Amateur Radio:
A Resource to Idaho Emergency Managers

Amateur Radio Presentation to
Idaho Emergency Managers Association
02/06/13

Ed Stuckey, Mike Meier

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Ed Stuckey
Amateur Radio Station   AI7H

Idaho ARRL
Section Manager (SM)

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Who we are:

Amateur Radio Service
Licensed by the Federal Communications Commission (FCC)

Each License issued to an Operator and a Station
Each Amateur Operator has a unique Call Sign

"Amateur" Radio means "NON-COMMERCIAL" Radio
- No Advertising
- No Broadcasting
- No Playing of Music
- No Foul Language

Amateur Radio is a DIFFERENT Service than Citizen's Band Radio

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Where We Came From:

Beginning in 1901…

Originally – No licensing, no differentiation of Radio Stations

All stations were on the same frequency
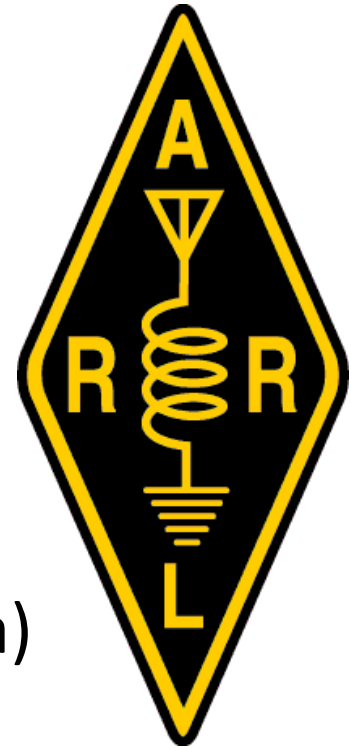
Maximum range was about 100 miles over land

It was widely thought that Amateur Radio was a fad
(like home computers)

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About our Organization:

The American Radio Relay League (ARRL)

- Chartered in 1914, Hartford CT
- Non-Government Organization (NGO)
- National Membership Organization (US/Canada)
- ARRL Founders Recognized that there was a
  need for standards and procedures
- Original intent of ARRL was for operators to master
  Radio Relays of messages

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World War I
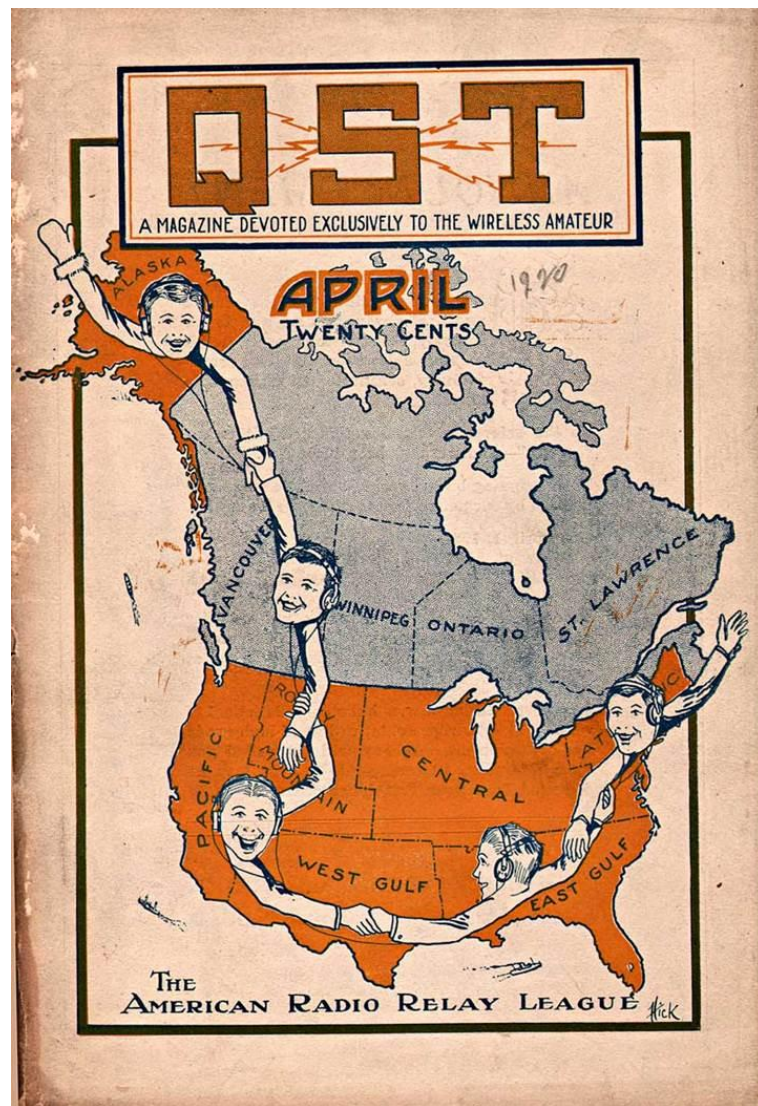## Off-Air 04/07/17 – 10/10/19

