Amateur Radio Disaster Communications

ITU-R PPDR Seminar
24 September 2002

UN statement on amateur disaster communications

- One important network is sometimes overlooked: more than 2.6 million amateur radio stations world-wide.
- In many cases provided first information about a disaster and served as the only link.
- Amateurs have 2 distinct advantages:
  - ◊ independence of infrastructure
  - ◊ dedicated, skilled, able to improvise

ITU BR Director Jones statement

Amateur Radio continues to play an important role in disaster communication. It has a unique ability to provide radiocommunications independent of the telephone network or other radio services particularly in the first few days before relief agencies are at the scene and have set up for disaster telecommunications services.

Amateur Radio disaster communications in some countries

- The Amateur Services provide communications for disaster mitigation and relief in some countries
- Not all countries having periodic natural calamities take advantage of disaster communications capabilities of the amateur services

Amateurs already there

- Effective amateur services disaster communications depends on *indigenous* operators distributed throughout a country, both where the populations are and in some rural or remote areas.
- Expatriate resident operators may not have sufficient numbers but can train prospective amateurs and help set up a network.

Need for a national plan

- Countries need a national plan for disaster mitigation and relief operations.
- Emergency telecommunications and restoration of facilities should be featured.
- All radio services, including the amateur services, should be included in the plan.

Some recent disasters where Amateur Services played a part

- 2001 World Trade Center, Pentagon
- 2001 earthquake in Gujarat State, India
- 2001 earthquakes in El Salvador
- 1999 earthquake in Turkey
- 1998 Hurricane Mitch in Central America
- 1998 Swiss Air Flight 111crash in Canada
- Yearly hurricanes, floods and fires

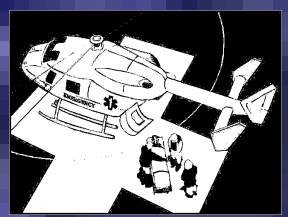
Amateur Radio disaster communications

- The amateur population is distributed in both urban and rural areas
- Amateurs maintain ties with government and relief agencies
- Need for organisation in advance
- Networks must be regularly exercised

Types of emergency traffic

- Tactical traffic at disaster site
- Formal disaster message traffic
- Health-and-welfare traffic
- Need for a national network of HF, VHF amateur radio with Internet interchange capability

Working with public agencies



Intergovernmental Conference on Emergency Telecommunications Helsinki, 1998 (ICET-98)

- Adopted *Convention on the Provision of Telecommunication Resources for Disaster Mitigation and Relief Operations*
- Provides framework for rapid deployment and effective use of telecommunications in disasters
- An intergovernmental pact with provisions for non-governmental organisations

Disaster Communications Handbook for Developing Countries

- Major contributors OCHA, IARU
- 3 major parts:
  - Policy
  - Operations
  - Technical
- At ITU Bookstore, English, French, Spanish

ITU-R and ITU–D Recommendations

- ITU-R M.1042-1 Disaster communications in the amateur and amateur-satellite services
- ITU-D Rec. 13 Effective utilisation of the amateur services in disaster mitigation and relief operations

