

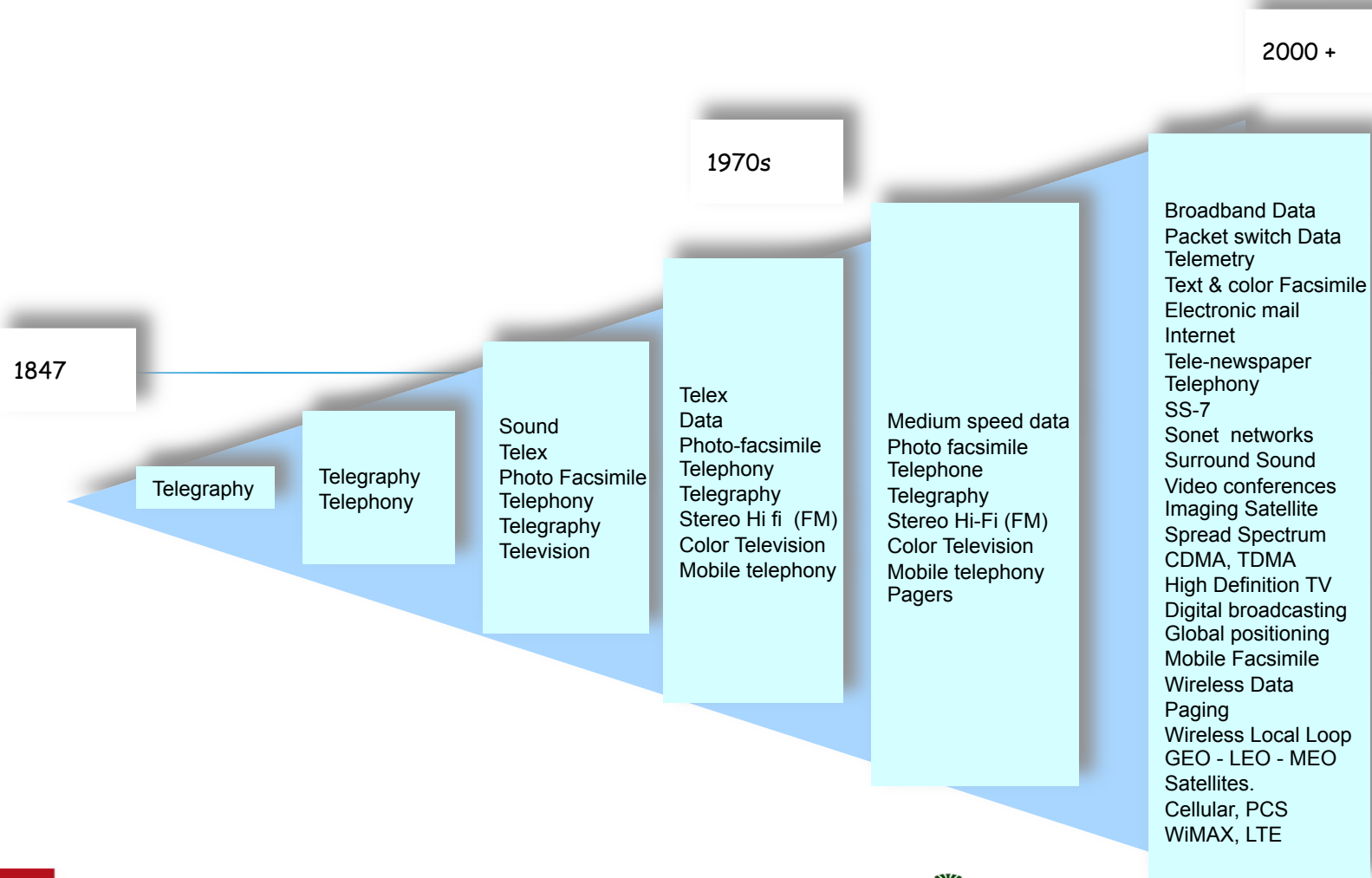
# BUILDING ON EXISTING AND EMERGING SYSTEMS

8 June, 2010

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Peter Anderson  
School of Communication  
Simon Fraser University

# GROWTH IN TELECOM SERVICES AND TECHNOLOGIES



# TRENDS AFFECTING ICT INFRASTRUCTURE

- × Increased portability
- × Improved ease of use
- × Increased networking capability
- × Increased interoperability
- × Increased interdependency and complexity

# CONTRIBUTING FACTORS

- × Technology – analogue to digital
- × Liberalization and deregulation
- × Global trade
- × Merger of telecommunications and the computer – common standards and protocols
- × Convergence of communication functions, media and products and services brought about by introduction of digital technology

# EMERGING INFRASTRUCTURES AND APPLICATIONS

# TERRESTRIAL MOBILE COMMUNICATION

- × Cellular telephones will increasingly become:
  - + Multimode
  - + Internet Gateways
- × Full integration of mobile and fixed networks

# MOBILE ICT

---

# WIRELESS TELEPHONE FIRST GENERATION - CELLULAR





# WIRELESS TELEPHONE - SECOND GENERATION

Cellular/PCS radio telephone



Source: <http://www.celt.net.org.uk/mobile-phone/img/mobile-evolution.gif>



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Earthquake Workgroup  
Sharing Information to Promote Mitigation



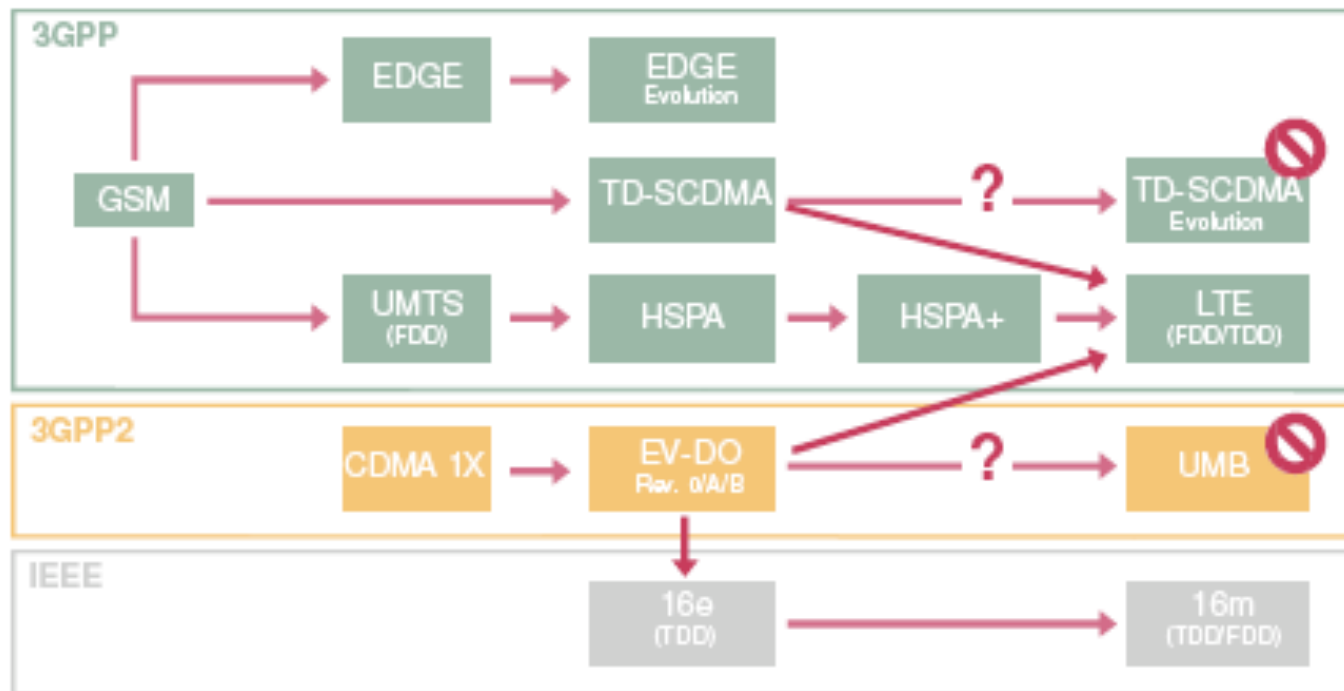
THE VAN HORNE INSTITUTE



Emergency  
ManagementBC

# WIRELESS TELEPHONE - THIRD GENERATION





Source: Grivolos, Julien and Steven Hartley The road to 4G mobile: LTE, HSPA and mobile WiMAX <http://www.ovumkc.com/>

# MOBILE ICT – CURRENT TRENDS

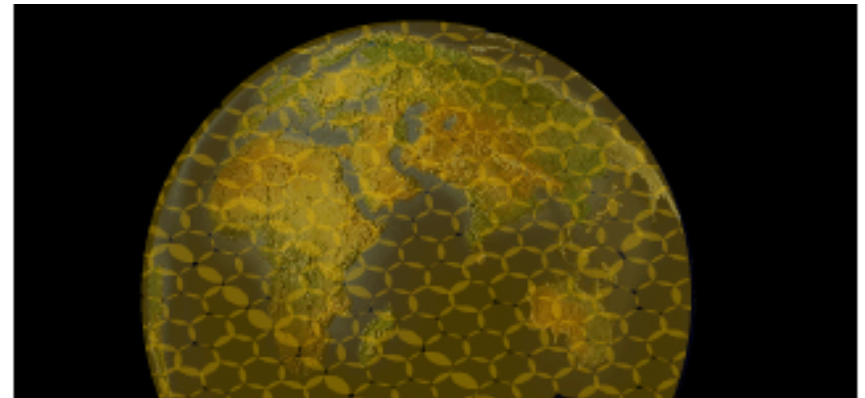
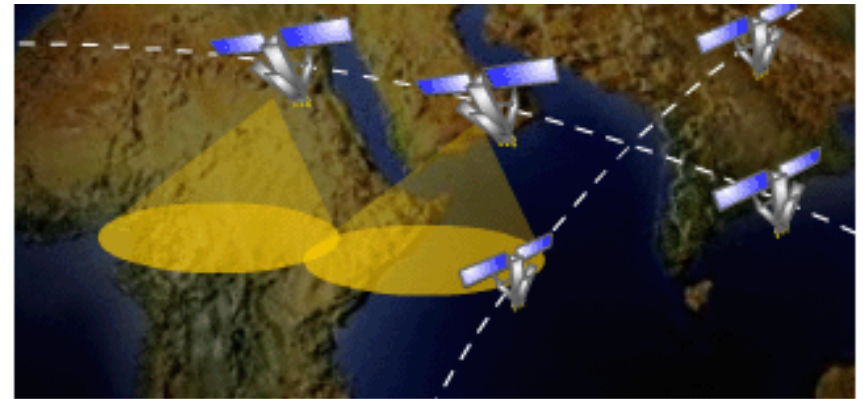
## Redefining Mobility

- ✖ Mobility software: Use smartphones not only for voice, voicemail, and email, but also for collaboration tools such as instant messaging, contacts, conferencing, social networking, GIS, location tracking, audio and video on demand, etc.
- ✖ Dual-mode (Wi-Fi/802.11) phones: Connect over the Wi-Fi network when in range and over the cellular network when out of range.
- ✖ Follow-me services: can specify that when the phone number is dialed all of the personal communications devices – phones in other offices, home phone, and cellular phone – ring as well.

# SATELLITE COMMUNICATION LEOS AND GEOS

# IRIDIUM LEOS

- ✖ 66 low-earth orbiting (LEO) satellites
- ✖ GSM handsets



Source: Iridium [http://www.iridium.com/using/iri\\_using.asp](http://www.iridium.com/using/iri_using.asp)



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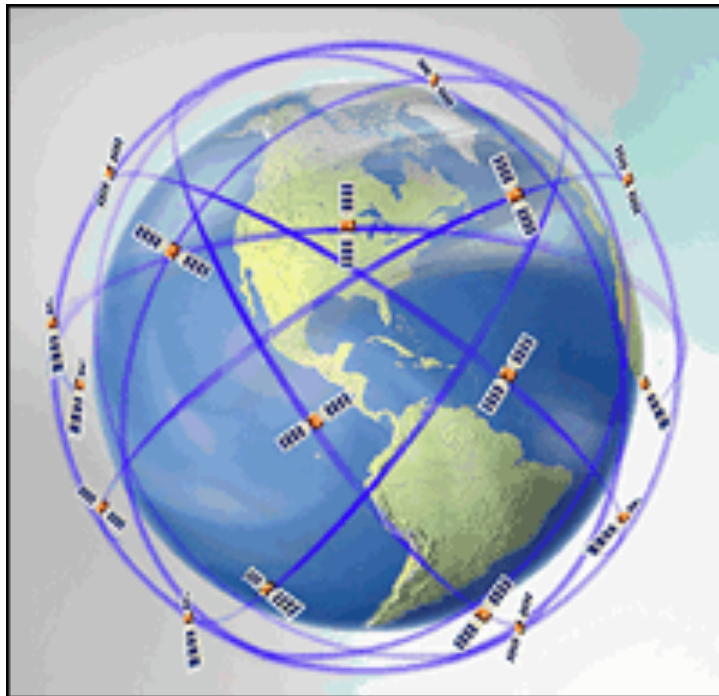
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# IRIDIUM SERVICES

- × Data (2.4 Kbps dial-up or 10 Kbps direct)
- × Voice
- × Global Paging
- × SMS