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American Radio Relay League
Organized Ham Radio
Focus:

- Mastery of the "Short Waves"

- Relay of non – commercial, Health & Welfare oriented messages around North America

(April, 1920)

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ARRL "Field Organization":

The "Field" is organized into geographical "Sections"

(Currently there are 83 "Sections" in the US and Canada)

Amateur Radio Operators in each Section elect a *Section Manager* (2-year terms)

Original Plan:
Section Manager was administrator for Radio Relays ("Traffic") for the newly created *National Traffic System (NTS)*

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Communication Act of 1934 – Created the "FCC", also officially recognized the *Amateur Radio Service* to be capable of "providing Communications Services, particularly in time of Emergency"

ARRL expanded the Field Organization in 1935
to include Emergency Communications –
the *Amateur Radio Emergency Service*®

ARES®

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World War II
Off-Air 12/08/41 – 12/15/45

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Amateur Radio provides Many Other Services

"External"
- Relationship with NWS – "Skywarn"
- Radio-to-telephone connection – "Phone Patches"
- Relationship with FCC – "Official Observers" (OO's)

"Internal"
- Generating interest among prospective hams
- Administration of Amateur Radio Tests – for FCC
- Providing education for hams in good engineering and operating practices

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ARRL
Organized Ham Radio
"Five Pillars":

Our "Service Organization"

(January, 2008)

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Amateur Radio Emergency Service (ARES®)

- A Non-Government Organization (NGO)
- Since 1935 (except for WW – II years)
- In Idaho, County OEM's are our Served Agencies
- Providing Service to 21 of 44 Idaho Counties
- Continuity of Training Levels
- Continuity between Counties and States
- Additional services (described later)

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Amateur Radio Emergency Service (ARES)

- Three level Hierarchy:
  - State
    - District (Six Districts)
      - County or Tribal (44 + 4)

- Highly Decentralized

- County OEM **/** ARES EC (or RACES RO) relationship is extremely important to us!

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Radio Amateur Civil Emergency Service (RACES)

- Created as part of an amendment to War Powers Act (1953)

- In case Amateur Radio was silenced by another war

- RACES Stations were Classified under Amateur Radio Service

- Any "Civil Defense Agency" may develop a RACES unit

- RACES Station licenses were

  issued to *many* CD Agencies

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Radio Amateur Civil Emergency Service (RACES)

- Agencies abused the privilege by using their stations as intercoms between locations within their jurisdiction

- RACES Station licenses no longer issued

- RACES units may only be on the air for 1hr/week

- We have a few RACES units in Idaho

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ARES and / or RACES (A few Comparisons)

- ARES – is a NGO

- RACES – communications restrictions

- ARES – continuity between Counties *and* States

- RACES – gives Served Agency better control

- We encourage RACES units to be "ARES/RACES"

   Reality: We're all in this together!

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ARES + RACES = Auxiliary Communications Service

ARES®   RACES   ACS   (or DCS or ECS?)

- A new Idea for Idaho
- Mostly used in highly populated states with large numbers of Served Agencies
- To achieve Unified Command
- Many Details to be worked out

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Quality of Product or Service

Service Oriented

Dependable

Proficient

Trustworthy

Best In Class

World Class!

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"*Attributes of Most Trusted Company or Organization*"
% Who Strongly Agree this statement Describes the Company/Organization

