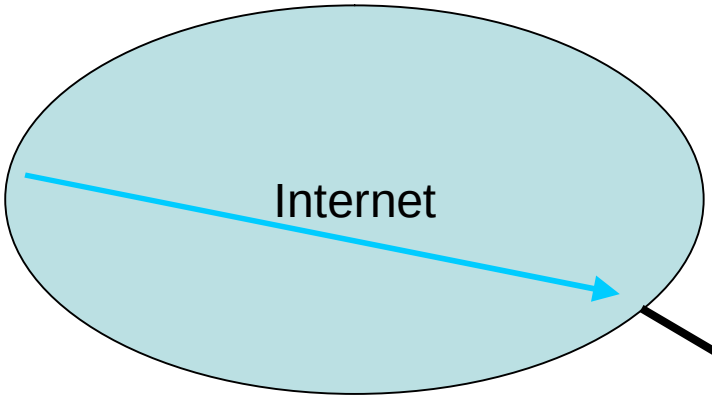
Remote CW paddle operation

Remote Control

SM7LCB

Remote CW paddle operation

How to transfer local generated CW
to a remote station?



By audio via IP-phone application.

Audio

Skype

Internet

Skype

Tone decoder

-Easy?
-Bandwidth 8-16 kbits?
-Only key data no PTT
-Not tested by me

By digital serial transfer.

