

EM WIN

Emergency **M**anagers
Weather
Information **N**etwork



EMWIN

Everybody talks about the weather, but no one does anything about it! - Mark Twain

Until now!

WHAT IS EM *WIN*?

A PC-based System That Delivers a Continuous Stream of Critical Weather Data

- **Warnings**
 - ▶ Winter
 - ▶ Convective
 - ▶ Man-made (Civil Emergency Messages)
- **Watches**
 - ▶ Winter and Convective
- **Special Weather Statements**
- **Forecasts**
- **Current Weather**
- **Radar**
- **Satellite**
- **Miscellaneous graphics**

Why get EM *WIN* if you have...

- NOAA Weather Radio
 - Emergency Alert System
 - NOAA Weather Wire Service
 - Internet
-
- Good Question!

Why get EM *WIN*?

- EMWIN is meant to compliment your other sources of weather information
- EMWIN data can be re-broadcast over VHF radio frequencies
- EMWIN software can activate external devices

Who uses EMWIN?

- A low-cost critical weather information source to Emergency Managers and emergency personnel:
 - ▶ School Administrators
 - ▶ First responders
 - ▶ Hospitals/Health Care Facilities/Nursing Homes
 - ▶ Fire Fighters/Rescue Squad
 - ▶ Businesses, Media, John Q. Public
- It is NOT meant to compete with commercial providers of weather information to the media, BUT compliment the information!

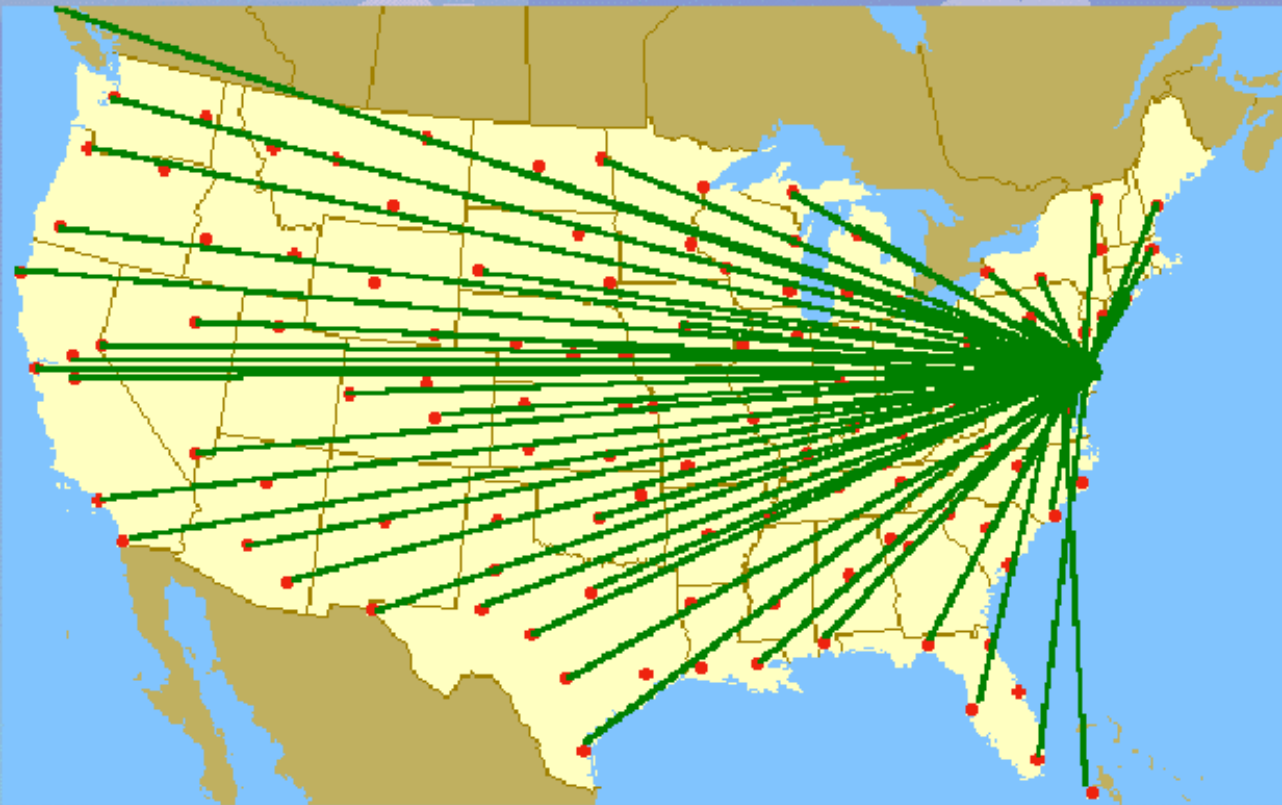
What do I need to receive EM WIN ?

