QRQ and iCW – Morse Code in the Fast Lane
About me

- N7RH, Wolf(gang) Heeren, * 1978
- M.Eng. Electrical Engineering and Information Technology
- DL license from 1996 to 2016, US Extra since 2012
- Self-taught code proficiency
- Since 2013: Focus on High Speed Telegraphy activities
High Speed Telegraphy

- High Speed Telegraphy competitions*
- Clear Text QSOs (aka Ragchewing)
  - On Air
  - iCW

* HST-related content with kind permission of DJ1YFK
High Speed Telegraphy Competitions

- Started in early 20th century in USA, as well as USSR
- RX & TX of Code Groups
  - 1939: Ted McElroy (USA): 75.2 WPM (RX, typewriter)
  - 1942: Harry Abner Turner: 35 WPM (TX, hand key)
  - 1954: Fjodor Rosljakow (USSR): 88 WPM (RX, typewriter)
  - 1954: Wesselin Borisov (Bulgaria): 80 WPM (RX, pencil)
High Speed Telegraphy Competitions

- Since 1995: IARU HST Competitions
  - Stronger focus on Amateur Radio, with additional disciplines (Callsign RX, Pileup competition, but no head copy)
- IARU World Championship each odd year
- IARU Region 1 Championship each even year

- Most successful teams are from Eastern Europe, most notably Belarus, Romania and Russia
  - Taught as competitive activity in school
  - “Athletes” are supervised by professional trainers
Team YO

Team EW
High Speed Telegraphy Competitions

- In HST competitions, received content has to be written down for accuracy evaluation
- Ability to type or jot down received content is often times limiting factor
Clear text QSOs

- Clear text QSOs offer the freedom to head-copy clear language, which enables us to go beyond max. speeds of code group- or callsign-based competitions
- The faster it gets, the more recognition changes from letter-by-letter to word-by-word, or even beyond that.
  - e.g., “THE” does not take longer than the number “9”
  - At 40 WPM: transition to word by word
  - At 60 WPM: transition to phrase by phrase
- Familiar patterns are the key to fast content recognition
QRQ: How fast is fast?

- According to N0HFF’s “The Art & Skill of Radio-Telegraphy”, Ted McElroy stated that “any normal person can easily achieve 25 WPM”

- 25 WPM is HSC entry level

- At this point, the sky is the limit, sometimes literally... (QRM, QRN, QSB, etc.)
QRQ: How fast is fast?

- Fast copying is a matter of practice; what about sending?
- Straight Key ➔ (el.) Bug ➔ Keyboard
- Possibly enjoyable sending speed: My (arguable) opinion:
  - Straight key: up to 20 WPM
  - Paddle: ~ 55 WPM
  - Keyboard: > 100 WPM
    - Five Star Operators Club admission was @ 80 WPM, sent with unbuffered keyboard (founder: W6UF, † 1989)

- [https://soundcloud.com/chaseology/qrr-cw-morse-code-qso-over-the-internet-k8if-aaohw](https://soundcloud.com/chaseology/qrr-cw-morse-code-qso-over-the-internet-k8if-aaohw)
QRQcw web page

- Good resource for all kinds of QRQ-related topics:
- [http://qrqcwnet.ning.com/](http://qrqcwnet.ning.com/)
Alas – the bands are dead!

- **iCW**
  - Is a great addition to on air activities for
    - Skeds with friends we can’t reach on air
    - Off air training sessions at any speed
    - QSOs with people from all over the world (if they are logged in)
  - Has the potential for being an alternative for everyone who does not have the chance to install a decent antenna
    - telegraphy over the internet is better than no telegraphy at all
  - Easy installation & free of charge (no registration necessary)
iCW: How to get started

- **Hardware requirements**
  - Computer (Windows, Apple or Linux machine)
  - Rig or some kind of tone generator + keyer (if needed)
  - Some audio cables for the necessary connections

- **Software requirement**
  - Mumble (open source VoIP software)
iCW - Schnelleinstieg in Internet CW (iCW installation in 8 minutes)

- [https://www.youtube.com/watch?v=zjG6MZ7LZUI](https://www.youtube.com/watch?v=zjG6MZ7LZUI)

AAoHW example setup

Begali Sculpture and W5UXH iCW keyer
References


- QRQcwnet.ning.com
iCW Live Demonstration