Convert to serial data

CW paddle data

Client

Internet

Other program

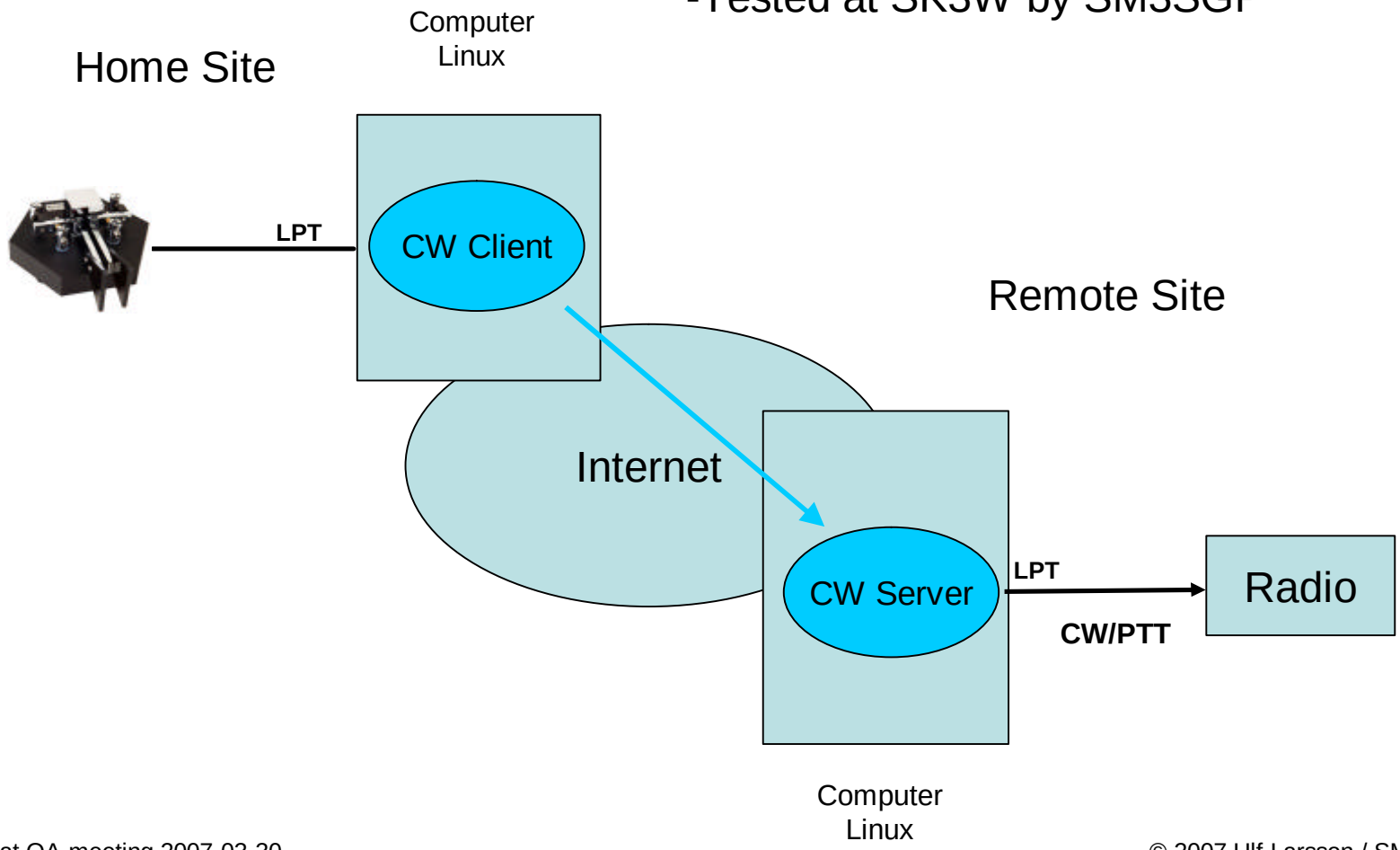
CW Server

CW text data

-Easy?
-Bandwidth smaller
-Key and PTT data
-Remote text CW generation

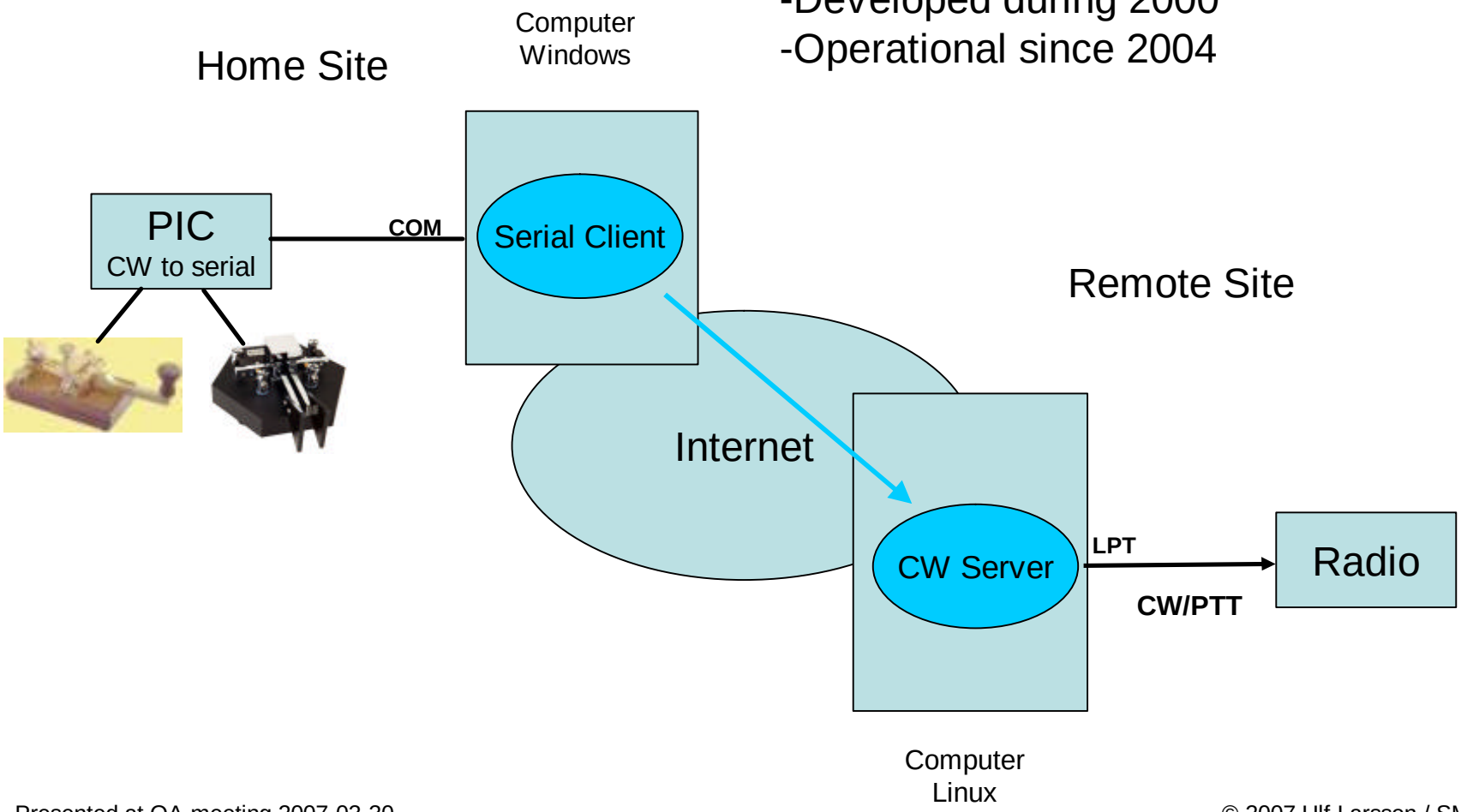
Remote CW version 1

-Linux running a CW client
-Linux running a CW server
-Developed during 2000
-Tested at SK3W by SM3SGP