- Reception system (*satellite, radio or internet*)
- PC running Windows (*preferably Win95/98*)
- Software (one or more of the following)
 - ▶ Digital Atmosphere <http://www.weathergraphics.com>
 - ▶ RealEMWIN <http://skywatch.org>
 - ▶ WeatherNode <http://www.emwinpro.com/>
 - ▶ Interwarn <http://www.interwarn.com>
 - ▶ ABCpager <http://www.abcpager.com/>
 - ▶ Additional Software Vendors
 - <http://iwin.nws.noaa.gov/emwin/winven.htm>

What are some of the add-on features of EM *WIN*?

- Activation of external devices for physically challenged citizens
- Audio alarm when priority messages (warnings) are issued by the NWS
- Automatic pager activation, email alerts, FAX and printing capabilities
- Graphical forecasts and observational information plotted
- Locally inserted radar imagery
- County maps with watches and warnings highlighted when they arrive
- Internet engine

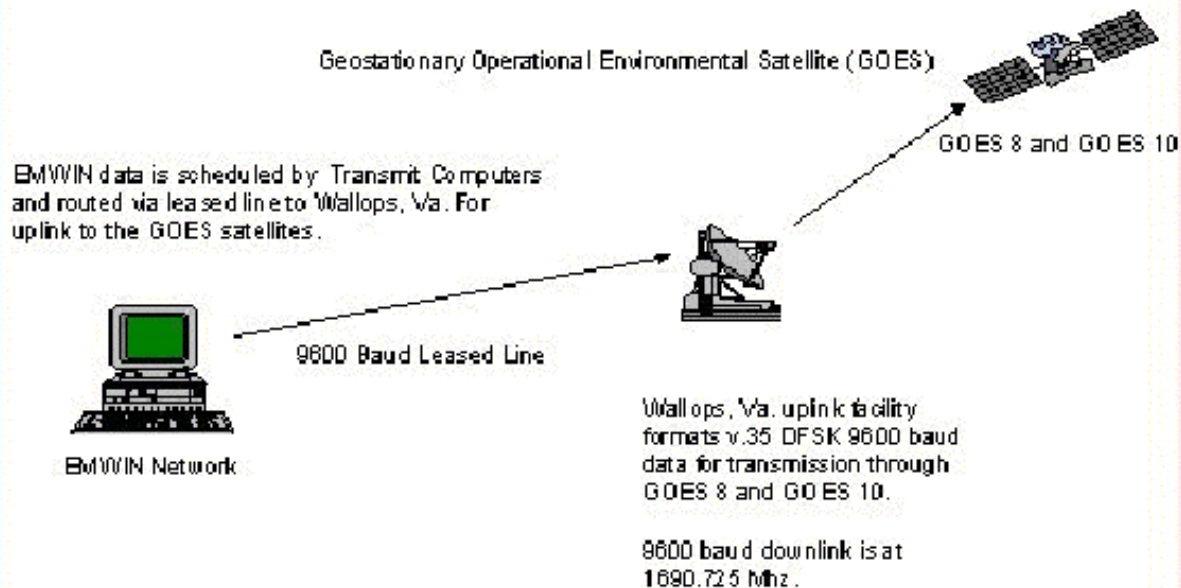
How does EM *WIN* work?