# GLOBALSTAR - 48 LEOs



Source: Personal Satellite Network, Inc. <http://www.skyhelp.net/globalstar.htm>



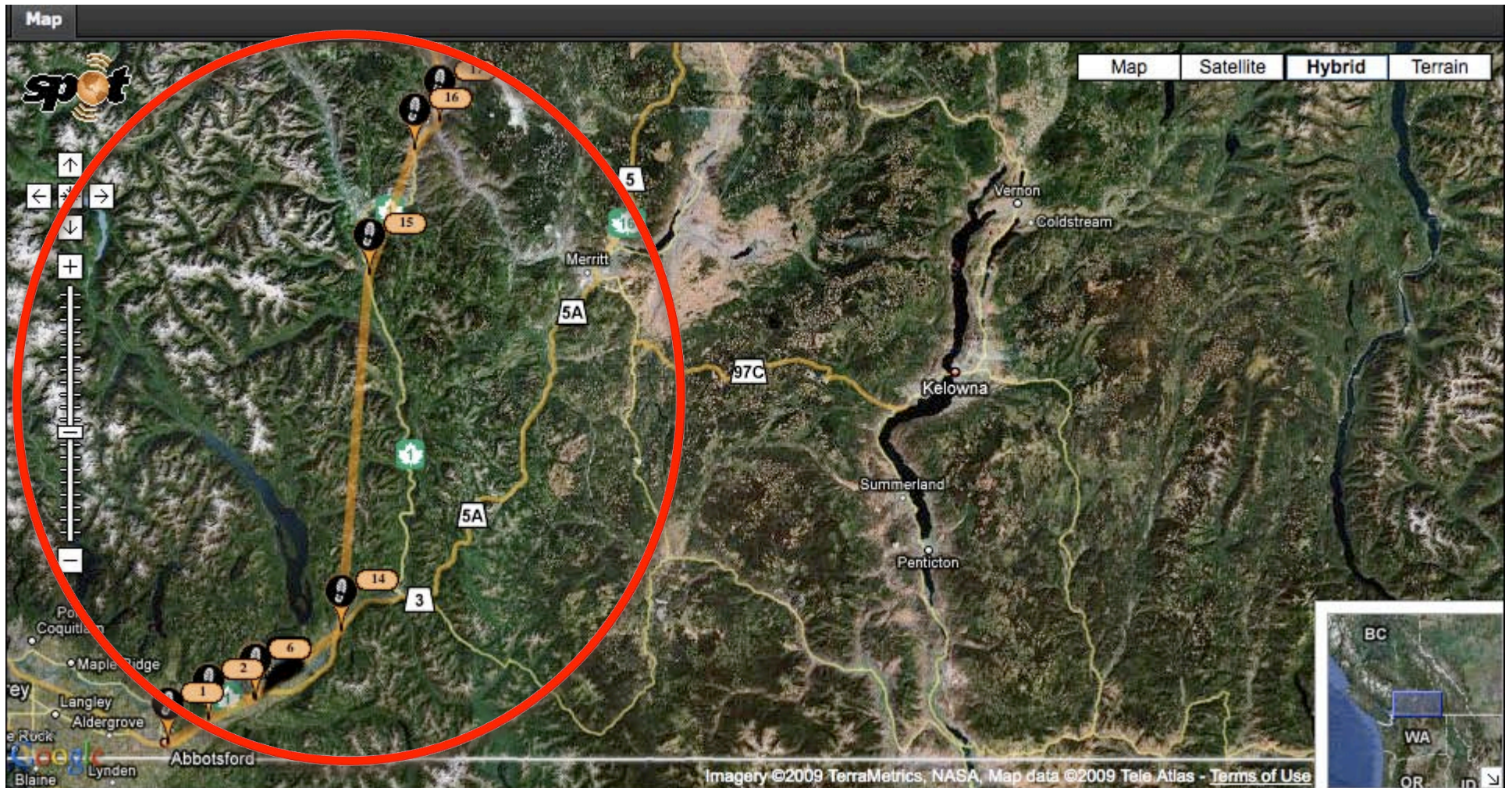
# SPOT



# SERVICE OFFERINGS

- × SPOT basic services
  - + Check in
  - + Ask for Help
  - + Alert 911
- × Track progress
- × Search and Rescue
  
- × One-way only





# IRIDIUM GEOPRO



- × Two-way GPS messaging
- × Internal and external antenna
- × Automated tracking reports
- × Multiple messaging options including free form text and predefined messages
- × LED and audio alerts



# MSAT GEO COVERAGE



Source: TMI Communications <http://www.tmi.ca/about/coverage.cfm>

# MSAT SERVICES

- × Voice and Dial-up Data
- × Fax
- × Packet Data
- × Dispatch Radio



# HUGHES G2 TERMINAL



LAND – 2 AXIS



MARINE – 3 AXIS

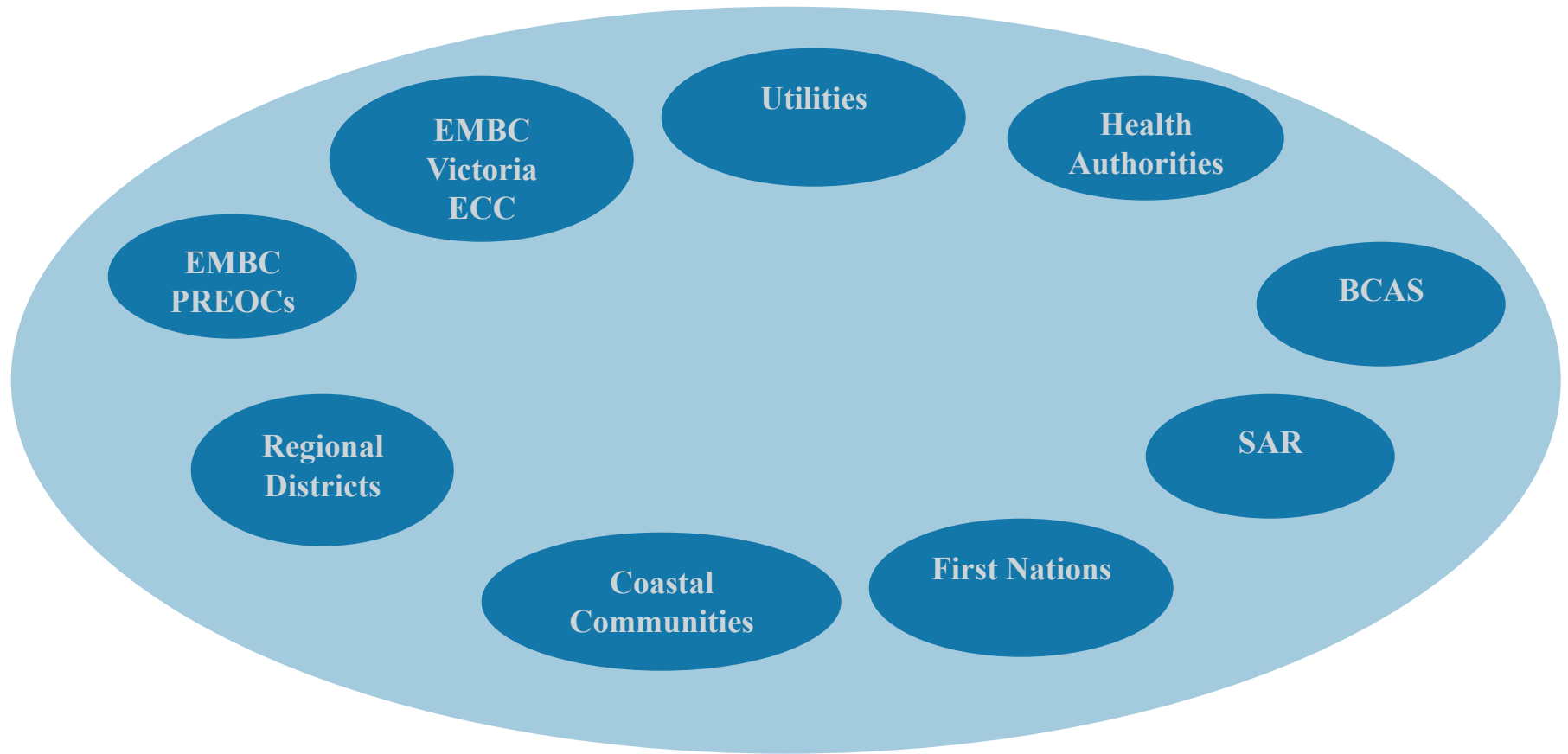




# EMERGNET

- ✖ Creation of two Satellite Dispatch Radio Talk Groups for use by Emergency Preparedness and Emergency Response organizations.
  - + BC Emergency Private Mode Talk Group
  - + BC Emergency Interoperability Talk Group
- ✖ These two Talk Groups provide access to the various agencies and organizations for the purpose of a common voice communications infrastructure that has no reliance on the PSTN or other terrestrial communications networks.