Remote CW version 2

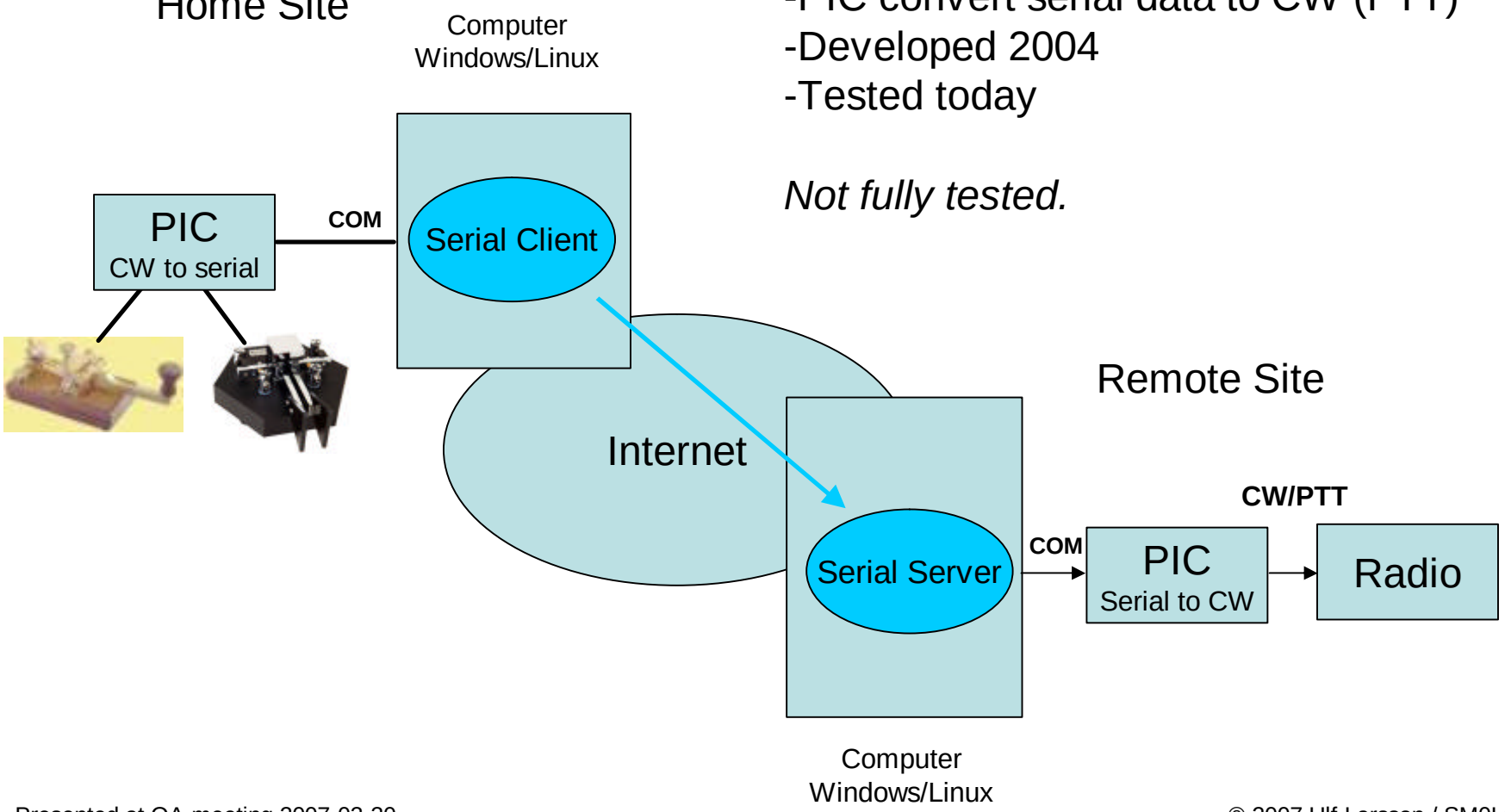
-PIC convert CW to serial data
-Windows serial client program
-Linux running a CW server
-Developed during 2000
-Operational since 2004



Remote CW version 3

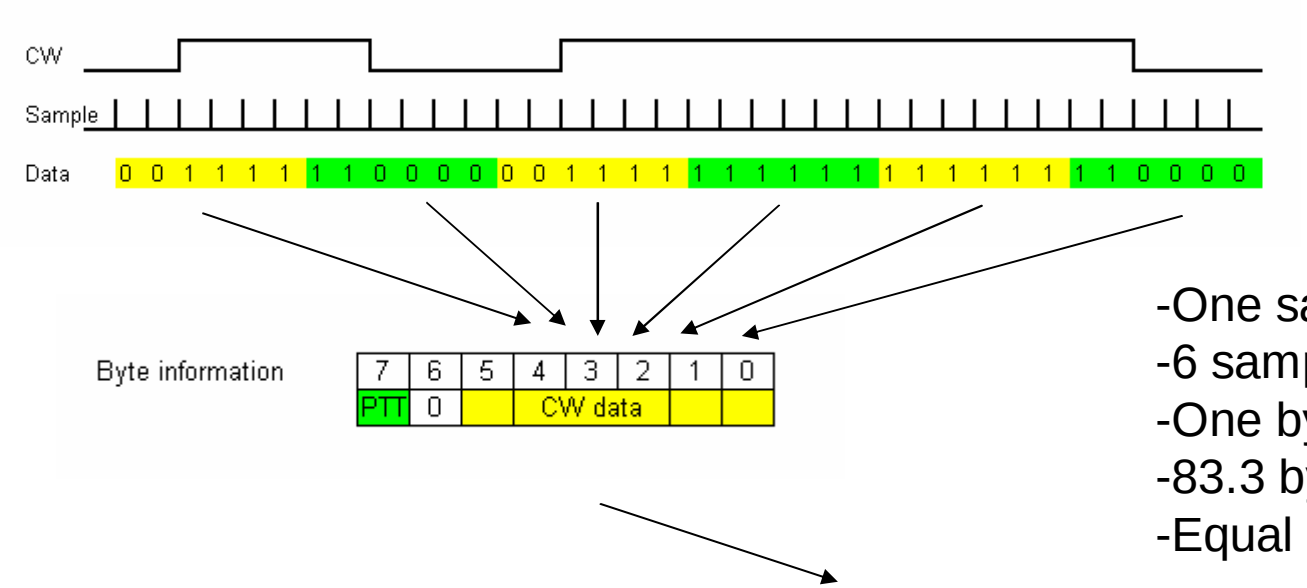
-PIC convert CW to serial data
-Windows/Linux serial client program
-Windows/Linux serial server program
-PIC convert serial data to CW (PTT)
-Developed 2004
-Tested today

Not fully tested.