NWS products are sent to Wallops Island Virginia for satellite uplink

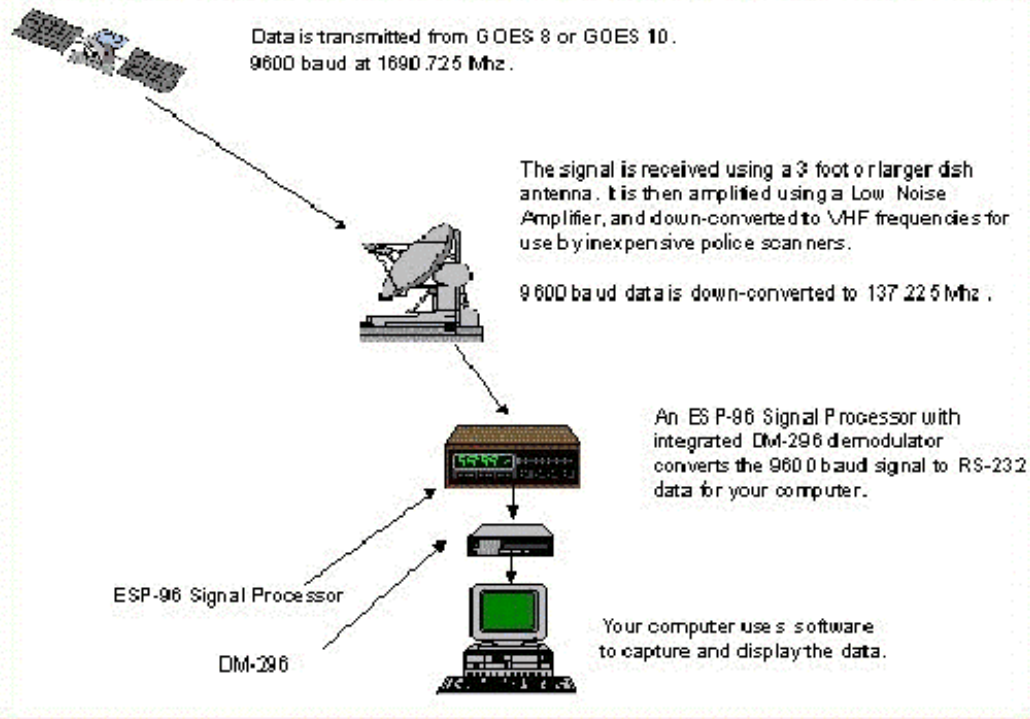
How does EMWIN work?

How EMWIN Data Is Distributed



How does EMWIN work?

How EMWIN Data Is Received From GOES



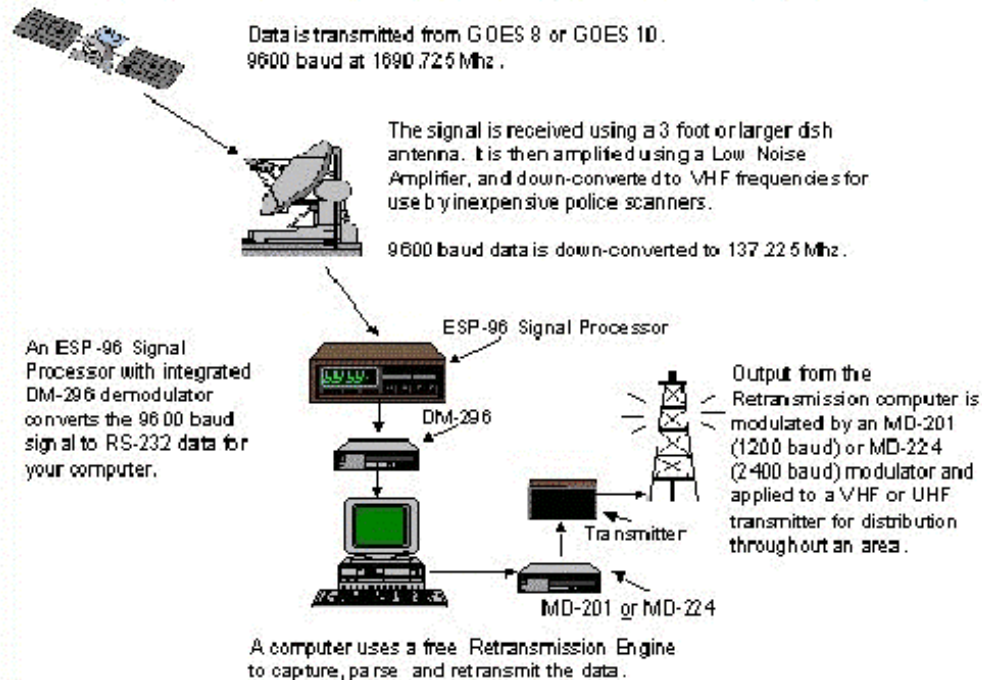
Users with satellite dishes receive the downlink signal and a signal processor sends the data to a PC

How does EM *WIN* work?