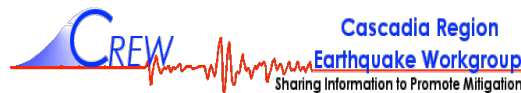
# BC INTEROPERABILITY TALK GROUP



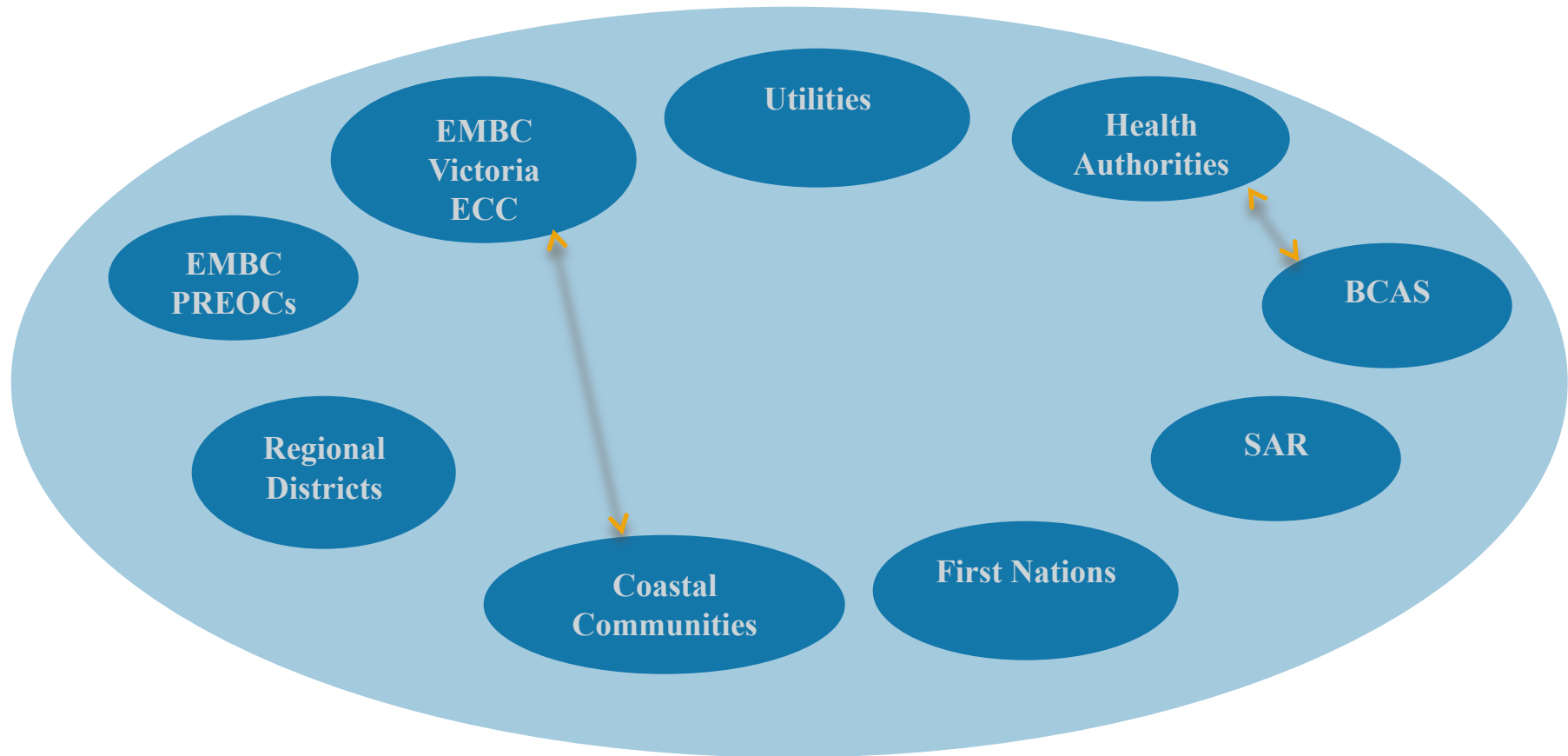
For illustrative purposes only



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# TALK GROUP - PRIVACY MODE



For illustrative purposes only



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# BGAN

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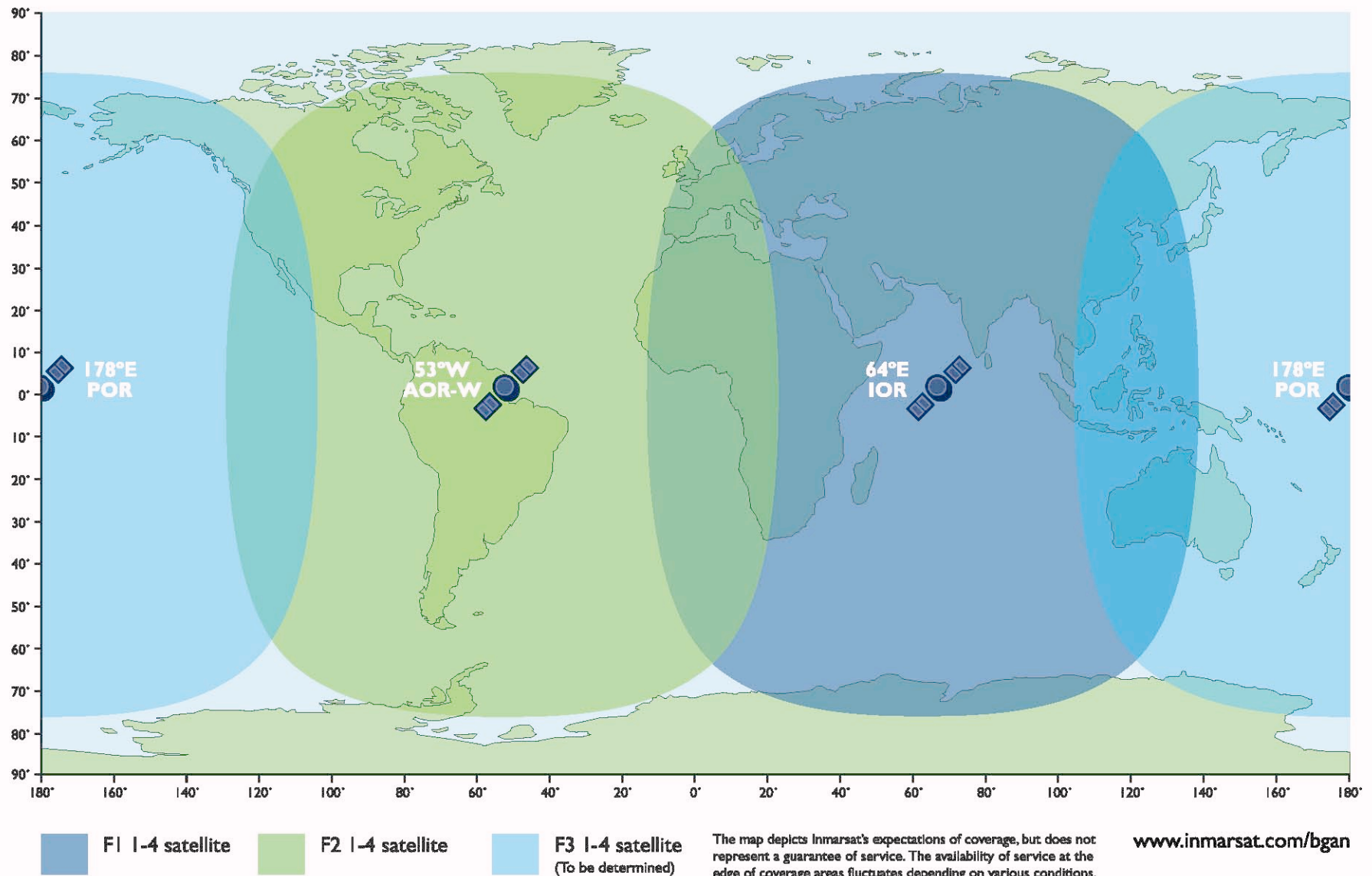


## BGAN Terminals

- Data – IP - 448- 490 kbps
- Voice
- Text Messaging



# Inmarsat BGAN coverage



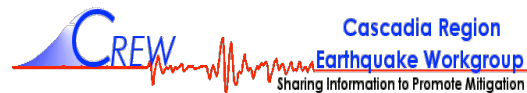
[www.inmarsat.com/bgan](http://www.inmarsat.com/bgan)





# GEOS - NEXT GENERATION

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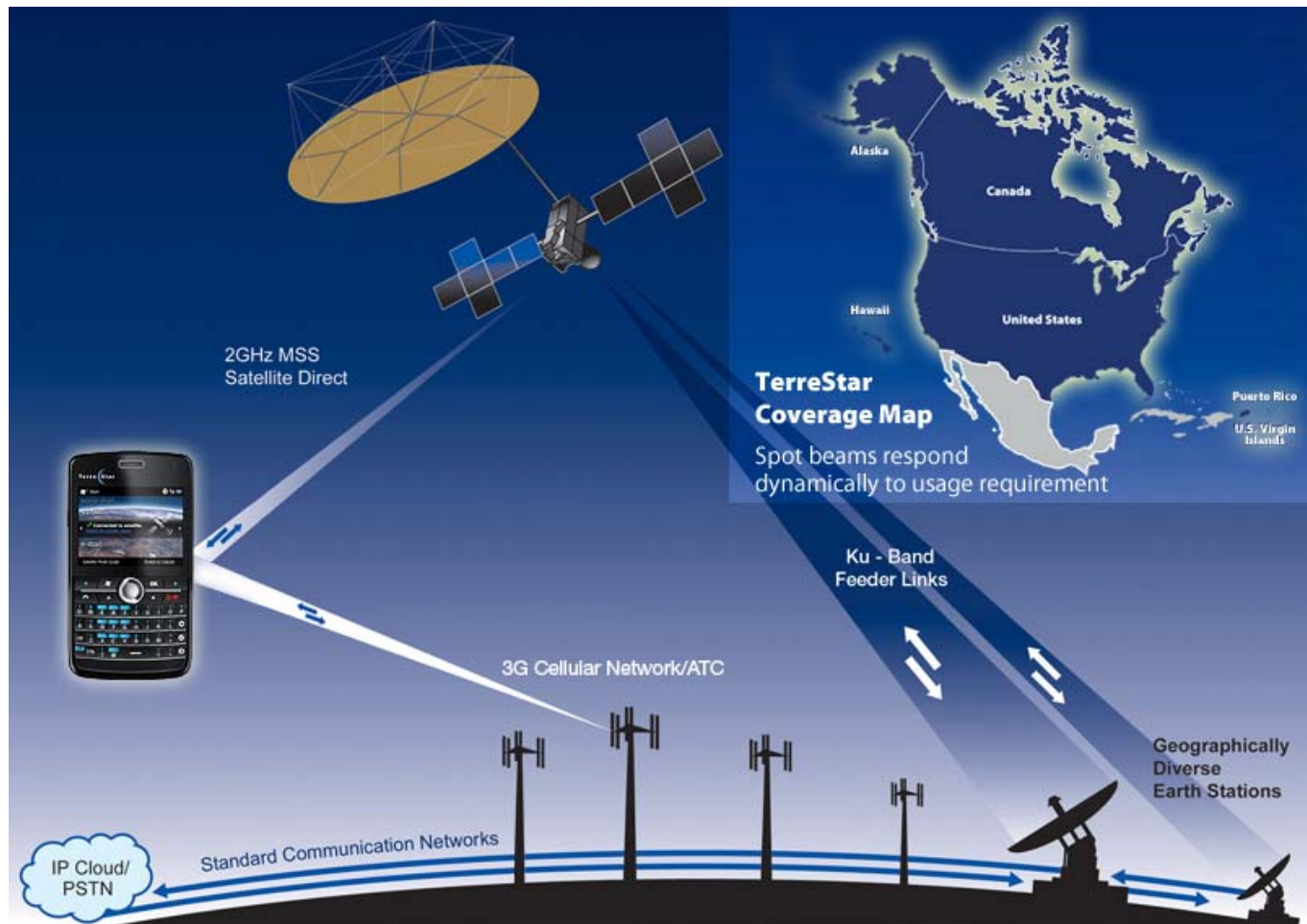
# EMERGING TRENDS: SATELLITE COMMUNICATION

- ✖ Space networking is becoming easier, faster to set up and interconnectable to terrestrial networks
- ✖ Satellite communications will become less expensive, and continue to expand
- ✖ Will support same or similar applications to terrestrial networks

**Figure 6 – Handset as Multi-Application Controller**



# TERRASTAR



Source: <http://www.terrestar.com>



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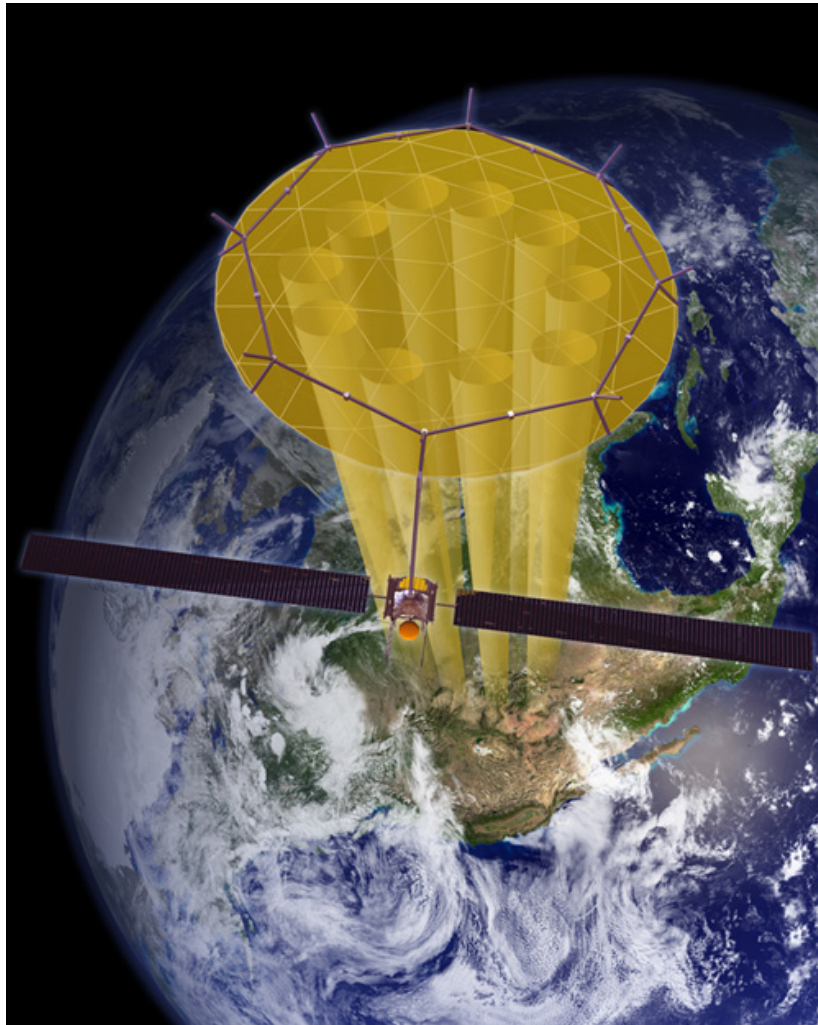
Source: <http://www.terrestar.com>