PIC CW to serial conversion.

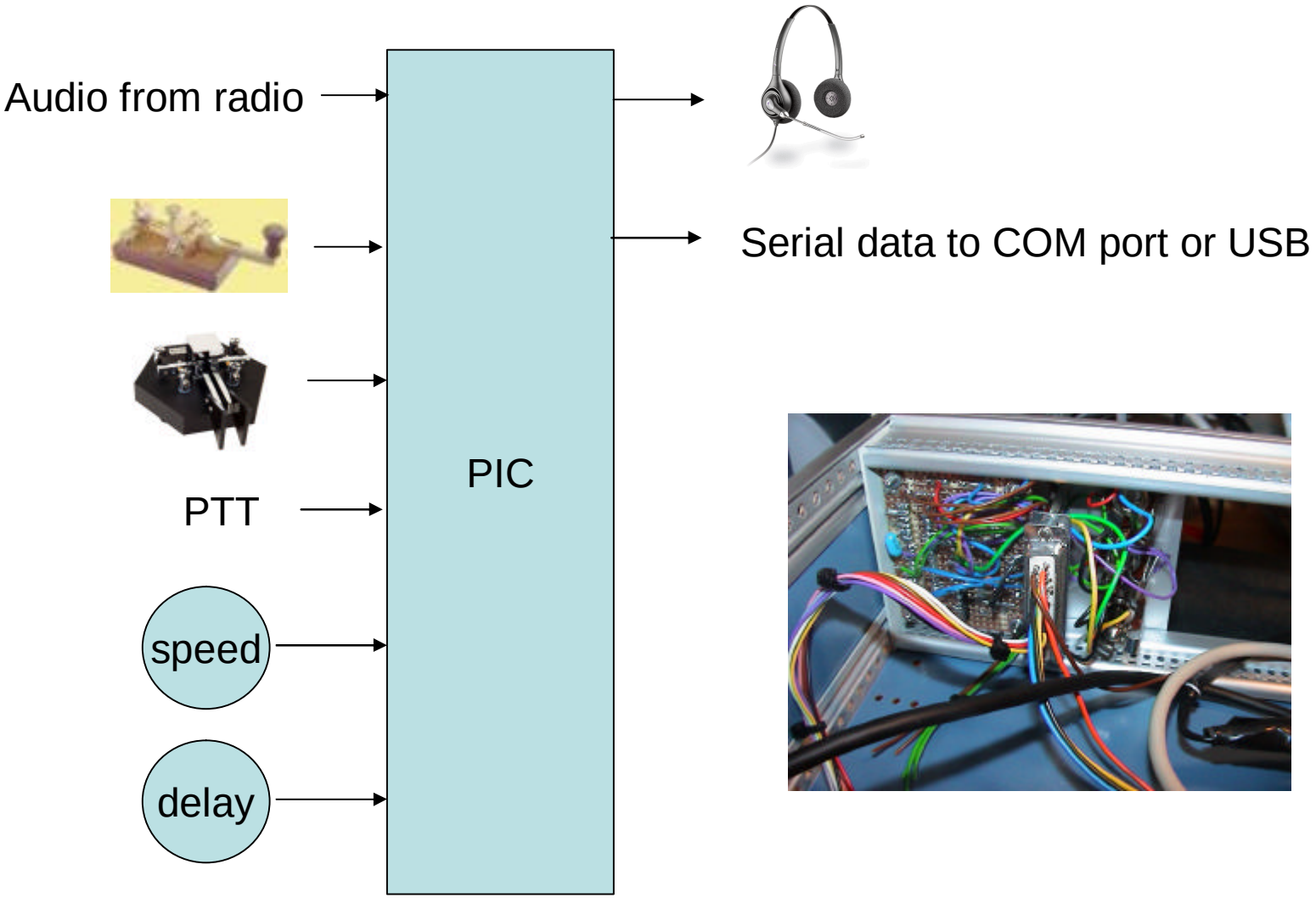
-PIC sample the CW key signal (~ 2ms)
-6 samples added into one byte
-One bit in the byte hold PTT status
-Bytes are sent in 9600 bits