- Uplinked to satellites from Wallops Island
 - GOES-8, GOES-10 and Telstar
- Downlink available anywhere in U.S. with dedicated satellite dish
- Downlinked signal can be rebroadcast on VHF
 - 5 NWS frequencies (163+ and 168+ range)
 - Can be received by ANYONE with a VHF receiver, special modem and software

How does EMWIN work?

How EMWIN Data Is Retransmitted

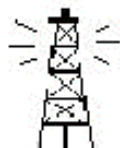


A downlink site can use retransmission software to capture, parse and retransmit the data to a VHF or UHF transmitter

How does EMWIN work?

How EMWIN Data Is Received From A Local Transmitter

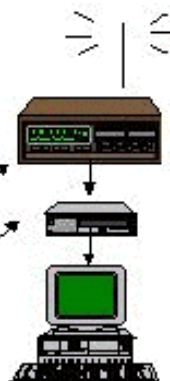
VHF or UHF
Retransmission
station transmits
EMWIN data



A scanner is tuned to the appropriate frequency and the speaker output from the scanner is connected to a DM-201B demodulator which converts the 1200 baud signal to RS-232 data for your computer.

Scanner or Receiver

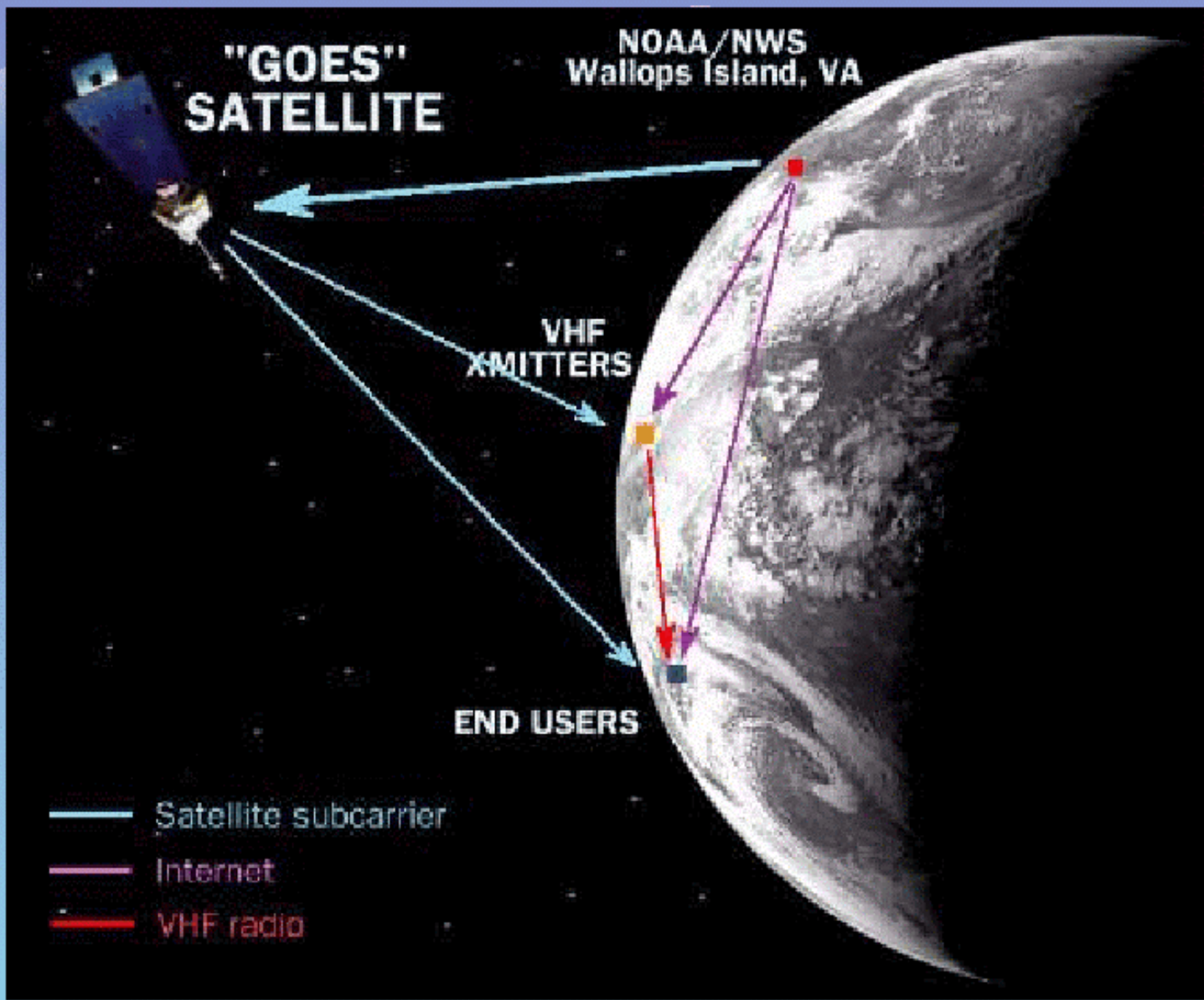
DM201B or DM-224



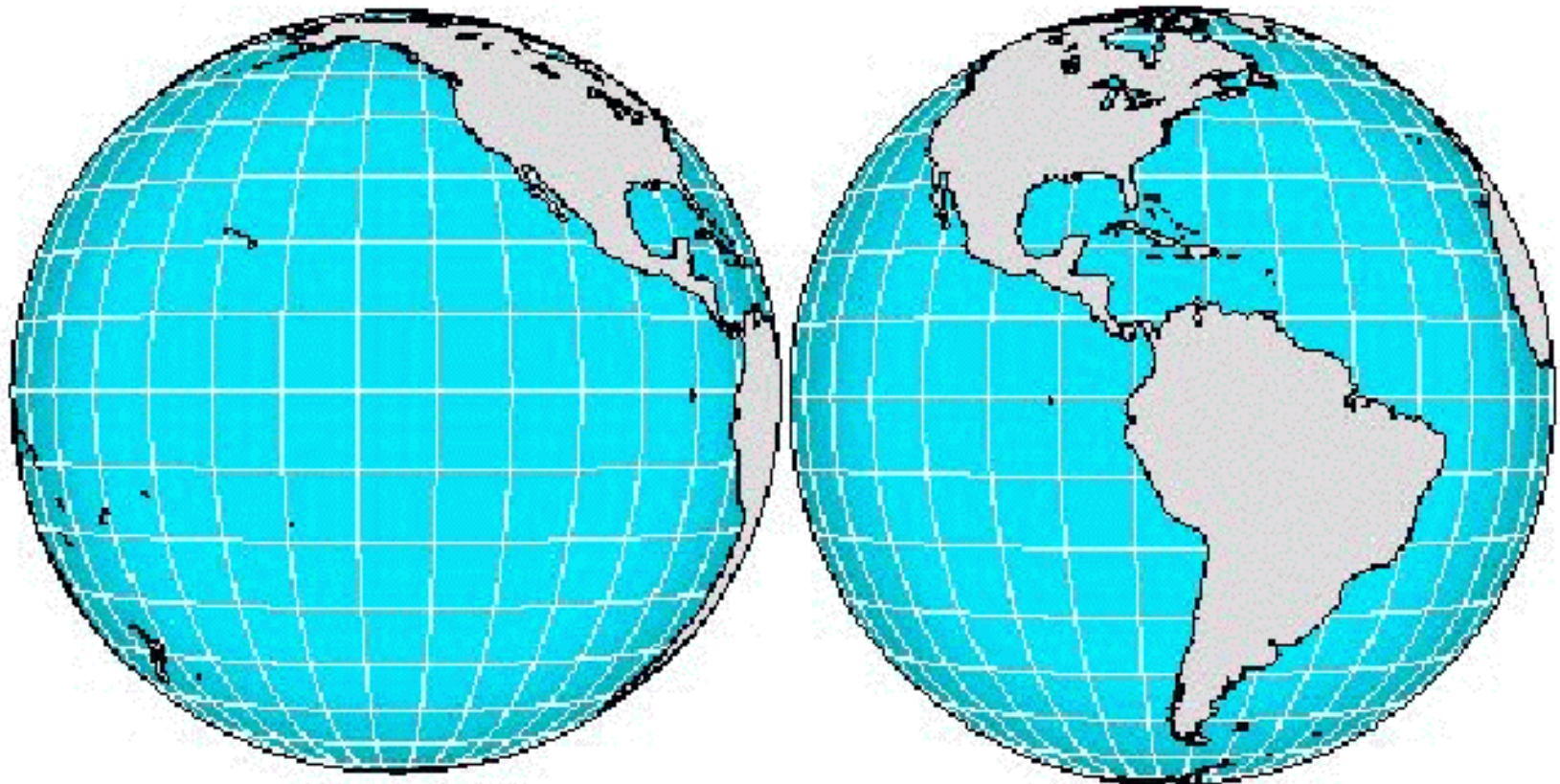
A scanner is tuned to the appropriate frequency and the discriminator output from the scanner is connected to a DM-224 demodulator which converts the 2400 baud signal to RS-232 data for your computer.

