

Hindsight is 2020: Ham Radio predictions from 20 years ago

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David Sarnoff Radio Club
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Background

David Sarnoff Radio Club Meeting
November 16, 1999

Ham Radio: A 2020 Vision
Charlie Dieterich, N2CTW

Revised into Trenton Computer Fest paper:
Amateur Radio in the New Century (March 2001)
Charlie Dieterich, N2CTW

About the Author

- Interested in Ham Radio since 1960's (early teens)
- First Licensed ~1976 WA1WZC
- Joined RCA Labs in 1975

Worked on future focused projects: Improving TV resolution, flat panel displays, VideoDisc, Satellite TV (DirecTV), etc.

“Keep an eye out for trends in Video”

... apply that thinking to Ham Radio

About the Paper

To quote the 1970 Radio Amateur's Handbook (American Radio Relay League):

*“Amateur radio is a scientific hobby,
a means of gaining personal skill
in the fascinating art of electronics
and an opportunity to communicate with fellow
citizens by private short-wave radio”*

Paper had three sections.

Part 1: The Lure of Ham Radio

The first part of the paper covered the evolution of Ham Radio from 1970 to 2001,

from AM to SSB,

the end of Heathkit,

but... HW-8 Transciever kit builders of a decade ago

became Cell Phone designers of today!

the Altoids craze,

the end of MARS nets, etc.

Part 2: Ham Radio on the Threshold?

The next part of the paper covered recent 2001 developments:

- PIC micro-controller for CW keyers..
- Personal computers for station operations
- Soundblaster decoding of RTTY, and PSK-31
- Software for antenna design on the PC!
- Satellite predictions on the PC!
- Computer control of the transceiver!!

Part 3: So what about the 21st Century?

PONDERINGS:

- What will happen to our hobby in 50 years?
- Will Hobbies still exist?
- What will people get out of Ham Radio?
- How will society, leisure time, living situations (condo rules, etc.) change?
- Will the trust of ham radio operators continue?
- “*Lower long-distance* telephone rates may also reduce the number of pirates on the HF bands.”
- “*There is no guarantee that the Ham bands won’t* be auctioned off by Congress.”

AND THEN SOME PREDICTIONS

Predictions

- 1 Disaster communications** will always be a mainstay. Hams are good at improvisation, and that's what's needed in an emergency.
The world is becoming more dependent on complex technology, which will break down in floods, hurricanes and earthquakes.
- 2 Field Day** will stay popular, despite **higher QRN** (static) and noise from computers, digital circuits and other man-made sources.
Contests still provide the best source of improvisation training, and why should that change?

Predictions

- 3 Folks will still use Ham Radio to **talk to total strangers**. Friendships will still be made on the bands, even as the Internet becomes commercial and impersonal.
- 4 Indeed, Ham Radio will see great **crusades--** like 10-10, grid square collecting, or Straight Key Night.
These will come and go, activity will wax and wane. Fortunately, Hams will forever be finding new ways to keep the hobby exciting.

Predictions

- 5 **The same folks** will be on 75 Meters 'phone, and still complain about the same things.
- 6 FSK-RTTY will die. PSK-31 and other narrower band modes will catch on for digital ragchewing.
Digital modes will continue to be popular with non-native speakers of English, since for them reading is easier than hearing.
- 7 For the same reason, **CW will survive**. CW based kits will also keep the mode vital. The 5-WPM rule won't kill it, you'll see.
- 8 **While** PACTOR will die, the replacement will be narrower band and higher rate, and just as obnoxious for those listening to adjacent signals.
- 9 **1296 MHz**, 2.3 and 3.3 GHz bands will be populated with new modes, just in time to keep them from being auctioned off.
This will happen sooner than you think.

Predictions

- 10 **Folks will still build kits**-- and more important-- folks will still buy kits and then let them sit for years, vowing to get to it “one of these days”.
- 11 Tinkerers will keep **software “junk boxes”** of old sound-blaster routines. They will use them to design new signal processing methods instead of new radio hardware.
- 12 **Antenna science** won't change much, but good antenna designs will be posted all over the Internet, so homebrew builders will have more to choose from.
- 13 Just as blind amateurs have become commonplace and accommodated, **Ham Radio for the deaf** will take hold. Yep, with PSK-31 and DSP, both CW and RTTY-like modes are open to the deaf-- but read on...

Predictions

- ¹⁴ A new, improved **narrow-band video mode**, based on MPEG technologies and new digital-modem technologies, will appear. VHF repeaters will be converted to the new mode, and everyone will have to wear clothes when on the bands.
American Sign Language will be seen on the new video modes.
- ¹⁵ “**Hand-Held Moonbounce**” will become possible, but never popular. New modes and signal processing methods, and better preamps and antennas will make this, and other remarkable communications feats, reality.
- ¹⁶ **Satellite tracking FM repeaters** will bring new opportunities to VHF, UHF or Microwave bands. Why haven't we done this already?
- ¹⁷ A new, **full-duplex mode** will be invented. This will allow traffic nets to work more efficiently, and also allow for real-time break-in. Good bye to the 10 minute monologue!

Predictions

- 18 New modes that automatically **minimize transmitter power** will appear, and become popular. These will extend portable radio battery life while reducing QRM and EMF exposure.
- 19 Hams will still buy **kilowatt amplifiers**, and use them to talk across town.
- 20 Other Hams will buy expensive equipment (Will Japan stay #1 for Ham equipment?) and never transmit. Their widows (or widowers) will have Ham friends get rid of these rigs at **hamfests**.
- 21 **Hams will stay** open minded, overweight and generally happy. The age demographics won't change much, and it will take some effort to dispel the "guy-hobby" image. (Wouldn't it be fun to have this change?) Still, no combination of Rogaine, Viagra or Liposuction will make you a better Ham Radio operator.

Predictions

Hams will still be motivated by the same things:

- It must be fun,
- It must teach something,
- It must provide a sense of achievement, or
- It must provide a sense of community.

AND...

The most important prediction is still the saddest:

*When the band is dead,
the band will still be dead.*

Thank you...

Let's share some reactions...