From CHAOS TO SYNERGY via a WHOLE of SOCIETY Approach

Innovative Internet Uses & the Open Internet: Security & Emergency Communications

PAT > Principal, RIVERA/LANTHIER & Associates
LANTHIER > Chair, eCLIC at Carnegie Mellon Univ. Silicon Valley, & Emergency Comms at Pacific Telecommunications Council
> Advisor, U.S. Pacific Command & United Nations WGET

11/20/2014  FED-STATE JOINT 706 CONFERENCE, 19NOV2014, SAN FRANCISCO, CA
SUMMARY FOR REGULATORS

- Create Synergy via Innovation, Leadership, & Collaboration (SILC)
- Actively promote an Open Internet “Whole of Society” (WOS) approach...move beyond, to inclusive emergency communications
- Support Democratized Innovation via specific programs in key innovation areas: Wireless BB, Social Media, Unmanned Tech
- Exercise & test measurable WOS-based criteria for Wireless Infrastructure Capacity, Reliability, and Quality in Emergencies
- Move from “Thought Leadership” to “Collaborative Action Leadership”. Vigorously seek visionary public/private programs.
- Apply lessons from past successes and current programs, worldwide (CPUC ROMP/NRF/CAP, CETF, LINC, MCIP, UNWGET, UNETC, APEC/WOS, CMUSV, LLNL, NPS, CalIOES, DHS, etc.)
- Make WOS-based Emergency Communications a top priority. Based on California’s experiences, the CPUC could lead an action team.

Pat Lanthier, patlan@pacbell.net, patrick.lanthier@sv.cmu.edu
DISASTER CHAOS
The Communications “Ground Truth”

Volunteer & Technical Communities
- Crisis Commons
- Humanity Road
- Standby

NGOs
- Global
- Local
- Nets
- World Vision
- IRC/RC
- CARE
- Mercy Corps
- Save the Children
- ...many others

Evil
- Hackers

United Nations System
- OCHA
- WFP
- UNDP
- UNESCO
- UNHCR

Open Internet

Donors
- World Bank
- USAID, AUSAID, etc

Military

Governments
- FED, STATE, CITY

Academia

Industry / Media

US PACOM MCIP, pel 11/20/2014
FROM CHAOS TO SYNERGY

SYNERGY : 1 + 1 = 3

Results are greater than the sum; more effective, efficient, sustainable

COMBINE:

> INNOVATION

> LEADERSHIP

> COLLABORATION, via OPEN INTERNET
MORE THAN RESPONSE

Emergency Management Cycle: interactive comms-heavy process via Voice & Open Internet

Plan → Prevent → Respond → Recover → Mitigate → Plan

USDHS, CALOES
11/20/2014
LEADERSHIP EXAMPLE: CPUC +

Digital Conversion -“ROMP”- $400M, 2 years

Rural Office Mod Program

(CPUC + PACBELL + California Consumer Advisory Panel)

California Nonfarm Employment
1988-1999

SYNERGISTIC EFFECT: INTERNET COMMS = JOBS
LEADERSHIP EXAMPLE : LINC
POLICE, FIRE, SCHOOLS, LLNL, CMUSV, +
INNOVATION: THE NEW ECONOMY
Mobile Internet-Based

The New Economy, 4 aspects:
- Fast, Global, Networked, Knowledge Worker-Based
  
  (California Economic Strategy Panel, “Connecting to Compete”)

Communications impacts **all** 4 aspects, with:
- **Wireless Internet** = Home, Local, Area & Sat nets
- **User Innovation** = Lead Users: “Democratizing Innovation” (Dr. Eric von Hippel, MIT)
- Unprecedented uses, **synergies**: social, safety, security, health, education, sustained commerce
- **BEST TIME, EVER, FOR EMERGENCY COMMS; FOR ALL, VIA OPEN WIRELESS INTERNET**
INNOVATION: WIRELESS
Mobile BroadBand : The Future is Here

“The future of Broadband is Wireless;
The future of Wireless is Broadband”...pel

“Broadband Wireless will soon close what information gap remains”...Forbes

“Most exciting new tech platform since the Internet – no innovation limits”...Forbes

“ Likely offer a larger wave of investment opportunity than the PC”...John Doerr, VC
CMUSV INNOVATION for PEOPLE: INCIDENT AIDE SYSTEM (IAS)
INNOVATION : SOCIAL MEDIA and UDOP/COP via OPEN INTERNET

• Enlightened Social Media use/analysis leads to “Social Intelligence” (SI) & “Situational Understanding” (SA-SU)

• Common (User-Defined) Operational Picture (UDOP or COP) creates shared space, = Best Decisions

• Shared appropriately via Open Internet
UDOP: User-Defined Ops Picture
INNOVATION: BEYOND AWARENESS

- Strategic: From Awareness to Situational Understanding
- Tactical Process: From Social Media to Social Intelligence

**Information Management Focus**
- Collect
- Process
- Disseminate
- Store
- Display
- Protect

**Knowledge Management Focus**
- Create
- Organize
- Apply

**Decision-Making**
- Prioritize
- Evaluate
- Fuse

**Knowledge**

**Information**

**Data**

**Situational Understanding**

**Social Media**

**Social Intelligence**
SOCIAL MEDIA: BIG CHANGE
Just 10 years, engaging all,
via Open Internet
INNOVATION: UNMANNED SYSTEMS
MIONet: Drive-by Search by USV Sea Fox, and USV and UAV Wireless Relay
COLLABORATION
“Stars Aligning” IN ASIA/PACIFIC = Globally Unique

- Multinational Communications Interoperability Program (MCIP) PACIFIC ENDEAVOR; 23 Countries, UN, NGOs
  - NEPAL: US & Nepal Mil, Tribuvan U., CMUSV, CAN, etc.

- ASIA PACIFIC ECONOMIC COLLABORATION
  - “WHOLE OF SOCIETY APPROACH” 11/11/11

- Build from best practices of MCIP, UNWGET, UNETC, PTC, CPUC, CalOES, others

11/20/2014
“WHOLE OF SOCIETY” APPROACH via APEC

• Asia Pacific Economic Collaboration

APEC (con’t)

• “WHOLE OF SOCIETY” Approach to:
  1. Save Lives,
  2. Ensure Economic Vitality, &
  3. Enhance Human Well-Being”

MCIP, UNWGET, & PTC ECDM

• All focused on HA/DR (Humanitarian Assistance/Disaster Relief) Communications Planning & Management with Military, Gov’t, UN, NGOs, Industry, Academia

• MCIP: Multinational Communications Interoperability Program; 23 countries, USPACOM Joint Command

• UNWGET: UN Working Group on Emergency Telecomms & UNETC: Emergency Telecomms Cluster

• PTC ECDM: Pacific Telecommunications Council, Emergency Comms & Disaster Management Workshop