Your computer uses software to capture and display the data.

Retransmission signal is received through a scanner tuned to the appropriate frequency, then sent through a demodulator and into a PC



GOES 10 and GOES 8 Coverage Area



EMWIN is also on PeaceSat (Goes 7) in the Pacific Rim
EMWIN signal covers 3/4 of Earth as of December 2000

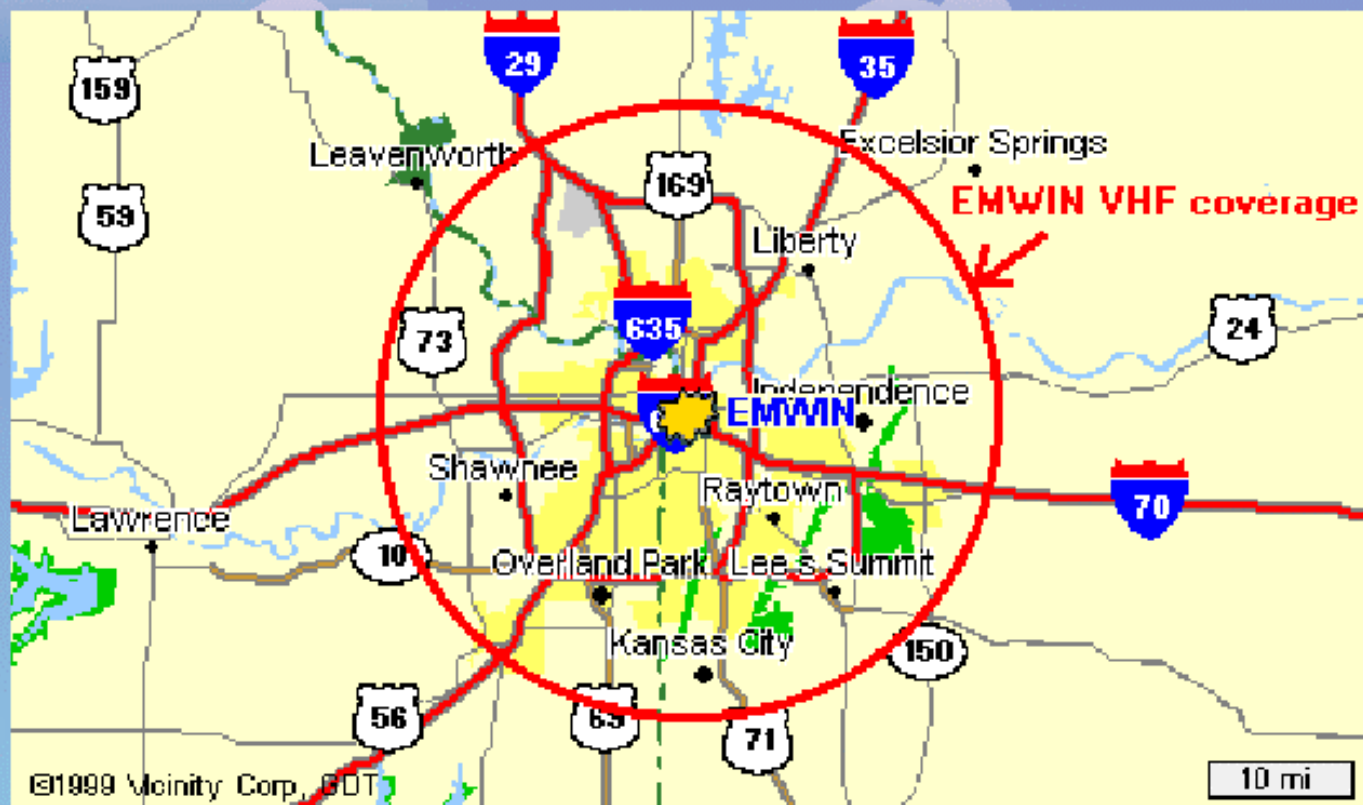
Why rebroadcast?