Provides dependable and reliable products and services – 86%

Delivers on its promises – 80%

Listens to Customers and reacts appropriately – 72%

Has someone who knows you and you can go to
with a question or problem – 59%
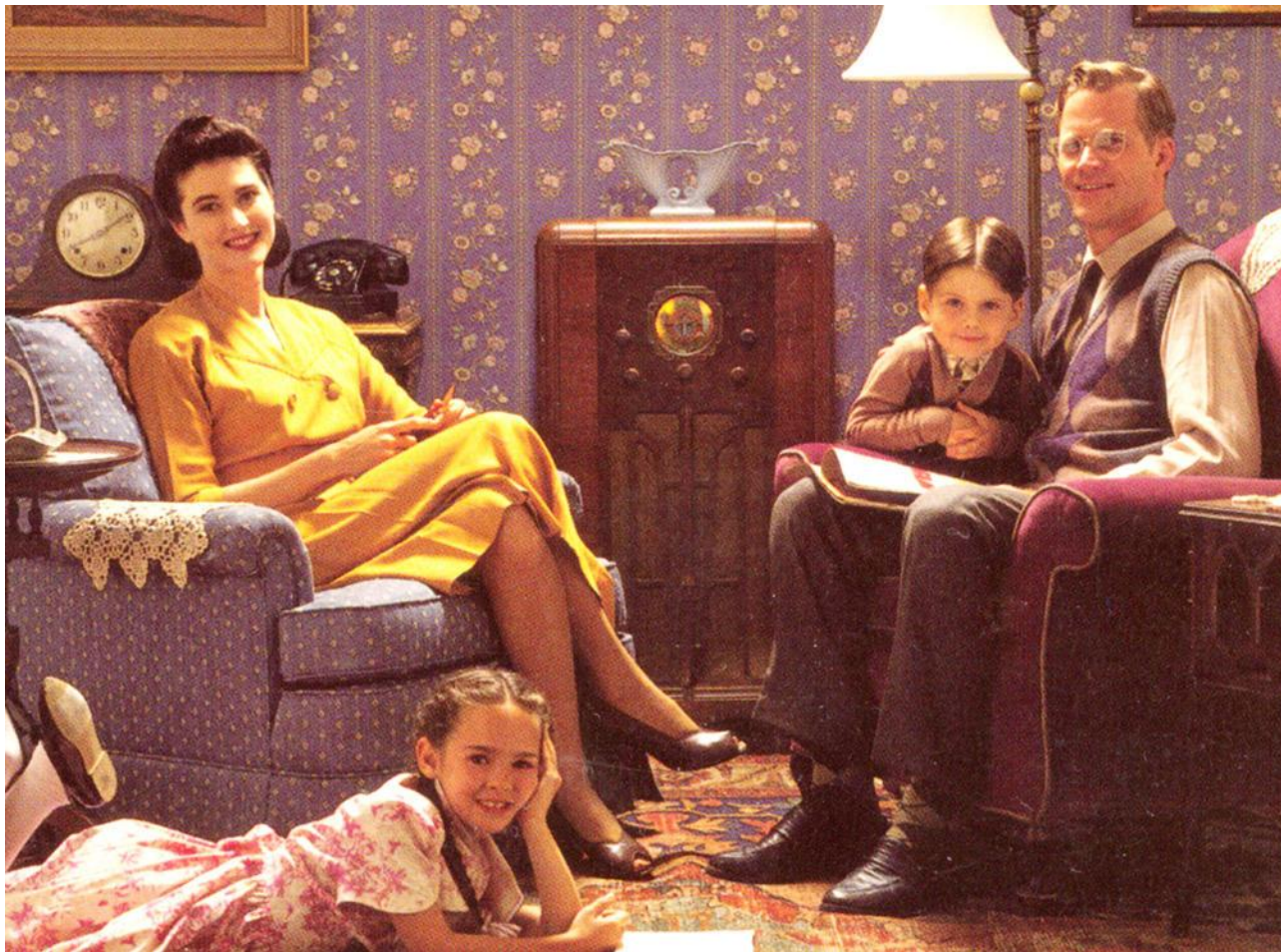
Idaho ARES Would like to be that Organization!

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Mike Meier
Amateur Radio Station   WB7RBH

Idaho ARRL / Idaho ARES
Section Emergency Coordinator (SEC)