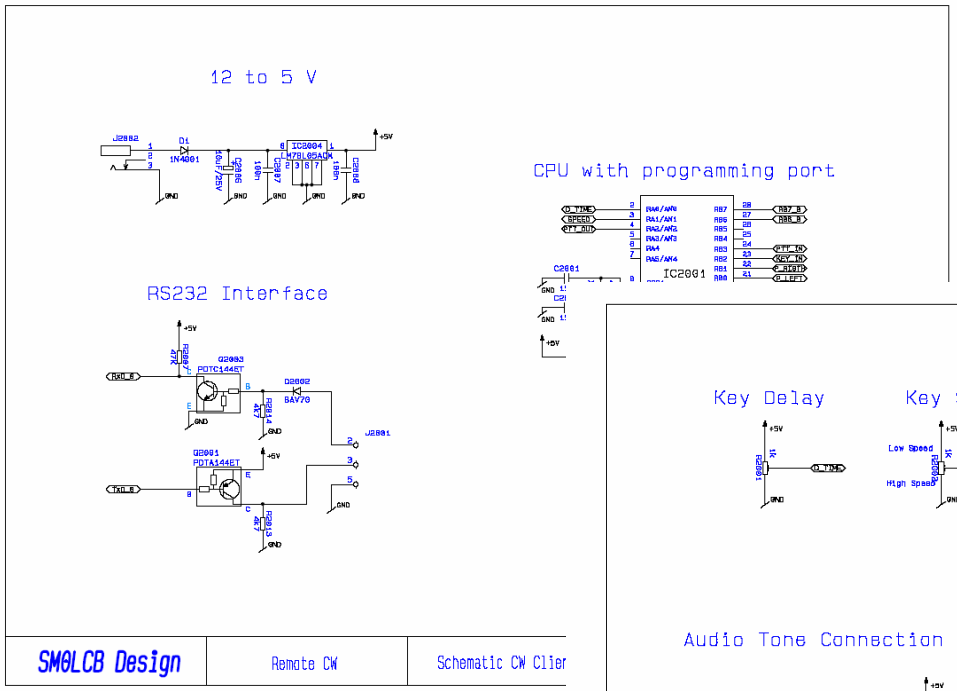
-One sample every 2ms
-6 samples in each byte
-One byte every 12 ms
-83.3 bytes per second
-Equal to 833 bits!

RS-232 transfer of data
Alternative USB interface

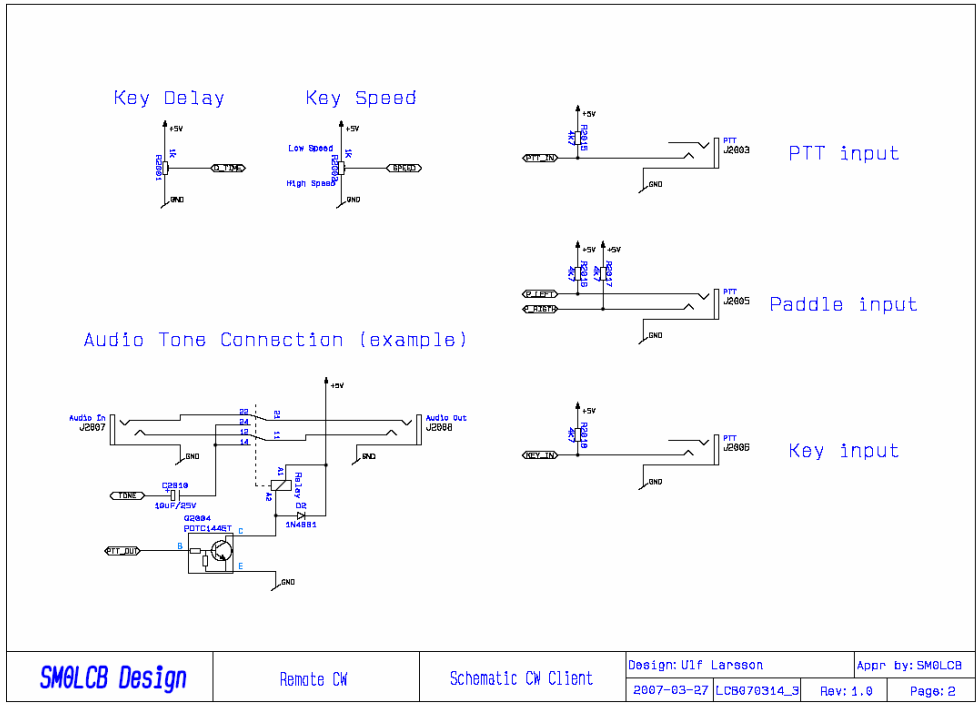
PIC, CW to serial.