- Provide an important community service
- Add local data
- Add radar data
- Reach more people for less \$\$

What are the advantages (whistles & bells) of re- broadcasting EMWIN?

- Insert “local data” that is not on the satellite datastream (messages crediting organizations supplying the signal)
- Rebroadcast signal is cheaper! - final cost for customer is under \$300 for radio receiver, demodulator, and software.
- Expanded “coverage area” of EMWIN - by reducing equipment cost, effective coverage area is increased

Rebroadcast area



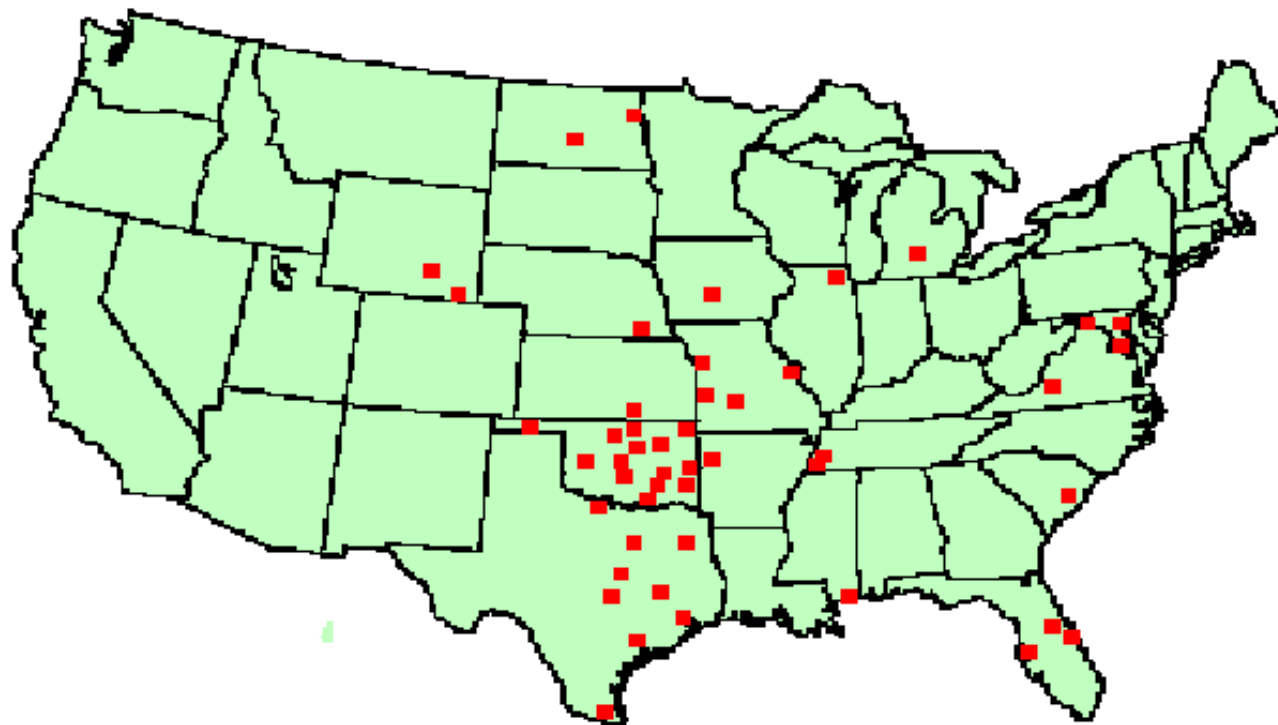
Rebroadcast signal from a single satellite downlink site can cover a large metropolitan area

Who rebroadcasts EM *WIN*?