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ManagementBC

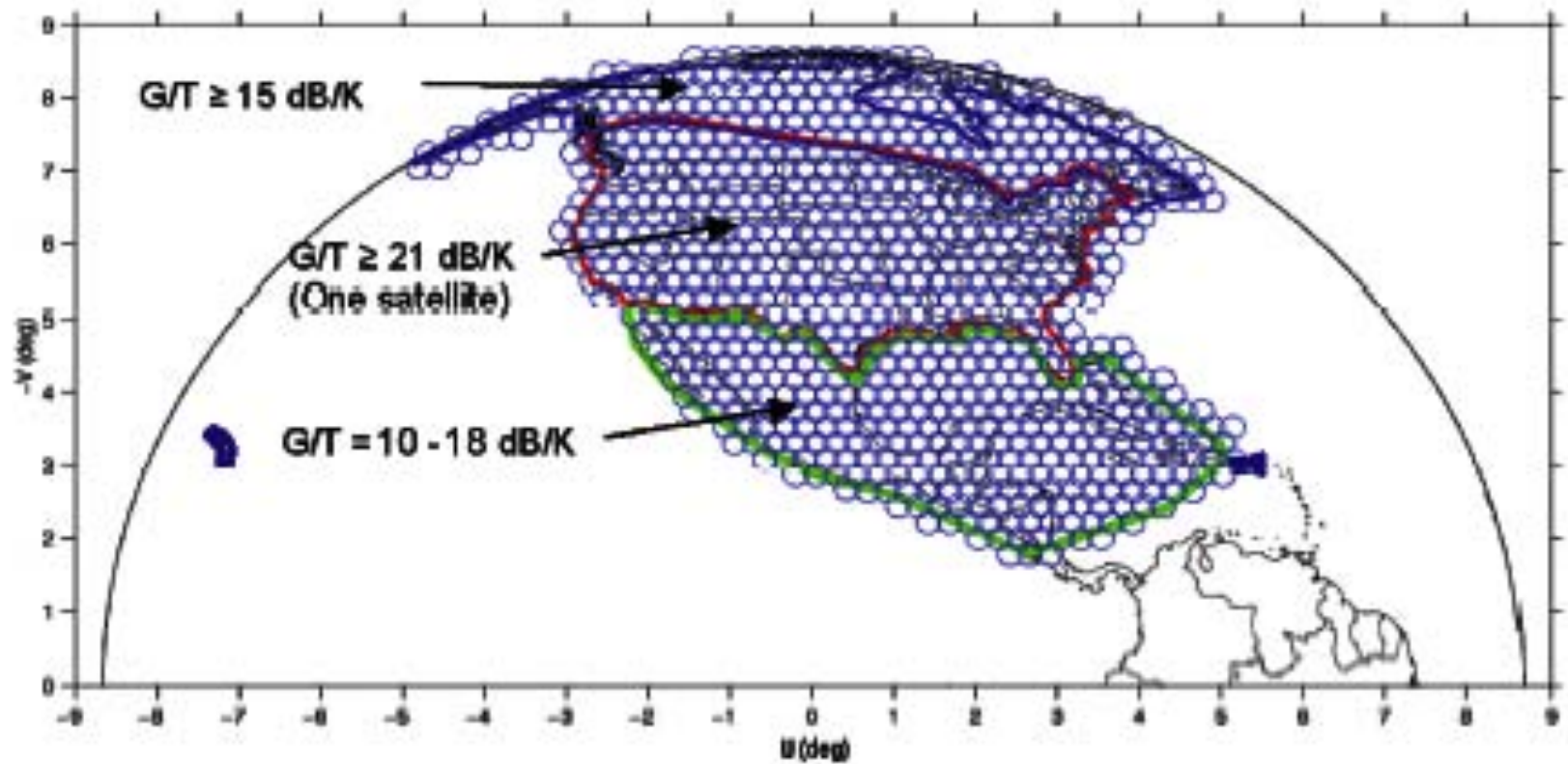


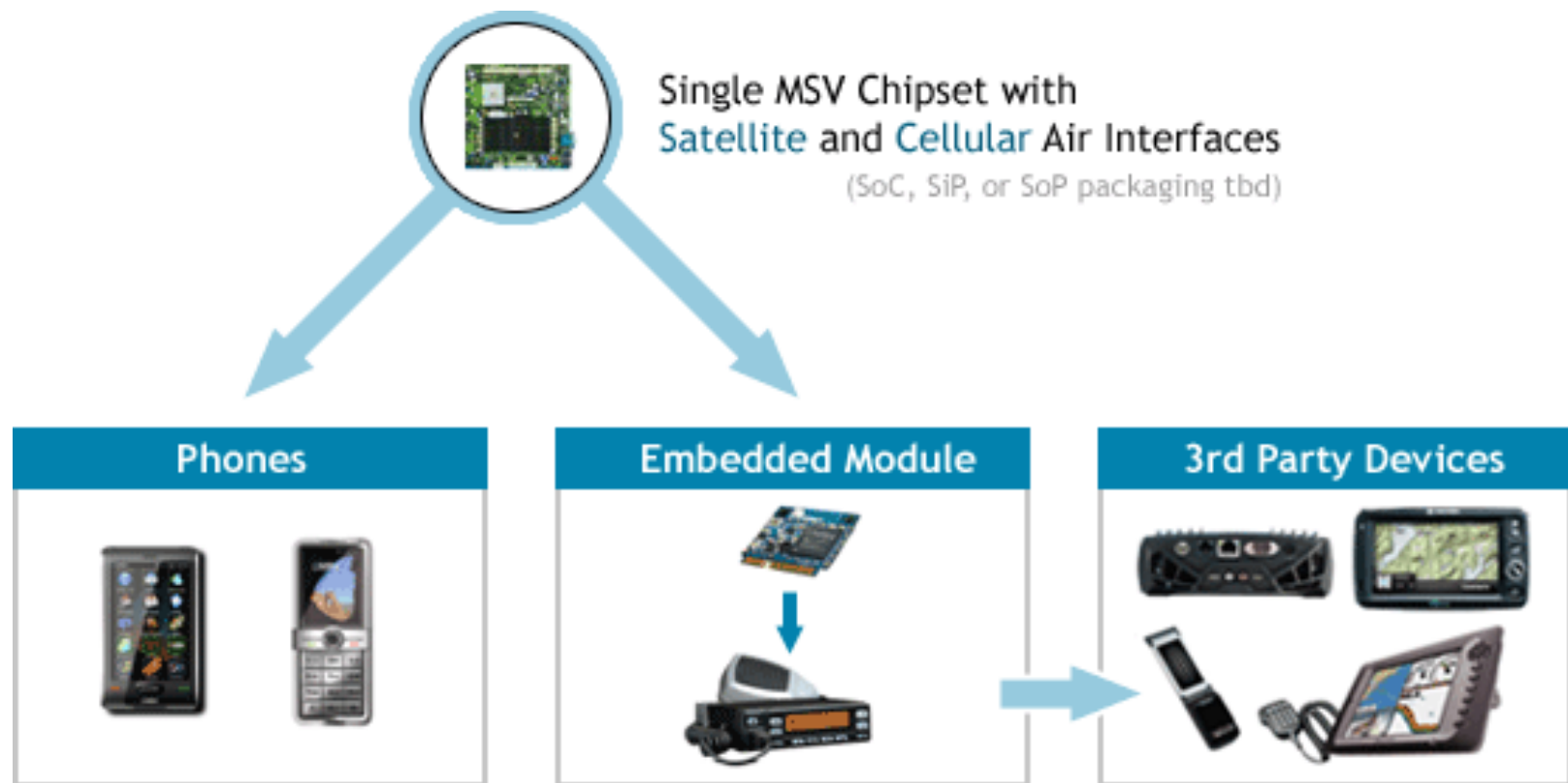
# SKYTERRA (MSAT)



Source: <http://www.skyterra.com>

Figure 9 – MSV Satellite Coverage of North and Central America



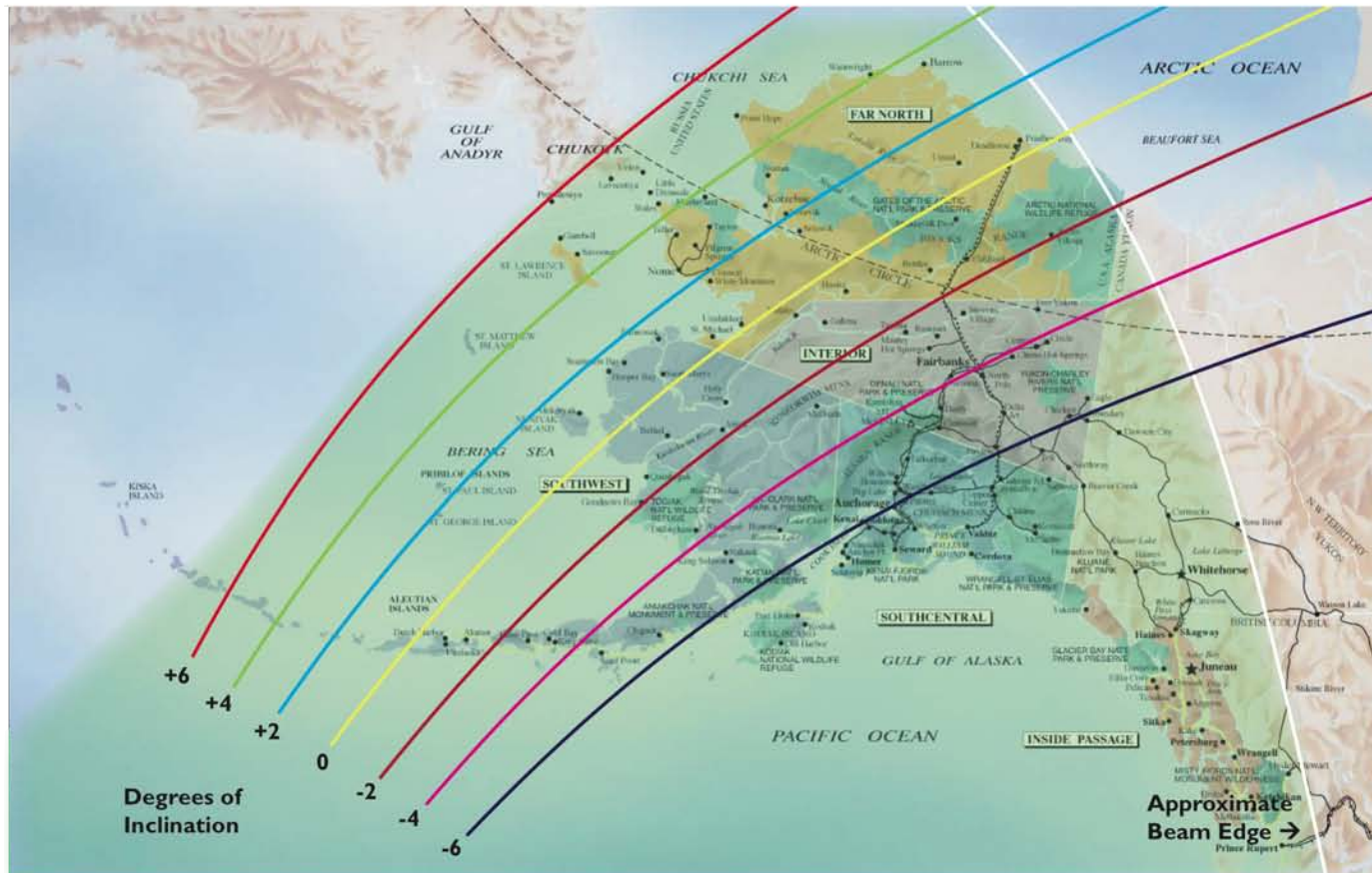






Source: <http://www.skyterra.com>

MSAT-2 and SkyTerra 1 at 101.3° W with Elevation Angle at 5°



# SATELLITE COMPARATIVE COSTS

|                       | MSAT   | IRIDIUM - HANDHELD   | BGAN  |
|-----------------------|--|--|---|
| <b>SERVICE PLAN</b>   | EmergNet BC<br>\$ 56.95 per month  | Basic plan<br>\$ 49.95 per month   | Basic plan<br>\$ 64.00 per month  |
| <b>CALLING RATES</b>  | 1 - Tel calls \$ 0.99/min<br>2 - Two-way radio usage is free                   | 1 - Iridium to landline or cell \$ 1.49/min<br>2 - Landline to Iridium start at \$ 3.00/min  | 1 - Data rate \$ 8.95 /MB<br>2 - Voice to landline \$ 1.29/min. - to celltel \$1.49/min   |
| <b>DIALING ISSUES</b> | 1 - North American dialing format.<br>2 - Has a 1-800 series telephone number. | 1 - Uses international dialing. Requires special training.<br>2 - International dialing costs landline caller extra per minute.<br>3 - Landline/cellular caller must have international dialing privileges | 1 - Uses international dialing. Requires special training.<br>2 - International dialing costs landline caller extra per minute.<br>3 - Landline/cellular caller must have international dialing privileges. |

# SATELLITE INTERCONNECTION COSTS

| SELECT YOUR CALLING DESTINATION |             |                  |
|---------------------------------|-------------|------------------|
| Iridium (Satellite Phone)       |             |                  |
|                                 | Landline    | Mobile/Specialty |
| Digital Phone Basic             | \$4.00/min. | \$4.00/min.      |
| Digital Phone Lite              | \$4.00/min. | \$4.00/min.      |
| Digital Phone                   | \$4.00/min. | \$4.00/min.      |

Shaw Phone to Iridium

# SATELLITE INTERCONNECTION COSTS

**SELECT YOUR CALLING DESTINATION**

Inmarsat Pacific Ocean

|                     | Landline   | Mobile/Specialty |
|---------------------|------------|------------------|
| Digital Phone Basic | \$N/A/min. | \$13.23/min.     |
| Digital Phone Lite  | \$N/A/min. | \$13.23/min.     |
| Digital Phone       | \$N/A/min. | \$13.23/min.     |

Shaw Phone to BGAN

# NEW MEDIA

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# WC/ATWC WEB PAGE

NOAA's National Weather Service  
**West Coast and Alaska**  
Tsunami Warning Center  
WORKING TOGETHER TO SAVE LIVES  
Serving the U.S. mainland, Canada, Puerto Rico, and the Virgin Islands.


contact us event map section 508

Local weather forecast by "City, St" or "ZIP"  GO

Recent Messages#  
Products  
User Guide (PDF)  
Tsunami Catalogs  
Tsunamis  
Earthquakes  
WCATWC  
Tide Gauges  
TsunamiReady  
FAQs  
Links & References  
Send Info  
Emergency Services

NOAA 50 Years  
USA.gov

No Tsunami Watch, Warning, or Advisory in effect

 **No Watch, Warning, or Advisory is in effect**

Note: Not all earthquakes result in the issuance of a tsunami message. For complete earthquake information, refer to the USGS Earthquake Hazards Program web site <http://earthquake.usgs.gov>

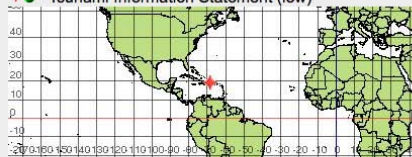
Your local time is: 9:00 / UTC is: 4:00

Event Calendar  
June 2010




| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
|     |     | 1   | 2   | 3   | 4   | 5   |
| 6   | 7   | 8   | 9   | 10  | 11  | 12  |
| 13  | 14  | 15  | 16  | 17  | 18  | 19  |
| 20  | 21  | 22  | 23  | 24  | 25  | 26  |
| 27  | 28  | 29  | 30  |     |     |     |


**Latest Event**

★ - Tsunami Information Statement (low)



2010/06/05 18:26:34 (UTC)  
Preliminary Magnitude: 4.1  
Latitude: 18.885 Longitude: -67.898  
Location: 70 miles/113 Km NW of Mayaguez, Puerto Rico  
[576239 1](#)

Closeup View  Event Location  Alert Status 

Please click on image, for larger view  
 [print 576239-01](#)

**New Tsunami Videos**

We are pleased to present:

The Marin County Office of Emergency Services (OES), "Marin Tsunami" video  
Please click [here to view](#)

The San Diego County OES, "Tsunamis: Know what to do!" video.  
Please click [here to download the tsunami video](#)

Media Format: MP4 Size: 39,245,905 bytes

Source: <http://wcatwc.arh.noaa.gov/>



# REALLY SIMPLE SYNDICATION (RSS) FEEDS

The screenshot shows the NOAA West Coast and Alaska Tsunami Warning Center website. The header includes the NOAA logo, the text "NOAA's National Weather Service", "West Coast and Alaska Tsunami Warning Center", and the slogan "WORKING TOGETHER TO SAVE LIVES". It also features navigation links for "contact us", "event map", and "section 508". A search bar is present with "Search", "NWS", "All NOAA", and a "Go" button. The left sidebar contains a "Local weather forecast by 'City, St' or 'ZIP'" input field with a "Go" button, and a list of links: "Recent Messages", "Products", "User Guide (PDF)", "Tsunami Catalogs", "Tsunamis", "Earthquakes", "WCATWC", "Tide Gauges", "TsunamiReady", "FAQs", "Links & References", "Send Info", and "Emergency Services". The main content area is titled "RSS Feed" and includes an "About RSS" section explaining that RSS is an XML dialect for syndicating news. It provides information about WC/ATWC RSS messages and a link to "Subscribe Now" for the RSS Event Feed. A section titled "RSS 2.0" shows the "The WCATWC RSS Uniform resource Locator (URL) is:" followed by the URL "http://wcatwc.arh.noaa.gov/rss/tsunamirss.xml". Below this, it states "The following documents provide more information/details on RSS:" and lists links for "RSS 2.0 Specification", "RSS History and Details", and "RSS Software". A note at the bottom states: "Note: The sites listed above are NOT maintained or controlled by NOAA. Note: Some browsers/systems block 'pop-ups'. You may have to press Ctrl and then click OK to activate the link." The final sentence says: "The NOAA RSS Home Page with other NOAA RSS feeds can be found [here](#)".