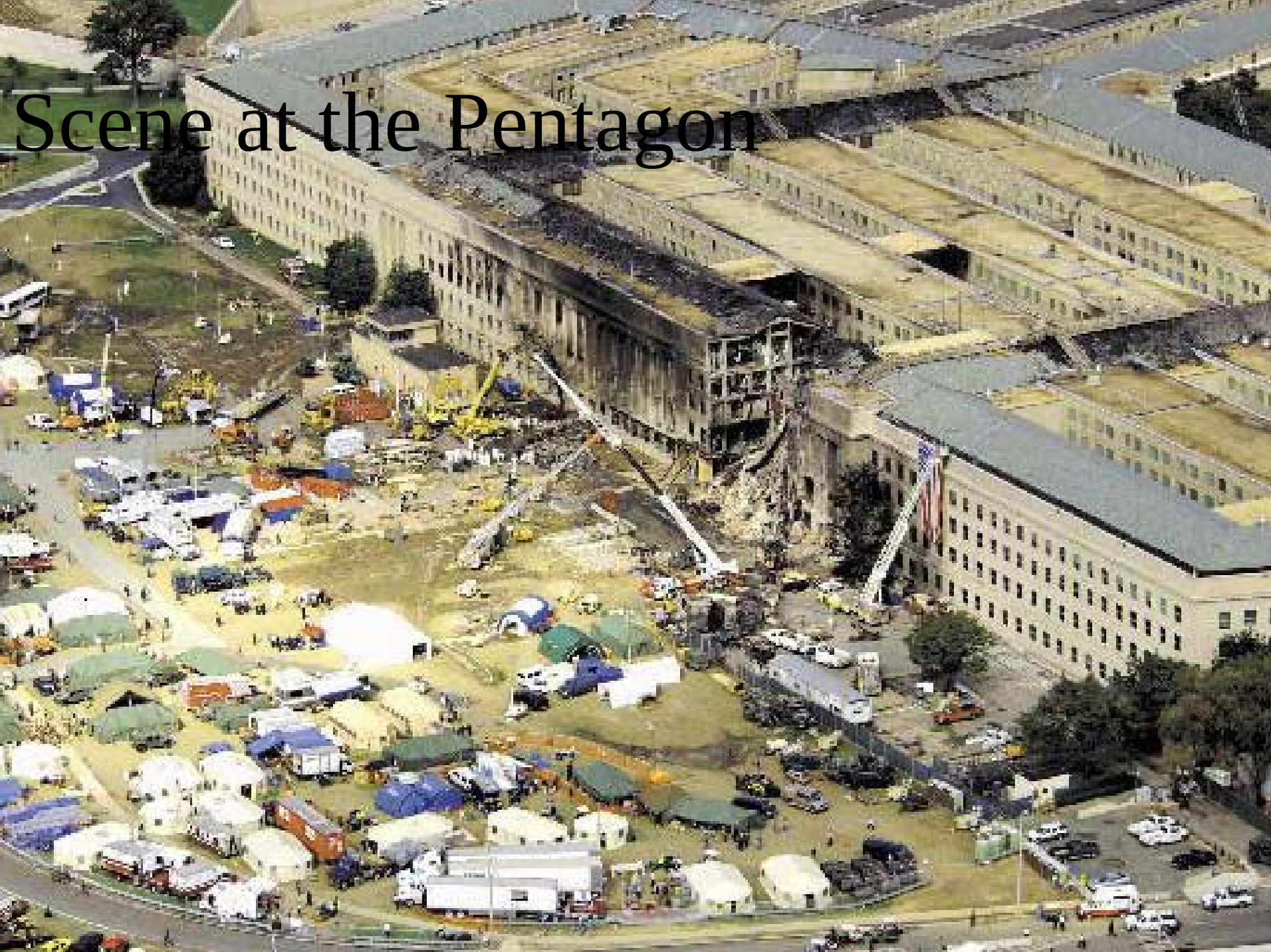
9/11/01: "This is *Not* a Test"

Adapted from *QST*,
Journal of the American Radio Relay League

NY Amateurs Mobilize

- Amateurs mobilize within minutes of attacks on the World Trade Center on September 11, 2001
- ARRL NY City District Emergency Coordinator and RACES Radio Officer called ARES and RACES leadership
- NY Section Manager and NY-Long Island Section Emergency Coordinator organized the AREA and RACES activation

Scene at the Pentagon



DC-Area Amateurs Rally to Support Pentagon Response

- Montgomery County, MD RACES activated immediately
- Amateurs provided communications to 5 area hospitals
- At request of Salvation Army, Virginia Section Emergency Coordinator called for volunteers

Communications Situation

- High call volume taxed the telephone system in Manhattan and Washington
- It often took 15-20 times to make a call
- Red Cross and other communications overloaded
- Amateur radio bridged the gap

At American Red Cross radio room in Brooklyn, NY, Mark Dieterich, N2PGD, (standing) checks volunteer shift schedule. Simone Lambert, KA1YVF, manages schedules for the World Trade Center Disaster Relief Communications registration Web site.

David King, AA2KV, (right) receives an assignment from Dave Pizzino, WB2EAR, who is handing radio duties at the American Red Cross Headquarters in Brooklyn

Lewis Cheek, K4HR, assisted in configuring the repeater on loan from the Stafford Amateur Radio Association to Virginia ARES to support the Salvation Army Disaster Relief operation.

Immediate Response

Within an hour, a nation-wide net was formed, including Federal Emergency Management Agency, Federal Aviation Administration, Red Cross, state emergency centers and others

Some Statistics

World Trade Center

- Active >2 weeks
- 500 operators
- 6000 man hours
- Some remained active afterwards in support of Red Cross, Salvation Army

The Pentagon

- Active 1 week
- 100 operators
- 760 man hours