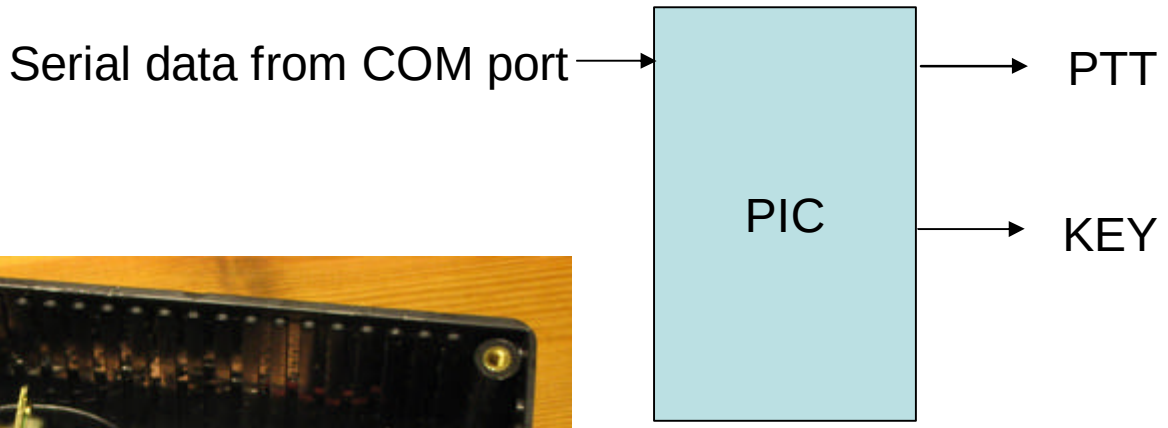
PIC, CW to serial.

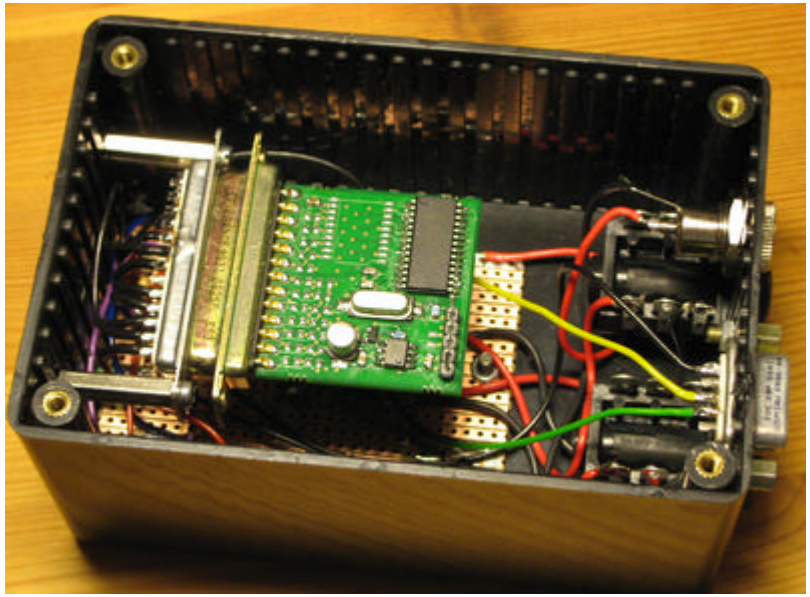


-CPU PIC16F876A
-Simple RS232 inferface
-Paddle/Key/PTT input
-Monitor tone
-Monitor audio switching
-Speed/Delay setting



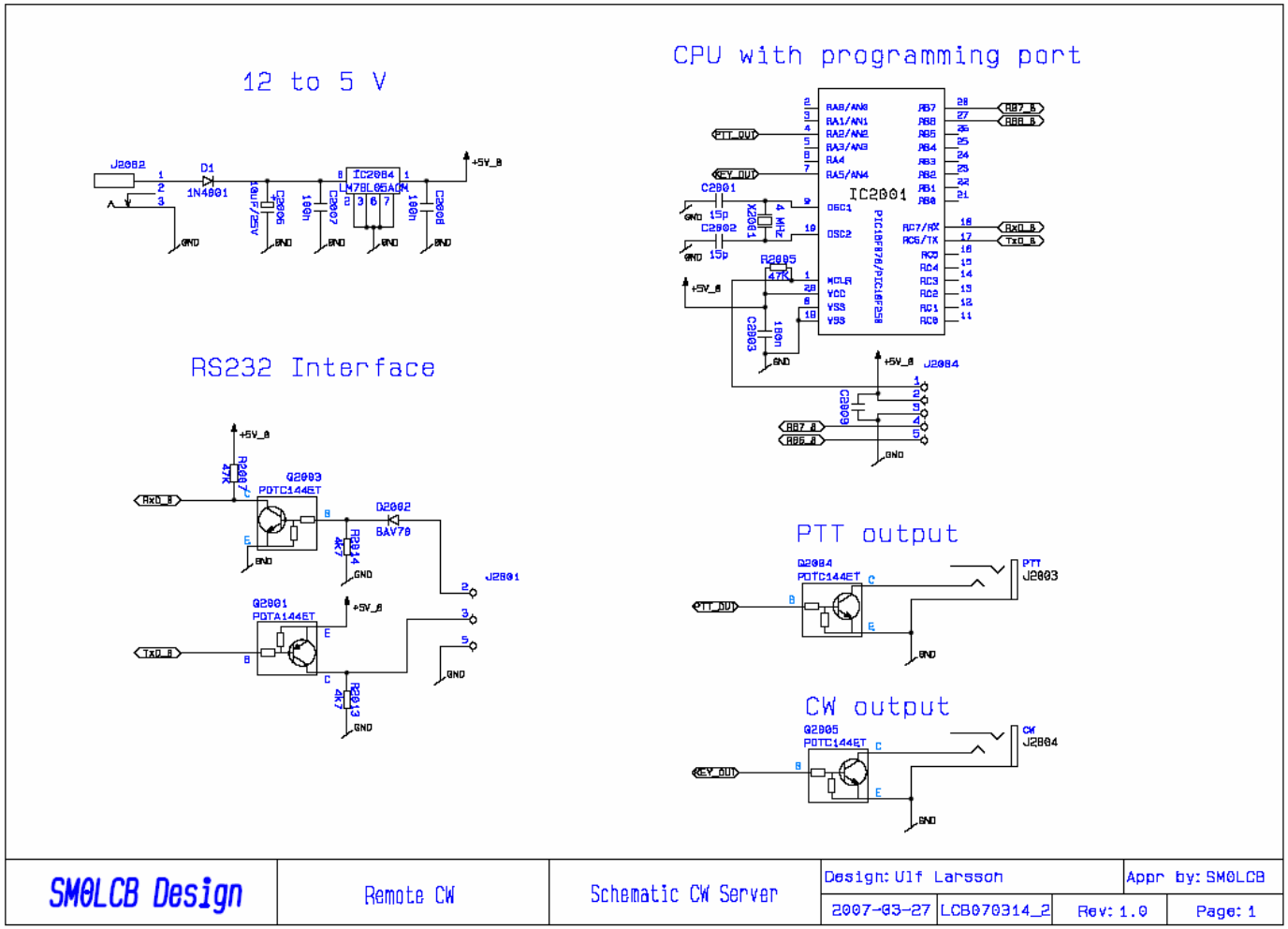
PIC, Serial to CW.