NOAA's National Weather Service  
West Coast and Alaska  
Tsunami Warning Center  
WORKING TOGETHER TO SAVE LIVES  
Serving the U.S. mainland, Canada, Puerto Rico, and the Virgin Islands.

contact us event map section 508

Search NWS All NOAA Go

Local weather forecast by "City, St" or "ZIP"  
Go

Recent Messages  
Products  
User Guide (PDF)  
Tsunami Catalogs  
Tsunamis  
Earthquakes  
WCATWC  
Tide Gauges  
TsunamiReady  
FAQs  
Links & References  
Send Info  
Emergency Services

## RSS Feed

### About RSS

Really Simple Syndication (RSS) is an Extensible Markup Language (XML) dialect for syndicating news and other web site content. RSS can provide headlines, links to documents and brief information in an easy to use and easy to understand format.

WC/ATWC RSS messages provide tsunami response guidance. Evacuations are conducted by local emergency management organizations. Please contact your [state or province](#) emergency management groups for site-specific tsunami hazard information.

[Subscribe Now](#) for RSS Event Feed

The WCATWC RSS Uniform resource Locator (URL) is:

**<http://wcatwc.arh.noaa.gov/rss/tsunamirss.xml>**

The following documents provide more information/details on RSS:

[RSS 2.0 Specification](#)  
[RSS History and Details](#)  
[RSS Software](#)

Note: The sites listed above are NOT maintained or controlled by NOAA.  
Note: Some browsers/systems block "pop-ups". You may have to press Ctrl and then click OK to activate the link.

The NOAA RSS Home Page with other NOAA RSS feeds can be found [here](#)

Source: <http://wcatwc.arh.noaa.gov/info/tsunamirssabout.php>

# EMAIL AND SMS

West Coast and Alaska Tsunami Information - (Private Browsing)

http://wcatwc.arh.noaa.gov/watcher/tsunamiwatcher.php

West Coast and Alaska Tsunami I...

Tsunami Warning Center  
WORKING TOGETHER TO SAVE LIVES  
Serving the U.S. mainland, Canada, Puerto Rico, and the Virgin Islands.

Search NWS All NOAA

Local weather forecast by "City, St" or "Zip" GO

Recent Messages  
Products  
User Guide (PDF)  
Tsunami Catalogs  
Tsunamis  
Earthquakes  
WCATWC  
Tide Gauges  
TsunamiReady  
FACs  
Links & References  
Send Info  
Emergency Services

USA.gov

### TsunamiWatcher Mailing List Description

This service provides tsunami bulletins issued from the West Coast and Alaska Tsunami Warning Center. These bulletins contain information specific to residents along the Alaska, British Columbia, Eastern Canada, and U.S. West, East, and Gulf of Mexico coasts. For information on events outside these areas, please register at [loc.unesco.org/indotsunami/subscribe\\_warning.htm](http://loc.unesco.org/indotsunami/subscribe_warning.htm)

Short format messages provided through this site are very abbreviated (messages are less than 90 characters in length). These messages are intended for dissemination to cell phones with text messaging capabilities. Due to the message length limitations, only the message type, earthquake parameter information, and a very concise evaluation is provided. Please contact your cell phone provider to determine the proper email address to forward these short messages to your cell phone.

**Disclaimer:** Timely delivery of data and products from this list server through the Internet is **not** guaranteed. Official National Weather Service dissemination systems which can provide timely delivery of data and products are:

[NOAA Weather Radio](#),  
[NOAA Weather Wire](#),  
[EMWIN](#),  
[Family of Services \(FOS\)](#),  
[NOAAAPORT](#),

and your [local National Weather Service Forecast Office](#).

**\*\*NOTE\*\* \*\*NOTE\*\* \*\*NOTE\*\* \*\*NOTE\*\***

**Note:** WCATWC messages provide tsunami response guidance. Evacuations are conducted by local emergency management organizations. Contact your local and [state or province emergency management](#) groups for site-specific tsunami hazard information.

**Note:** Tsunamiwatcher e-mails have [donotreply@noaa.gov](mailto:donotreply@noaa.gov) as the "from" address. Please ensure that your provider does not block/filter e-mails sent from [donotreply@noaa.gov](mailto:donotreply@noaa.gov)

**Disclaimer:** This server may **not** be available 24 hours a day, seven days a week. Timely delivery of data and products from this server through the Internet is **not** guaranteed. Please read the [full Disclaimer](#) for more information.

**Privacy:** You must submit a valid email address to subscribe to the service. The server will reply to the address given to verify that the address is valid. The email address is stored on the server only as long as you are subscribed to the service. Please read the [NOAA Privacy Policy Statement](#).

E-mail Address:  ?

Firstname:  ?

Lastname:  ?

Select Groups:

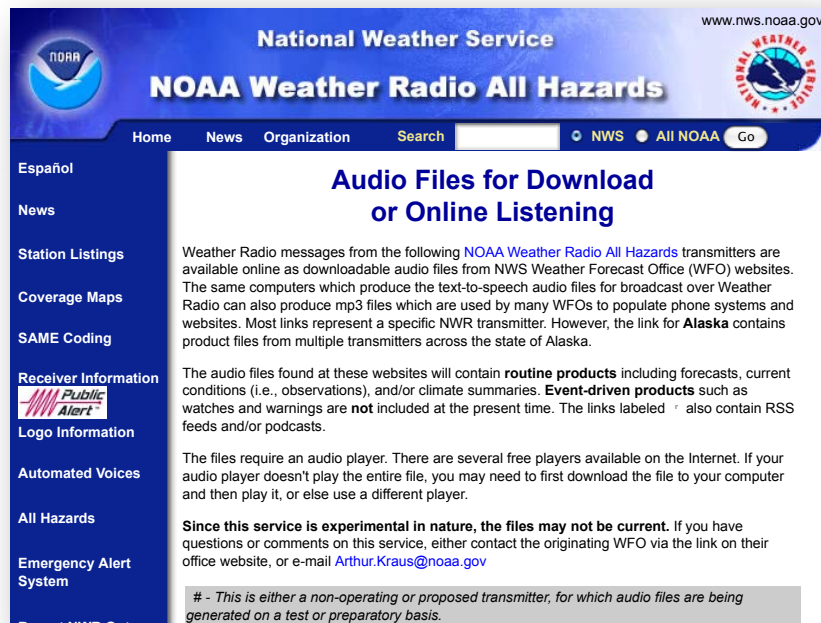
**All messages for U.S. West Coast, British Columbia, and Alaska**

☐ Full Text [E](#)

☐ Short Message [E](#)

Source: <http://wcatwc.arh.noaa.gov/watcher/tsunamiwatcher.php>

# AUDIO DOWNLOADING AND STREAMING




**National Weather Service**  
**NOAA Weather Radio All Hazards**

Home News Organization Search [ ] NWS All NOAA Go

Español  
News  
Station Listings  
Coverage Maps  
SAME Coding  
Receiver Information  
Logo Information  
Automated Voices  
All Hazards  
Emergency Alert System  
Report NWR Outages

## Audio Files for Download or Online Listening

Weather Radio messages from the following [NOAA Weather Radio All Hazards](#) transmitters are available online as downloadable audio files from NWS Weather Forecast Office (WFO) websites. The same computers which produce the text-to-speech audio files for broadcast over Weather Radio can also produce mp3 files which are used by many WFOs to populate phone systems and websites. Most links represent a specific NWR transmitter. However, the link for **Alaska** contains product files from multiple transmitters across the state of Alaska.

The audio files found at these websites will contain **routine products** including forecasts, current conditions (i.e., observations), and/or climate summaries. **Event-driven products** such as watches and warnings are **not** included at the present time. The links labeled  also contain RSS feeds and/or podcasts.

The files require an audio player. There are several free players available on the Internet. If your audio player doesn't play the entire file, you may need to first download the file to your computer and then play it, or else use a different player.

**Since this service is experimental in nature, the files may not be current.** If you have questions or comments on this service, either contact the originating WFO via the link on their office website, or e-mail [Arthur.Kraus@noaa.gov](mailto:Arthur.Kraus@noaa.gov)

# - This is either a non-operating or proposed transmitter, for which audio files are being generated on a test or preparatory basis.



**National Weather Service**  
**NOAA Weather Radio All Hazards**

Home News Organization Search [ ] NWS All NOAA Go

Español  
News  
Station Listings  
Coverage Maps  
SAME Coding  
Receiver Information  
Logo Information  
Automated Voices  
All Hazards  
Emergency Alert System  
Report NWR Outages  
Special Needs Info  
General Information  
Frequently Asked Questions

## Streaming Audio

There are two types of NOAA Weather Radio All Hazards audio available on the Internet:

- [Live Streaming Audio](#)
- [Audio Files for Download or Online Listening](#)

Whether you listen to the live streaming audio or download the static audio files, **please remember that you should NOT rely on this Internet audio to receive watches or warnings.** Instead, you should have a dedicated [NOAA Weather Radio receiver](#) which will alert you 24 hours a day to hazards in your area.

## Live Streaming Audio

The following [NOAA Weather Radio All Hazards](#) broadcasts are available online as live streaming audio. These streams are hosted by third parties such as universities, private companies and individuals, *not by NWS*. While we broadcast the audio used by these streams, we have no control over interruptions or discontinuation of these streaming audio services. Many of these streams are hosted by [Weather Underground](#). They may have additional streaming audio sites which are not yet listed here.

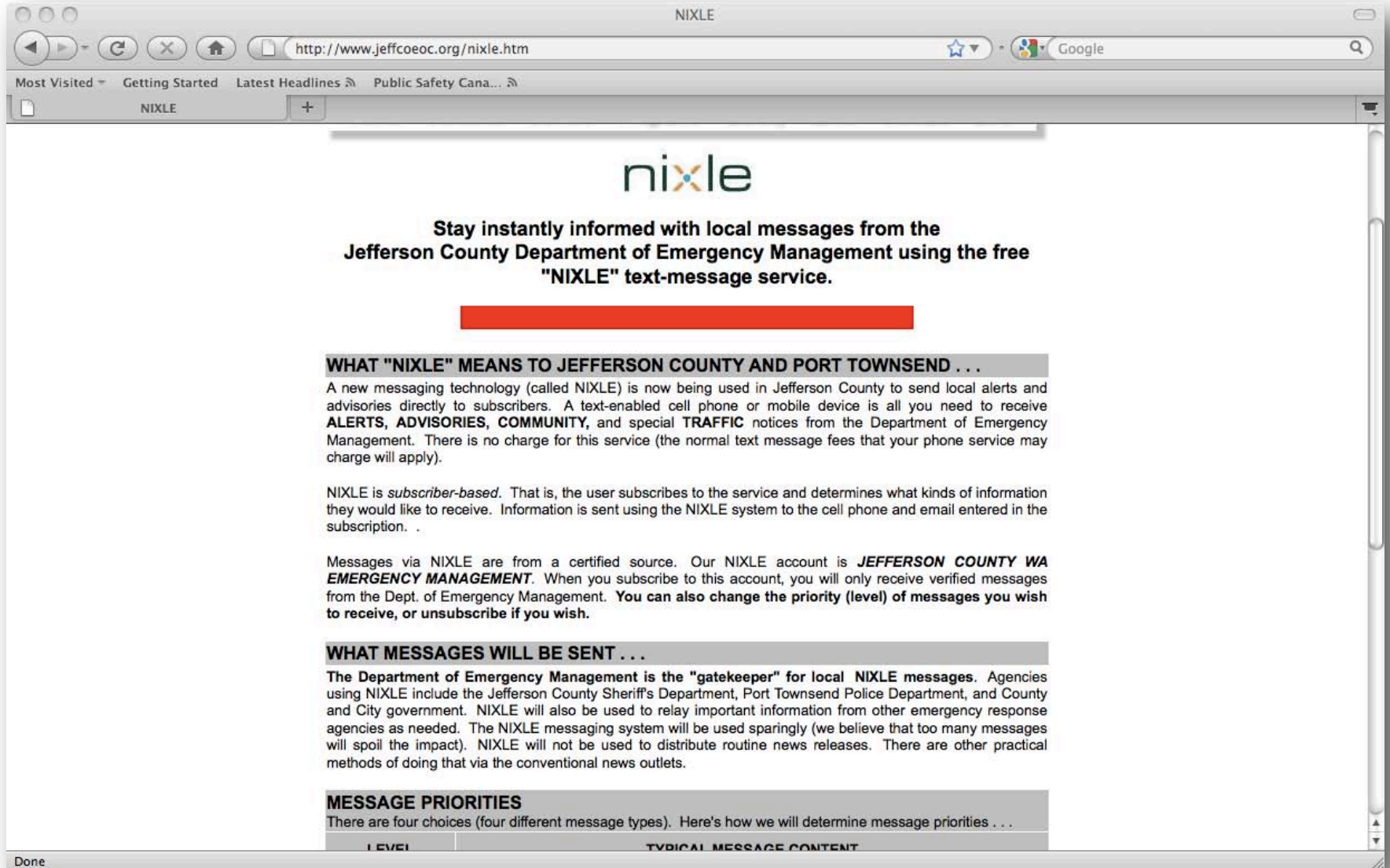
Note that some of these streams have a limit to the number of simultaneous connections they can support. If there is active weather in a particular area, you may not be able to connect to the audio stream from that area.

