Fundamentals of Disaster Communications

A Practical “How-to” Workshop

- Explore terrestrial and satellite telecom
- Learn more about field power systems
- Improve your local emergency communications

May 7-9, 2002
Madison, Wisconsin
Develop Skills You Can Count On

This new workshop will provide the basic knowledge and skills you need to set up and effectively manage an emergency communications system for any international disaster or humanitarian emergency. Non-technical disaster management professionals will learn the basics of field communications. At the same time, experienced communications professionals will benefit as they develop practical disaster communications field skills and learn to use their technical expertise for improved humanitarian assistance.

Focus on Cost-effective Solutions

The workshop will introduce the theory and practice of administering ad hoc field communications networks of the type common in today’s humanitarian operations around the world. The emphasis will be on third world implementation, but your learning will also apply to emergency communications in the developed world. The course will mix theoretical information with case studies drawn from current problems and will provide hands-on experience in troubleshooting hardware used in the field today.

Who Should Attend

This workshop is designed for career international humanitarian fieldworkers, program or project officers, or anyone interested in a better understanding of disaster communications. Individuals from United Nations agencies, international NGOs and national NGOs; and planners and executive officers of organizations responding to international humanitarian needs will benefit by attending. Disaster professionals with little experience in communications will learn the basics. Communications professionals with limited disaster field experience will learn to apply their technical skills more effectively in international humanitarian assistance.

You Will Learn About...

- Getting the most from your phone system, fax, telex and mobile phones
- Operating VHF simplex radios, including network creation, protocols, trafficking messages, duplex repeaters, CTCSS, SELCALL phonepatch and wide area trunked radio networks
- Planning and propagation for HF radio systems, as well as setup, operation, administration, programming, working to coast stations and automatic link establishment networking
- Ad hoc networking and interworking, arranging trafficking of messages between and across networks, leveraging local knowledge, official telecom coordinators, ham radio, and more
- Satcomms, encompassing satphones, INMARSAT, Motient, Aces, Thuria, Globalstar, Iridium, ICO and covering high-speed data, new pay-per-megabyte services and fax over satphones
- Practical approaches to e-mail, such as POP account handling, e-mail etiquette, managing attachments, HF and packet networks

In addition to all these technical elements, you will also cover management and administration issues, including using prices and tariffs to determine a realistic budget, managing licenses, and meeting other legal requirements.

For More Course Descriptions

http://epdweb.engr.wisc.edu/courses/
# Fundamentals of Disaster Communications

A Practical “How-to” Workshop

May 7–9, 2002, in Madison, Wisconsin

## Learn with Internationally Recognized Practitioners

- Gary Garriott
  Volunteers in Technical Assistance
  Arlington, Virginia
- Jeffrey Klenk
  InterWorks
  Madison, Wisconsin
- Mark Wood
  Mobile Telecom Systems
  Ericsson Technical Training Centre
  Stockholm, Sweden

And others...

## Take Home Useful Reference Materials

You will receive a comprehensive notebook summarizing the workshop content, but you should expect to augment that with your own active participation and notetaking. The workshop will be based on one primary text, Disaster Communications, by Mark Wood. In addition to this text you will receive supplemental study and workshop materials.

## Workshop Outline and Highlights

### Tuesday, May 7

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00</td>
<td>Registration</td>
</tr>
<tr>
<td>8:30</td>
<td>Welcome and Overview</td>
</tr>
</tbody>
</table>

#### Morning Sessions

- Field Power Systems 1
  - Batteries
  - Power supply systems
  - Field Exercise: Establishing communications
- Field Power Systems 2
  - Generators
  - Alternative energy systems
  - Field Exercise: Setting up power systems

#### Afternoon Sessions

- Terrestrial Systems 1
  - VHF radio networks
  - Planning and network design
  - Base stations/relay stations
  - Field Exercise: Troubleshooting
- Local Communications 1
  - Emergency antennas
  - Repeater operations
  - Continuous Tone Controlled Squelch System (CTCSS)
  - Field Exercise: Antennas and repeaters

### Wednesday, May 8

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Morning Session</td>
</tr>
<tr>
<td></td>
<td>Terrestrial Systems 2</td>
</tr>
<tr>
<td></td>
<td>• HF radio networks</td>
</tr>
<tr>
<td></td>
<td>• Selective calling (SELCALL)</td>
</tr>
<tr>
<td></td>
<td>• Gateway services</td>
</tr>
<tr>
<td></td>
<td>• Amateur radio</td>
</tr>
<tr>
<td></td>
<td>• Field Exercise: Setting up HF installations</td>
</tr>
</tbody>
</table>