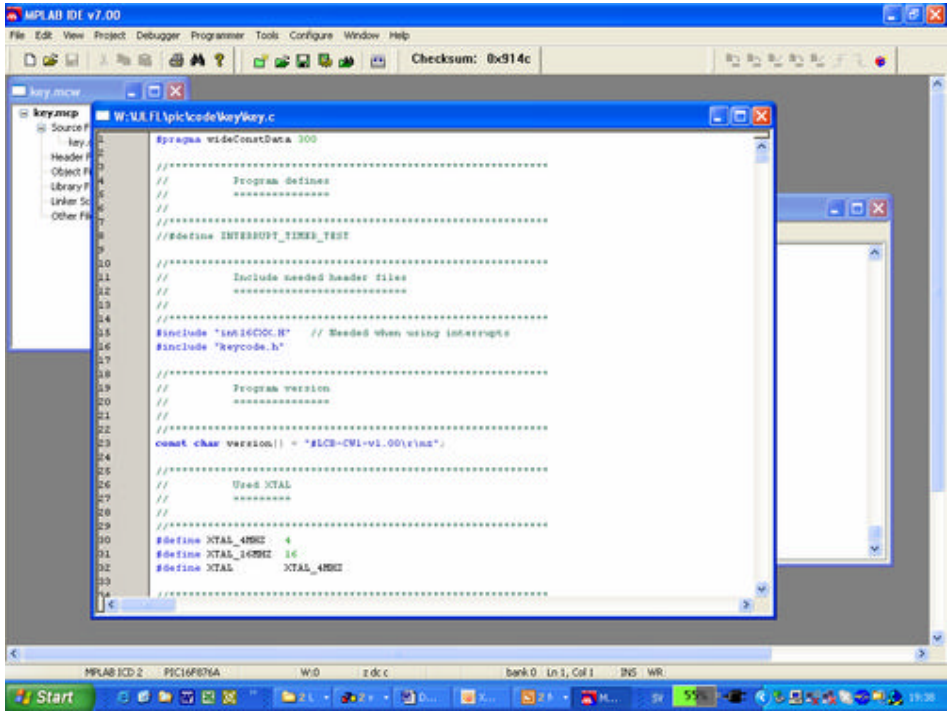
PIC, Serial to CW.

Schematics



PIC, CW serial software.

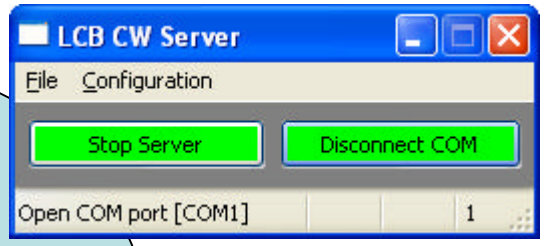
-CPU Microchip PIC16F876A
-Development (free) IDE MPLAB from Microchip
-Coder written in C
-C compiler CC5X



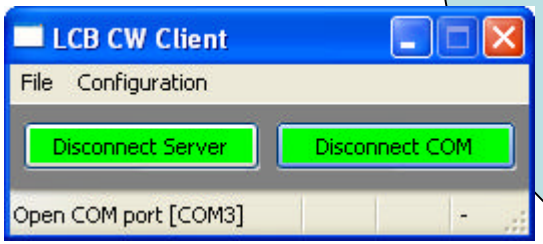
-Same program for both
"CW to serial" and
"Serial to CW".
-Not fully tested
(2007-03-28)
-Hopefully hex file
will be possible
to download from
my homepage soon…

http://sm7lcb.shacknet.nu

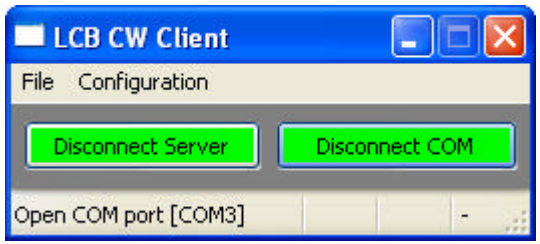
Serial Client/Server Software.