The streams require an audio player. There are several free players available on the Internet. If your audio player doesn't seem to work with a stream, you may need to use a different player. Some of the links may not work with every Internet browser (e.g., Firefox, Internet Explorer). If your browser doesn't work, try another.

For more information, or if you host or are aware of an audio stream of NOAA Weather Radio not listed here, please contact [Arthur.Kraus@noaa.gov](mailto:Arthur.Kraus@noaa.gov)

*The audio streams listed below are provided by external companies, citizens, or Universities. Some of the links will take you to an external Web page. NOAA's National Weather Service provides a link to these external audio streams and Web pages because they may contain related information of interest to you. This does not constitute an endorsement by the NWS of any information, products or services by the content provider. The NWS does not own or operate these sites and is not responsible for site maintenance or data accuracy. Use this data and the audio streams at your own risk.*

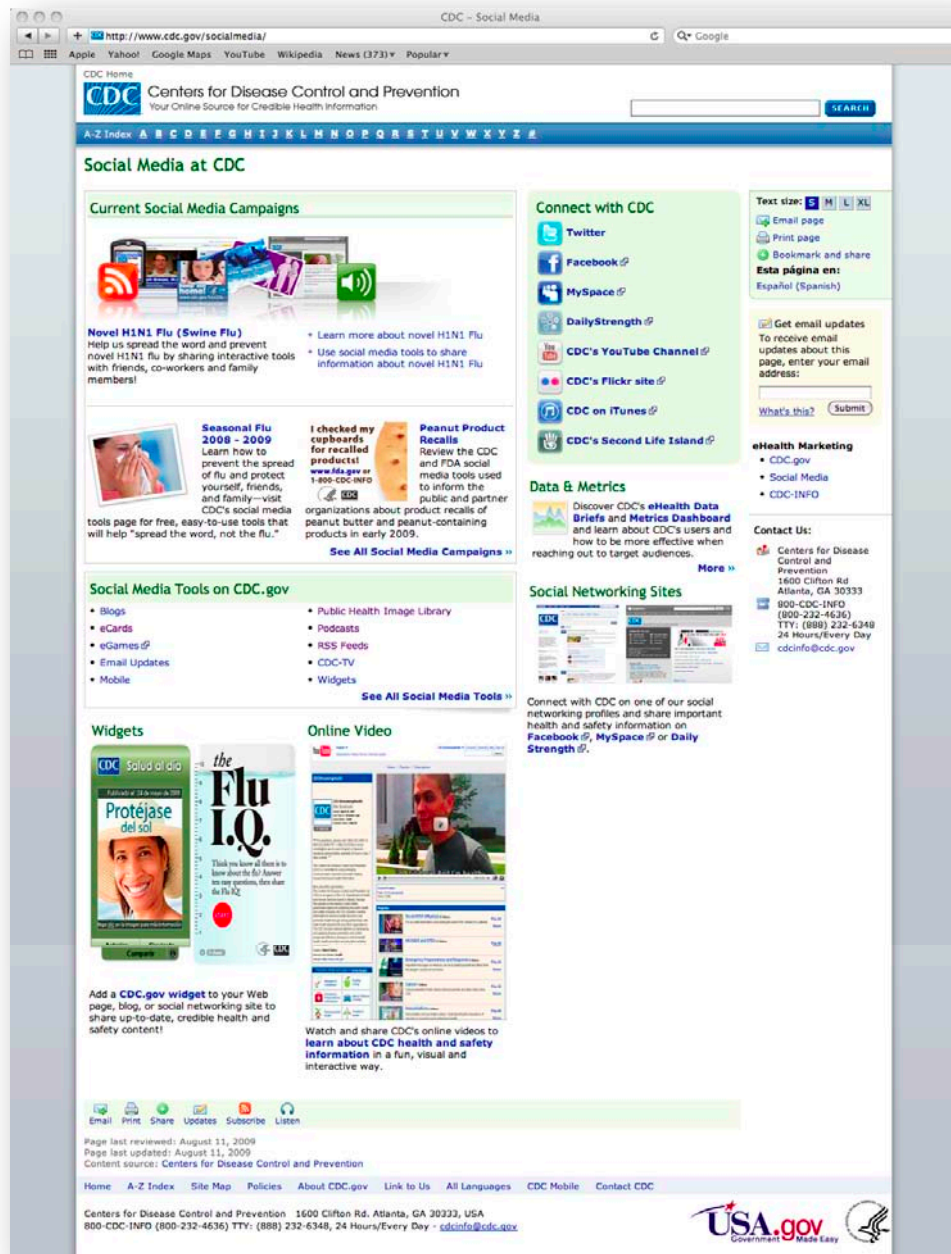
<http://www.nws.noaa.gov/nwr/streamaudio.htm>



# SOCIAL NETWORKING

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http://www2.cdc.gov/podcasts/

Apple Yahoo! Google Maps YouTube Wikipedia News (373) Popular

**CDC** Centers for Disease Control and Prevention  
Your Online Source for Credible Health Information

## Podcasts at CDC


**Podcasts**

PODCASTS PODCAST HELP RSS RSS HELP


Listen to/view CDC podcasts on your computer or download them for reliable health and safety information when and where you want it. New to podcasting? See [Podcast Help](#) and [RSS Help](#)

Features Browse Search Subscribe


### Recent and Featured CDC Podcasts




**Coping with Traumatic Events**  
[Listen To / Watch This Podcast \(2:16\) »](#)  
 Tragedies affect all of us in different ways. Some people might react to the stress immediately, while others may not experience stress until later. Created: 4/18/2007 by National Center for Injury Prevention and Control. Date Released: 4/19/2007.  
[More info on this topic »](#)




**H1N1 Flu Vaccine - Why the Delay?**  
[Listen To / Watch This Podcast \(2:26\) »](#)  
 This short podcast will help you understand how flu vaccines are made, why manufacturing and shipping vaccine take so long, and how you can find flu vaccines near you. Created: 11/10/2009 by National Center for Immunization and Respiratory Diseases (NCIRD). Date Released: 11/10/2009.  
[More info on this topic »](#)



**Influenza Round Table: Warning Signs**  
[Listen To / Watch This Podcast \(1:53\) »](#)  
 In this podcast, Dr. Joe Bresee describes the main symptoms of flu, including the new H1N1 flu, and when it is serious enough to seek medical help. Created: 11/3/2009 by National Center for Immunization and Respiratory Diseases (NCIRD). Date Released: 11/3/2009.  
[More info on this topic »](#)



**Influenza Round Table: Don't Get, Don't Spread**  
[Listen To / Watch This Podcast \(2:00\) »](#)  
 In this podcast, Dr. Joe Bresee describes how to keep from getting the flu and spreading it to others. Created: 11/3/2009 by National Center for Immunization and Respiratory Diseases (NCIRD). Date Released: 11/3/2009.  
[More info on this topic »](#)



**Influenza Round Table: Take Three**  
[Listen To / Watch This Podcast \(2:47\) »](#)  
 In this podcast, Dr. Joe Bresee describes how to keep from getting the flu and spreading it to others by taking these three steps. Created: 10/26/2009 by National Center for Immunization and Respiratory Diseases (NCIRD). Date Released: 10/26/2009.  
[More info on this topic »](#)

CDC en Español 简体中文

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Sign up for Facebook to connect with CDC.

**CDC**

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**CDC** Just Fans

**CDC** CDC November is American Diabetes Month

November is American Diabetes Month. People with diabetes are at increased risk for complications from influenza, including 2009 H1N1 flu. There are important steps and everyday precautions that people with diabetes should take in order to stay healthy this flu season.

**CDC Features - November is American Diabetes Month**  
Source: www.cdc.gov  
November is American Diabetes Month. People with Diabetes are at increased risk for complications from 2009 H1N1 Flu

10 hours ago

Dorrey, Phetdavanh, Dewa and 34 others like this.

View all 8 comments

Punya Ratna oh great,  
5 hours ago

Peter @Nathan. I read your second link. All it seems to say is "adjuvants are bad". It's an anti-vaxxer site. It doesn't even say which adjuvants are bad, let alone discuss any compounds. Poor form, Nathan.  
2 hours ago

**CDC** CDC 46 states reporting widespread influenza activity. Get the latest update on 2009 H1N1 Flu.

**CDC 2009 H1N1 Flu | 2009 H1N1 U.S. Situation Update**  
Source: www.cdc.gov

Fri at 12:20pm

Yuwanditta, Carlos, Enver and 31 others like this.

View all 47 comments

**CDC** CDC National Prematurity Awareness Month.

More than a half million babies in the United States—that's 1 in every 8—are born premature each year. Some babies are so small they could fit in the palm of your hand. If you're pregnant, learn about the risk factors for premature birth.

**CDC Features - National Prematurity Awareness Month**  
Source: www.cdc.gov  
National Prematurity Awareness Month. More than a half

CDC provides social media tools (widgets, mobile info, online videos, etc) to reinforce & personalize messages, reach new audiences & build communication infrastructure based on open information exchange. For official CDC info go to www.cdc.gov

**Information**

Location:  
www.cdc.gov/socialmedia  
Disclaimer: Posted comments and images do not necessarily represent the views of CDC.

Phone:  
1-800-CDC-INFO  
(1-800-232-4636) TTY: (888) 232-6348, English and Spanish  
24 Hours/Every Day or e-mail  
cdcinfo@cdc.gov

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http://twitter.com/alaska\_secc

Alaska SECC (Alaska\_SECC) on Tw...

twitter


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[Codes for other countries](#)

 **Alaska\_SECC**

Do you want to be more active in helping your community become prepared? Contact your local Citizen Corps program.  
[www.citizencorps.gov](http://www.citizencorps.gov)

8:32 AM Apr 30th via Twitterrific

Teach family members how to shut off water, gas, and electricity at your house's main switches as a part of your Family Emergency Plan.

7:44 AM Apr 28th via Twitterrific

How will your family connect to one another after a disaster? Develop a Family Communication Plan before a disaster.  
[www.ready.alaska.gov](http://www.ready.alaska.gov)

7:58 AM Apr 26th via Twitterrific

When creating your Emergency Survival Kit, don't forget about your pets. You should the same supply of food and water for them.

8:34 AM Apr 23rd via Twitterrific

When disaster strikes don't get stuck in the dark. Keep flashlights with fresh batteries in your emergency kit and at your bedside.

8:46 AM Apr 21st via Twitterrific

Plan for one gallon of water per day per person for your emergency survival kit. Five family members = 5 gal/day or 35 gal for your kit.

