The TOTORO graphic chat

Create a graphic chat program

Objectives

- Form two-person groups
- Create a graphic chat program together

Materials & Resources

Material	Duration
Passing a structure through Sockets in C	-

Material review

- How to transfer a structure properly between two devices
  - Serialization needed if the two platforms may differ
  - You can transfer the whole structure as a byte array if the two platforms is the same

Workshop

The goal is to make a graphic chat program with two STM32F746G-DISCOVERY boards.

Form two-person groups. One should write the server side program, the other one should write the client side program.

Client side

The client connects to the server with a TCP socket and sends touch screen data to the server.

Server side

The server accepts connection from the client and receives touch screen data via TCP sockets. Based on the touch data it draws filled circles.

How does it work?

If the user writes something on the client board, the drew messages appears on the server board.

Advanced tasks

Make it work back and forth

Every board should behave like a server and a client at the same time.

Define clear command

The user should be able to send clear screen commands (somehow) to the other board.

Color command

The user should be able to change the draw color on the other board.

Highly Advanced task

The boards should detect each other on the network (the IP address is detected automatically).

Solution

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