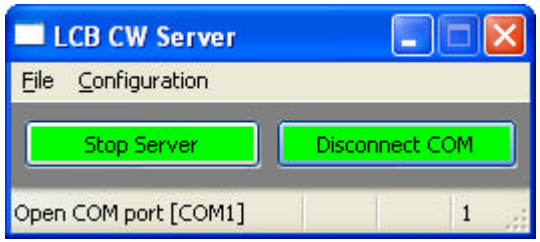


Internet



Serial Client/Server Software “wxLcbSerialNetwork”.





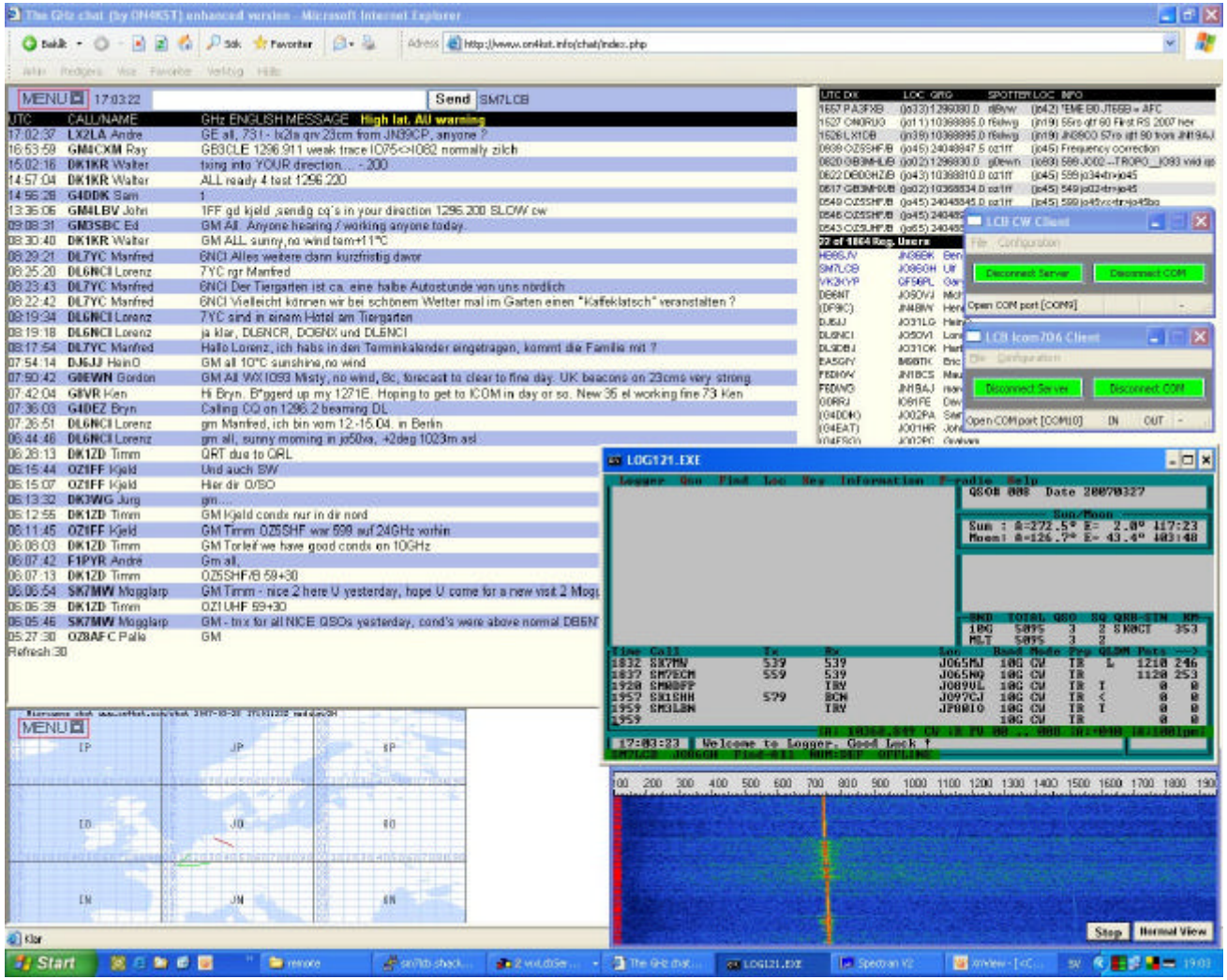
-Same program for client/server
-Configuration file *.lcbc

-Open source GUI (wxWidget).
-C++
-Support Windows/Linux(/Mac)
-Windows free IDE Dev-CPP

Information about wxWidget
see http://www.wxwidget.org

Program “wxLcbSerialNetwork”
see http://sm7lcb.shacknet.nu

SM7LCB remote control desktop layout.



For more information see

http://sm7lcb.shacknet.nu

END

DEMO….