3:16 PM Apr 19th via Twitterrific

Due to greater distances in our supply chains, DHS&EM recommends you maintain a 7-Day Emergency Survival Kit. Go to: [www.ready.alaska.gov](http://www.ready.alaska.gov)

4:14 AM Apr 16th via Twitterrific








































































































































































































































































































































**Name** Alaska SECC  
**Location** Fort Richardson, AK, USA  
**Web** <http://ready.alas...>  
**Bio** Alaska State Emergency Coordination Center

11 following 429 followers 44 listed

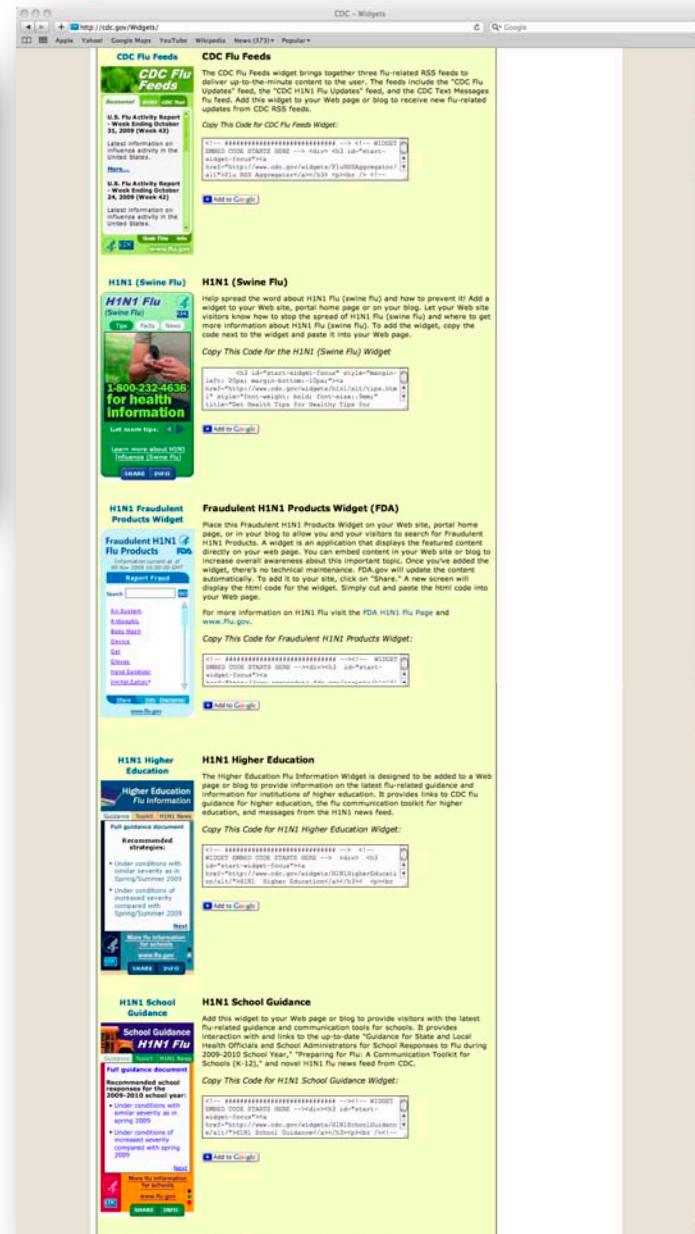
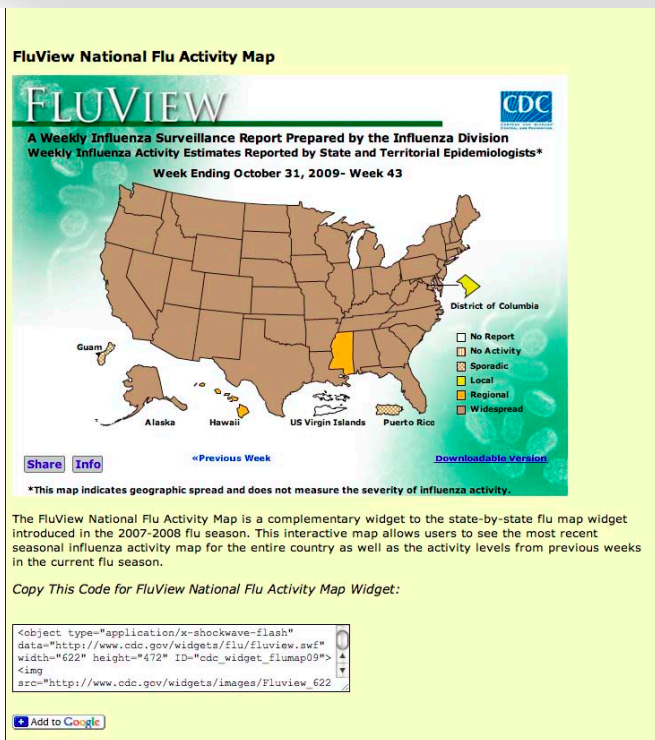
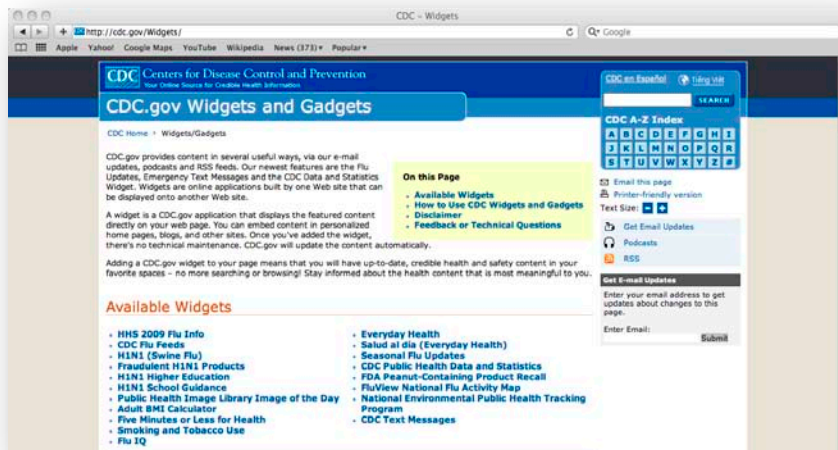
**Tweets** 57

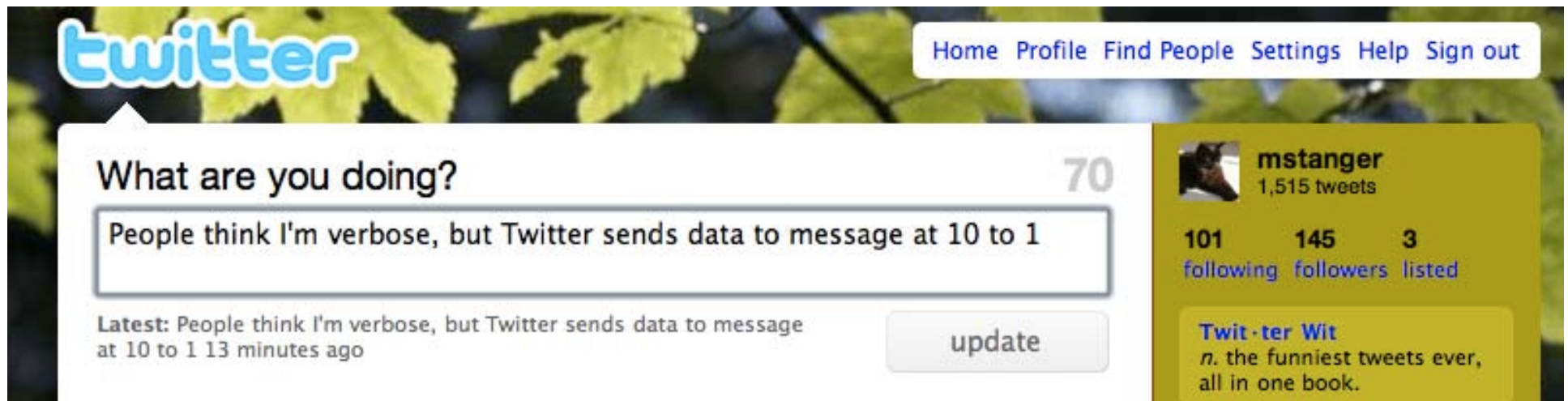
**Favorites**

**Following**







## Message Sent from Device to Twitter Server

E..%|@.@.....^.....\$...PCA.&..d.P.....POST /statuses/update.json HTTP/1.1  
TE: deflate,gzip;q=0.3  
Connection: TE, close  
Authorization: Basic bXNOYW5nZXI6ZHJhLWdvbg==  
Host: twitter.com  
User-Agent: Net::Twitter::Lite/0.08004 (Perl)  
Content-Length: 96  
Content-Type: application/x-www-form-urlencoded  
X-Twitter-Client: Net::Twitter::Lite  
X-Twitter-Client-URL: http://search.cpan.org/dist/Net-Twitter-Lite/  
X-Twitter-Client-Version: 0.08004

source=twitterpm&status=People+think+I'm+verbose%2C+but+Twitter+sends+data+to+message+at+10+to+1

## Message Retrieved from Twitter Server by Devices - 1460 characters in this case. Includes HTTP headers, user profile information and the original 70 characters

16:03:43.682419 IP 168.143.162.36.http > d142-058-094-138.wireless.sfu.ca.61657: Flags [.], seq 1:1461, ack 507, win 6432, length 1460  
E.....@.+.....\$.^..P....d.CA. P. {...HTTP/1.1 200 OK  
Date: Thu, 05 Nov 2009 00:03:43 GMT  
Server: hi  
X-Transaction: 1257379423-29763-7838  
Status: 200 OK  
ETag: "9cde12b009f3c03219cb62fd6f5c816d"  
Last-Modified: Thu, 05 Nov 2009 00:03:43 GMT  
X-Runtime: 0.05323  
Content-Type: application/json; charset=utf-8  
Pragma: no-cache  
Content-Length: 1385  
Cache-Control: no-cache, no-store, must-revalidate, pre-check=0, post-check=0  
Expires: Tue, 31 Mar 1981 05:00:00 GMT  
X-Revision: 2fc7ad016037eb809b076521f271bf0e672a9503  
Set-Cookie: lang=en; path=/  
Set-Cookie: \_twitter\_sess=BAh7CzoMY3NyZl9pZCIIZTY5MDYzYTkwMTIzNTg1YjBiYzNhZjMzMzYzA5YTM3%250A0DU6E3Bhc3N3b3JkX3Rva2Vuli01ODc3OWZmNzNkZGQyMDZiYTM0NGEyZmFk%250ANDZmN2FkODBiYjM0ZTJkOgI1c2VyaQ0wELk6B2IklIvJN2JlODk2NjcwMDM0%250AAZjA1Y2ZiMDFjZDU2Yzg1ZGE3NCIKZmxhc2hJQzonQWN0aW9uQ29udHJvbGxl%250ACjo6Rmxhc2g6OksZsYXNoSGFzaHsABjoKQHVhZWR7ADoRdHJhbnNfcHJvbXB0%250AAMA%253D%253D-c0f128831a2fcf0a12664e2b8d9fe6038f1ee5ca; domain=.twitter.com; path=/  
Vary: Accept-Encoding  
Connection: close

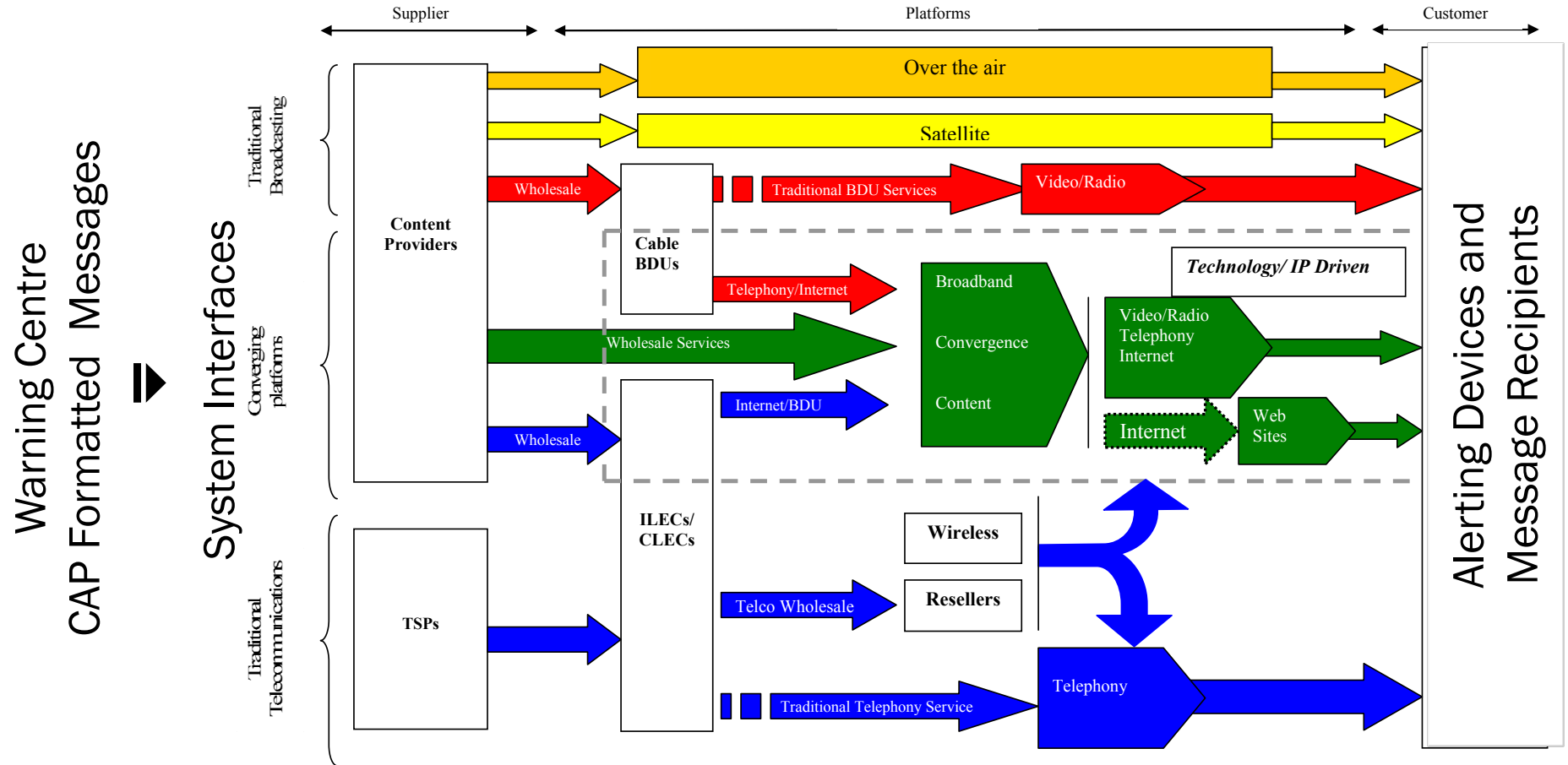
{"geo":null,"in\_reply\_to\_user\_id":null,"in\_reply\_to\_status\_id":null,"truncated":false,"source":"<a href=\"http://search.cpan.org/dist/Net-Twitter/\" rel=\"nofollow\">Perl Net::Twitter</a>","favorited":false,"created\_at":"Thu Nov 05 00:01:29 +0000 2009","in\_reply\_to\_screen\_name":null,"user":{"description":"Computer geek since 1978: 8-bit, baby! Systems guy at SFU for a 15+ years, and a n00b Communication MA student. Don't feel obligated to follow-I'm not compe  
16:03:43.682650 IP 168.143.162.36.http > d142-058-094-138.wireless.sfu.ca.61657: Flags [P.], seq 1461:2383, ack 507, win 6432, length 922  
E.....@.+.....\$.^..P....j.CA. P. Ha..ting","following":false,"friends\_count":101,"profile\_text\_color":"000000","profile\_background\_image\_url":"http://a3.twimg.com/profile\_background\_images/2826185/centralparkleaves-small.jpg","profile\_image\_url":"http://a3.twimg.com/profile\_images/360915983/noidyProfile\_normal.jpg","favourites\_count":7,"profile\_link\_color":"0000ff","profile\_background\_tile":false,"url":"http://hexadecimalmonkey.ca","screen\_name":"mstanger","notifications":false,"statuses\_count":1515,"created\_at":"Fri Jan 11 19:50:41 +0000 2008","profile\_background\_color":"AA6800","geo\_enabled":false,"profile\_sidebar\_fill\_color":"AAA100","protected":false,"location":"Vancouver","name":"Mike Stanger","verified":false,"time\_zone":"Pacific Time (US & Canada)","profile\_sidebar\_border\_color":"AA3000","id":12128432,"utc\_offset":-28800,"followers\_count":145},"id":5434694099,"text":"People think I'm verbose, but Twitter sends data to message at 10 to 1"]