#### Afternoon Sessions

- Local Communications 2
  - Field telephones, intercoms and PBX
  - Walkie-talkies
  - Pages and others
  - Field Exercise: Setting up a PBX
- Satellite Systems
  - Satphones
  - INMARSAT
  - Motient, IRIDIUM, V-sat
  - Low-earth-orbit (LEO) systems
  - Others
  - Field Exercise: Practical problems and pitfalls

### Thursday, May 9

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Morning Session</td>
</tr>
<tr>
<td></td>
<td>Local Communications 3</td>
</tr>
<tr>
<td></td>
<td>• Managing e-mail and Internet in the field</td>
</tr>
<tr>
<td></td>
<td>• POP accounts</td>
</tr>
<tr>
<td></td>
<td>• X25 and HF radio mailboxes</td>
</tr>
<tr>
<td></td>
<td>• Field Exercise: Install a packet radio system</td>
</tr>
</tbody>
</table>

#### Management and Administration

- Prices, tariffs and licenses
- ITU, WGET, Tampere
- Ad hoc networking and interworking
- Field Exercise: Prepare an implementation plan

#### Afternoon Sessions

- Field Case Studies
- Summary and Evaluation

5:00 Final Adjournment

### Course Registration and Daily Schedule

This course will be held at The Pyle Center, one of our lakeside conference centers on the campus of the University of Wisconsin-Madison. Registration will be at 8:00 am on Tuesday, May 7. General workshop sessions will run from 8:30 am to 5:00 pm, Tuesday through Thursday. Refreshments will be available at the start of each day and for mid-morning and mid-afternoon breaks. Lunches will be served daily at noon.

### Course Credits

Upon successful completion of the three-day workshop, you will earn 2.0 Continuing Education Units (CEUs). These credits can be applied toward the Disaster Management Diploma from the University of Wisconsin-Disaster Management Center (UW-DMC).
Maximize Your Training Dollars!

Our instructors can travel to you and deliver Fundamentals of Disaster Communications at your worksite. We can also design and deliver complete training programs tailored to your special organizational needs. If you’d like more information about on-site course delivery, please call UW-DMC Director Don Schramm, toll free 800-462-0876 or direct at 608-262-1122 or e-mail dmc@engr.wisc.edu.

Your Visit to Madison, Wisconsin

Located on the shores of Lake Mendota, the University of Wisconsin-Madison campus features a park-like setting of more than 1,000 acres. Fine hotels and restaurants are within walking distance to the campus, where our continuing education conference center is located. Hotel rooms are typically available for $50-$80 per night. You can enjoy a fine meal for $15 or less. And during your visit to Madison you can enjoy some of the city’s renowned recreational, cultural, and historical attractions, including the State Capitol and the Monona Terrace, designed by Frank Lloyd Wright.

Four Easy Ways to Enroll!

Phone: 800-462-0876 or 608-262-1299 (TDD 265-2370)
Fax: 800-442-4214 or 608-265-3448
Mail to: Engineering Registration, Dept. 108
The Pyle Center
702 Langdon Street
Madison, Wisconsin 53706
Internet: http://epdweb.engr.wisc.edu/brochures/A457.html

Need to Know More?

Call toll-free 800-462-0876 or 608-262-2061
Program Director: Don Schramm
Program Assistant: Diane Lange
Or e-mail custserv@epd.engr.wisc.edu

General Information

Fee Covers Notebook, textbook workshop materials, break refreshments, lunches and certificate.
Cancellation We prefer enrollment in advance. If you cannot attend, please notify us immediately. We will refund your fee, or you can have someone take your place.
Location The Pyle Center, 702 Langdon Street, Madison, Wisconsin. If you must be contacted during the course, phone messages may be left for you at 608-262-1122.
Accommodations Your enrollment confirmation will include local hotel/motel information. Or visit our Web site for lodging information: http://epdweb.engr.wisc.edu/visit

Your enrollment confirmation will include local hotel/motel information. Or visit our Web site for lodging information: http://epdweb.engr.wisc.edu/visit

Voluntary Information collected to enhance UW programming

- Female  - Male
- Asian/Pacific Islander  - American Indian/Alaskan Native  - Hispanic/Latino  - White/Other
- African American

- Occupational Area: Engineering, Architecture & Surveying

- Are you enrolled in this program primarily for career purposes?

- Yes  - No

- UW-Madison provides equal opportunities in employment and programming, including Title IX requirements. This course is supported in part by funds administered through UW-Extension.

Printed on recycled paper with vegetable-based ink. Please recycle this brochure.