AIM (AOL Instant Messaging)
• Wireless

Many companies offer VRS & IP/AIM/Wireless services. The caller has a choice to choose. There are approximately 16 VRS providers and more than 10 IP relay service providers. There are over 100 call centers in this country.

Video Communication

Video Relay Service (VRS)
IP (Internet Protocol) Relay Services

Handling 9-1-1 Internet Based Relay Calls

- Internet Based Relay Service users register with their preferred relay service provider to obtain local 10-digit phone number.
- The preferred relay service provider becomes default provider.
- The 9-1-1 call becomes priority when the user dials 9-1-1 via internet based relay service.
- The call back number will automatically connect to the preferred relay service provider who will then connect to the user.

What will show on your ANI/ALI screen ideally?
- From Registered Callers
  - User’s local 10-digit number
  - Physical address
  - Name of relay service provider
- From Non-Registered Callers
  - Name of relay service provider with its phone number

Average Speed of Answer
- There are 10-digit numbers for 3 lines: 9-1-1, administration and emergency. Administration and Emergency are non-emergency.
- Relayed calls may go through non-emergency lines. Telecommunicators have priority to answer calls via 9-1-1 lines.
- NENA requires PSAPs to answer calls in less than 10 seconds and 20 seconds during heavy traffic.
- FCC states that Video Relay calls are to be answered within 120 seconds and internet based relay calls are to be answered within 10 seconds. There is no ruling on time frame for connecting relayed calls to PSAP.

Emergency Call Flow using VoIP E9-1-1 linkages

User Relay Center VPC ESWG Selective Router
VPC (Manual Call Center) Manual Caller Location 9-1-1 Line
Emergency / Administrative Line
PSAP
Test 9-1-1 Calls
NENA Annual Conference – June 2010

- IP Relay Service - Over 4 minutes to connect to PSAP and it was through emergency line.
- Video Relay Service - Over 5 minutes to connect to the 911 center and it went through administrative line.

Test 9-1-1 Calls continued
On August 19, 2010, test calls to 9-1-1 were conducted using 9 different VRS providers.

- Two relay service providers connected calls to appropriate PSAPs via 9-1-1 line
- Others were either routed to another city or local PSAP via administrative or emergency line.
- A couple of calls were dropped and no callbacks were conducted.

A few minutes delay has shown that it could have led to death.
EVERY SECOND COUNTS!

Issues
- The nationwide 24/7 database on 10-digit phone numbers of PSAPs is not accurate.
- Phone calls using 10-digit numbers may go through administration or emergency line instead of 9-1-1 line.
- Caller Information may not updated on a timely manner.
- Calling 9-1-1 via VRS and IP relay services takes longer than the direct call.
- Relay Service providers have no way of knowing that calls from PSAPs are emergency.

Issues continued
- Calls between callers and relay service providers may get disconnected
- No uniform policy for relay service providers in handling 9-1-1 calls.
- Calls on mobile (text or video) – different location from registration. Any way to revise address? Caller info shown on relay agent’s monitor when receives a 9-1-1 call?
- Some PSAPs are not able to transfer calls to appropriate PSAPs.
- Transfer of location information from mobile caller to PSAP needs to be addressed.

Next Generation 9-1-1 Vision
- Direct, quick & equal access to emergency services for everyone anytime, anywhere and from any device
- Any type of communication modes via any device – video, text and voice
- Direct to appropriate PSAP – with location
- Transitioning to NG9-1-1 is important!

The Future
Virtual Reality
Richard L Ray

City of Los Angeles
Department on Disability
and
NENA Accessibility Committee

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