# COMMON ALERTING PROTOCOL (CAP)

- ✖ XML-based data format for exchanging public warnings and emergencies between alerting technologies.
- ✖ CAP allows a warning message to be consistently disseminated simultaneously over many warning systems to many applications.

# CAP ENABLED WARNING SYSTEMS



Source: CRTC 2009 Monitoring Report (modified)

- <cap:alert>  
   <cap:identifier>NOAA-NWS-ALERTS Alaska 2010-06-07T01:17:45-04:00</cap:identifier>  
   <cap:sender>w-nws.webmaster@noaa.gov</cap:sender>  
   <cap:sent>2010-06-07T01:17:45-04:00</cap:sent>  
   <cap:status>Actual</cap:status>  
   <cap:msgType>Alert</cap:msgType>  
   <cap:scope>Public</cap:scope>  
 - <cap:note>  
   Current Watches, Warnings and Advisories for Alaska Issued by the National Weather Service  
   </cap:note>  
   <cap:references> http://www.weather.gov/alerts/ak.html </cap:references>  
 - <cap:info>  
   <cap:category>Met</cap:category>  
   <cap:event>Short Term Forecast</cap:event>  
   <cap:urgency>Unknown</cap:urgency>  
   <cap:severity>Unknown</cap:severity>  
   <cap:certainty>Unknown</cap:certainty>  
   <cap:effective>2010-06-07T03:55:00</cap:effective>  
   <cap:expires>2010-06-07T10:00:00</cap:expires>  
   <cap:headline> Short Term Forecast </cap:headline>  
 - <cap:description>  
   SHORT TERM FORECAST NATIONAL WEATHER SERVICE YAKUTAT AK 8 PM AKDT SUN JUN 6 2010 AKZ017-071000- CAPE FAIRWEATHER TO CAPE  
   SUCKLING COASTAL AREA INCLUDING YAKUTAT- 8 PM AKDT SUN JUN 6 2010 .NOW... MOSTLY CLEAR SKIES AND LIGHT WINDS CONTINUING  
   THROUGH 2 AM. TEMPERATURE IN THE UPPER 50° S DROPPING TO THE MID 40° S. \$\$ DS JUN 10  
   </cap:description>  
 - <cap:web>  
   http://www.weather.gov/alerts/AK.html#AKZ017.AYANOWYAK.035500  
   </cap:web>  
 - <cap:area>  
   - <cap:areaDesc>  
     Cape Fairweather to Cape Suckling Coastal Area (Alaska)  
   </cap:areaDesc>  
   <cap:geocode>002282</cap:geocode>  
   </cap:area>  
 </cap:info>

Source: <http://www.weather.gov/alerts/ak.cap>

# NATIONAL INITIATIVES

- ✖ Integrated Public Alert and Warning System (IPAWS)
  - + modernization and integration of the U.S. alert and warning infrastructure
  - + creating an interoperability framework by establishing or adopting standards such as the Common Alerting Protocol (CAP)
- ✖ Canadian Profile of the Common Alerting Protocol
- ✖ National Public Alerting System (NPAS) – Public Safety Canada
- ✖ Pelmorex (the Weather Network)
  - + authorized by CRTC to be the national emergency alert aggregator and distributor for emergency alerts.
  - + Cable and satellite companies will have to carry these channels from September 1, 2010, to August 31, 2015

# EXPERIENCE FROM THE INDIAN OCEAN REGION: SRI LANKA HAZINFO LAST MILE PROJECT





# CAP ENABLED MOBILE PHONES

Microimage SMS Alerts - Windows Internet Explorer

http://202.69.192.51/down/DEWN.htm

Microimage SMS Alerts

## Dialog

Disaster and Emergency Warning Network

[Change Password](#) | [Sign Off](#)

### Setup

- Create Users
- Create Groups
- Create Districts
- Create Designations
- Create Messages
- Create Recipients
- Create Alarms
- Alarm Configuration
- CB Configuration
- Create CB Stations

### Alert

- Send SMS Messages
- Send CB Messages
- Send Alarm SMS Messages
- Send Alarm CB Messages

### Log

- SMS Message Log
- CB Message Log
- Alarm SMS Message Log
- Admin Message Log

Powered by  
**Microimage**

### Send SMS Messages

Message: Silent-Test-02-Mar-2007

Hotline#: 0602164957

Sound: Sound2

Message in Sinhala

Message in English

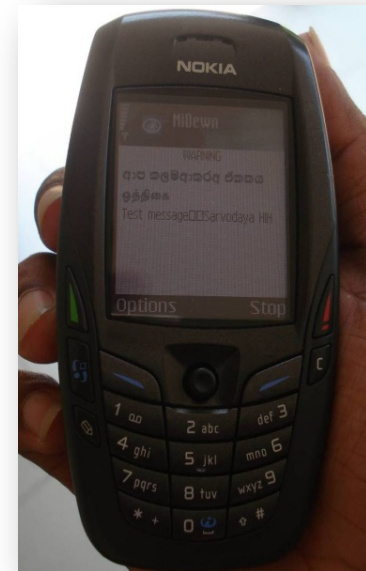
TEST: ADVICE NUMBER 001 Issued at 12:55 am on Friday, Ma 27, 2006  
BY LIRNEasia A SEVERE CATEGORY 4 CYCLONE is now current for  
HAMBANTOTA District coa

Message in Tamil

Message Recipients

[Select Recipients](#)

[Preview](#) [Send](#)



# SATELLITE RADIO

Disaster Warning Recovery and Response Addressable  
Satellite Radio (ASR) – WorldSpace



WorldSpace Radio



AsiaSt-3R  
Carrier:59

DAMB-R

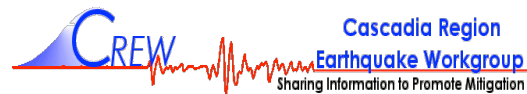


ON

06



# BUILDING ON INFRASTRUCTURE INITIATIVES





Topics

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[Frequently Asked Questions](#)  
[Benefits of Broadband Communities, Citizens and Businesses](#)  
[Government Suppliers](#)  
[Partners](#)  
[News Archive](#)

Resources & Links

[Cedar and Silicon](#)  
[FirstVoices Vignette](#)  
[broadBAND BC Vignettes](#)  
[Interactive Status Map Showing Community Connections](#)  
[Community Champions](#)  
[Government Links](#)

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News Flash

Connecting Citizens Grant Program

The Connecting Citizens Grant Program helps pay for infrastructure to deliver Internet connectivity to homes and businesses in rural and remote areas of British Columbia.

**Round Two is now closed**  
For results of Round Two, please click [here](#).

**Application information and materials:**  
Round Two: [Program Guide](#).

Round Two: Application Form and Templates

- [Application Form](#) You will need Adobe Reader 8 or higher to fill out the Application Form. Download the latest version of Adobe Reader [here](#)
- [Template: Detailed Project Plan](#)
- [Template: Project Budget](#)
- [Template: Financial Operation Plan](#)

Round Two: [Frequently Asked Questions](#)

Round One is now closed. Results are available [here](#)

MORE OF B.C. BENEFITS FROM CONNECTIVITY INVESTMENT

April 8, 2010

VICTORIA – British Columbians in up to 50 rural and remote locales will soon have the world at their fingertips with over \$1 million in provincial funding to expand broadband connectivity announced Citizens' Services Minister Ben Stewart. View the press release [here](#).

[News Archive](#)

Source: <http://www.network.gov.bc.ca/>



Source: <http://www.pathwaystotechnology.ca/news-updates>



Federal Communications Commission

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[FCC > WTB Home > Wireless Outreach > Broadband for Rural America](#)
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# Broadband Opportunities for Rural America

Search the FCC:

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[Recovery Act Funding](#)  
[Rural Workshops](#)  
[BPL](#)  
[Cable](#)  
[DSL](#)  
[Fiber](#)  
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[Recovery Act](#)  
[USDA Rural Development Broadband Program](#)  
[Rural Healthcare Pilot Program](#)  
[Wireless Broadband Access Task Force](#)  
[Rural Radiotelephone Service](#)  
[International Bureau's Rural Issues](#)  
[Telecommunications Service for Rural America](#)  
[Rural Telecommunications](#)  
[Rural Community Technologies](#)  
[Universal Service](#)  
[Spectrum Policy Task Force](#)

## Broadband Opportunities for Rural America

A Joint Initiative of the FCC and USDA

"Broadband can be the great enabler that restores America's economic well-being and opens doors of opportunity for all Americans to pass through, no matter who they are, where they live, or the particular circumstances of their individual lives."

— FCC Commissioner Michael Copps April 8, 2009

### Broadband Services

A range of different technology platforms can be used, either independently or in conjunction with one another, to provide broadband services. The links below provide additional information on how each of these various technologies works.

#### Broadband over Power Line (BPL)

Power lines reach virtually every community in the country; thus BPL has the potential to play an important role in providing broadband services to American homes and consumers.

#### Cable

Cable operators have been upgrading infrastructure and employing the use of digital technologies to allow the offering of high speed Internet access.

#### Fiber

Fiber-to-the-premises technologies use fiber optic cables that run from a distribution frame directly to a customer's home, property, or neighborhood to provide high-capacity broadband services.

#### Satellite

The ubiquity of satellite signals has long held the potential to deliver broadband communications anywhere and everywhere in America.

#### Wireless

There are a variety of terrestrial wireless technologies available or being developed to provide broadband services.

### Broadband Funding

**The American Recovery and Reinvestment Act of 2009 (Recovery Act)** established several broadband initiatives. One initiative included funding for the Broadband Technology Opportunities Program (BTOP), which is administered by the National Telecommunications and Information Administration (NTIA) in consultation with the Federal Communications Commission. The BTOP is designed to develop and expand broadband services to rural and underserved areas and improve access to broadband by public safety agencies. Another initiative included funding for the **Broadband Initiatives Program**, which is administered by the Rural Utilities Service (RUS) of United States Department of Agriculture (USDA). This program is designed to support the expansion of broadband service in rural areas through financing and grants to projects that provide access to high speed service and facilitate economic development in locations without sufficient access to such service.

- ▶ [U.S. Department of Agriculture Rural Development Broadband Loan Program](#)
- [General Field Representatives by State](#)
- [Notice of Funds Available](#)
- ▶ [FCC Rural Broadband Funding Programs](#)
- [Rural Health Care Support Program](#)
- [Schools and Libraries Universal Service Program \("E-Rate"\)](#)

### Broadband Reports

- ▶ [Rural Broadband Strategy - Report \(pdf\)](#)
- ▶ [Rural Broadband Strategy - News Release \(pdf\)](#)
- ▶ [Rural Broadband Strategy - Adelstein Statement \(pdf\)](#)
- ▶ [High-Speed Services for Internet Access Data and Reports \(semi-annual\)](#)
- ▶ [Section 706 Advanced Services Reports](#)
- ▶ [Other FCC Statistical Reports](#)

Source: [http://wireless.fcc.gov/outreach/index.htm?job=broadband\\_home](http://wireless.fcc.gov/outreach/index.htm?job=broadband_home)