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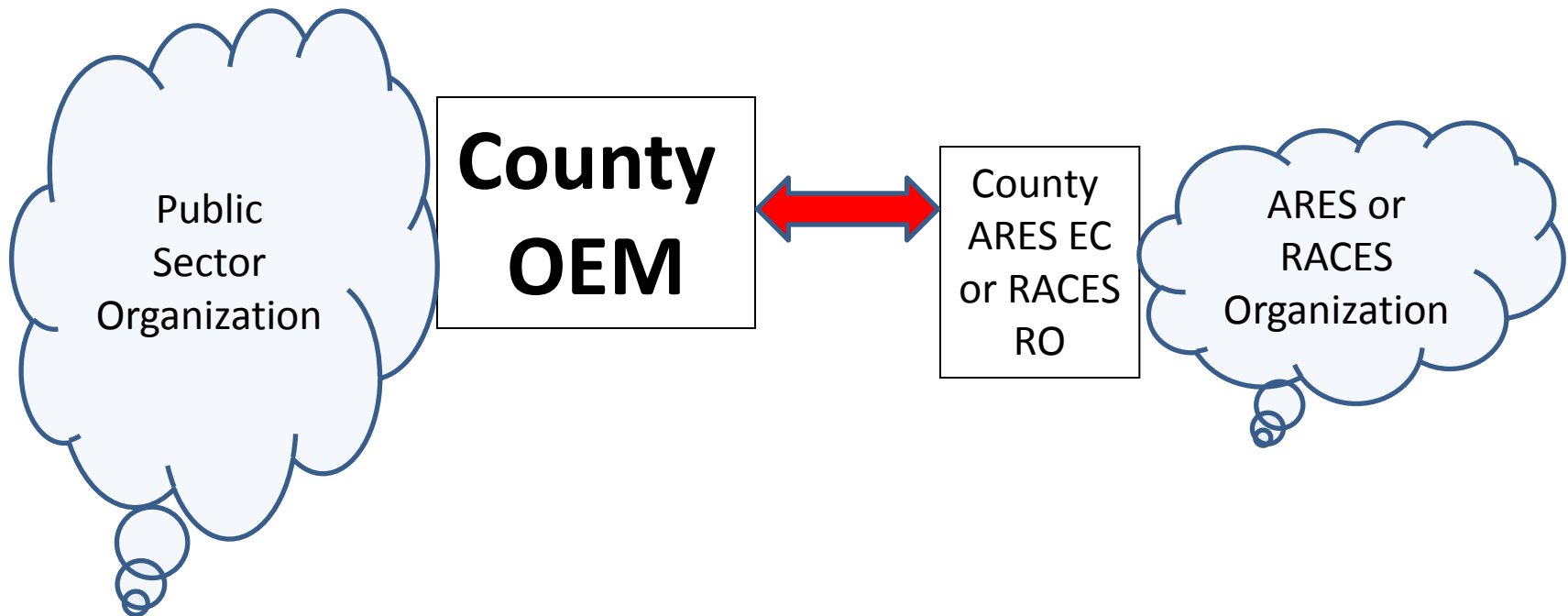Good Times

What We Bring to The Table

Experience and Desire

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The Most Important Slide in the Deck:

Idaho ARES Units recognize County OEM's as Served Agencies

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Where and How Idaho ARES serves:

- Idaho ARES Units recognize County OEM's as Served Agencies, when you want us, as long as you want us (we *NEVER* self-activate)

- Traditional VHF/FM, communications support, point-to-point or via Repeaters (*Recent Major Events have not needed this type of support*)

(more)

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Where and How Idaho ARES serves:

- Some ARES Members have Qualified for EOC Service in their County
  - ➢ As Assigned / Directed by EOC Manager
  - ➢ WEB EOC (future)
  - ➢ EOC "PMRS" Radios ("Idaho Secure Net")(future)

- Preparing for change in Situation and Evolving Hazards (like *hurricane Sandy*, which involved large scale infrastructure loss – electrical, phone, internet – for extended periods of time)

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Idaho ARES Response to Situation Changes:

- Encouraging Members to achieve "grid independence"

- Local HF Nets (no repeaters required) ("NVIS" to talk behind mountains)

- Using HF SSB to talk around the *region* (ARES/RACES HF Net). (Somewhat similar to OEM "Idaho Secure Net" Radio system)

(more)

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Idaho ARES Response to Situation Changes:

- Developing HF Digital peer-to-peer network (starting with one station per District, goal is one or more per County). Provides capability to send e-mail, with attachments – compatible with internet e-mail.

- Re-purposing surplus Public Service VHF / UHF radios as redundant links between Fire Districts (some Counties).

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Picture taken with digital camera, transmitted over the air via *Digital HF Radio*

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ARES and RACES in Idaho

- Previously Identified Joint Opportunities:
  - Standardized Qualifications /Training – statewide
  - Standard Badging or ID Card – statewide
  - "Mutual Assistance Teams" (MAT's)
  - Combined ARES/RACES HF Net (weekly, is now a Regional Net in West, includes eight states and provinces - ID, MT, SK, AB, BC, WA, OR, NV)

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Idaho ARES Future Direction:

Developing a more Formal Approach to Managing our Resources (example: The Standardized Training and Badging Paper).

Things we would like to do: (in no particular order)

- Keep our people interested and give them meaningful assignments

- Ensure that the Idaho ARES Standards are acceptable to all Counties and Tribes

- Offer assistance to County OEM's in new areas (Like setting up "Idaho Secure Net" Radios in all Counties).

(more)

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Things we would like to do: (in no particular order)

- Develop an Idaho BHS/IEMA/ARES MOU for emergency communications and support

- Develop a framework to accommodate other State Agencies that have emergency communications requirements (recent FEMA Region X "Cyber Storm" exercise)

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End of Presentation

Documents at: www.idahoarrl.info/iema.htm

E-mail addresses:

   Ed Stuckey: ai7h@arrl.net

   Mike Meier: wb7rbh@arrl.net