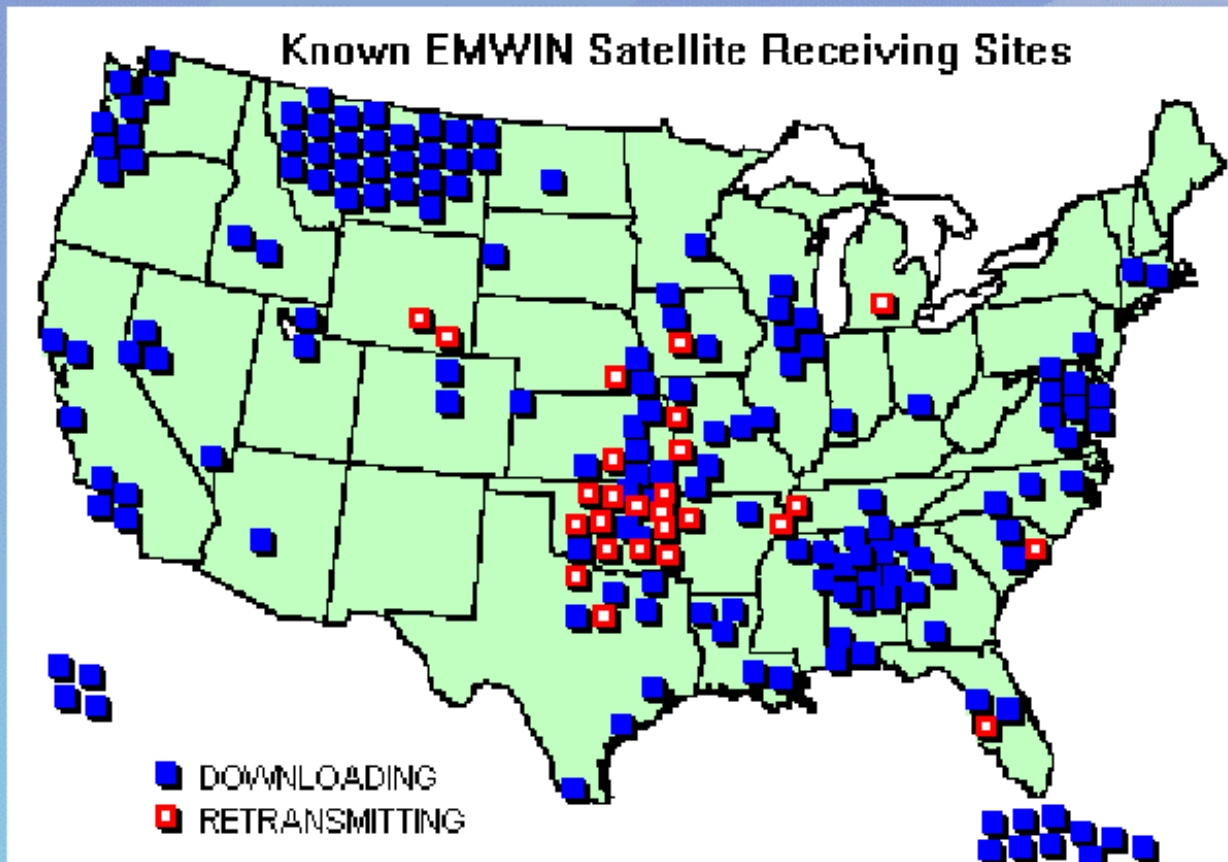
- *Kansas City Fire Department*
- *Cheyenne, WY - NWS/WEMA/Frontier Oil Co.*
- *Houston, TX (Harris Co.)*
- *Seminole Co., FL Fire and Rescue*
- *American Red Cross, Stillwater, OK*
- *University of Arkansas*
- *Southwestern Bell, Dallas, TX*
- *Radio Station WYPL, Memphis, TN*
- *St. Petersburg Times, St. Petersburg, FL*
- *WALA TV, Mobile, AL*
- *NWSFO Indianapolis, IN*
- *Many Others!!*

Who rebroadcasts EM *WIN*?

ALL KNOWN EMWIN RETRANSMISSION SITES



Where *else* is it being used?



How much does EM *WIN* cost?

Another Good Question!

- No Recurring monthly charges!
- Satellite systems - \$1500 or so.
- BUT...if rebroadcast on UHF/VHF or FM Subcarrier...
 - ▶ \$150-\$300 (receiver/demodulator/software)

EM WIN

For additional information on EMWIN,
check out the following websites:

<http://www.crh.noaa.gov/emwin>

<http://iwin.nws.noaa.gov/emwin/index.htm>