

Displayed Connectivity

Description

The setup consists of several devices. Each of them is a small microcontroller system equipped with a display and sensors put together into a small

Each device is able to show the states of other displays connected in some way to it.

Application 1: Setting the State

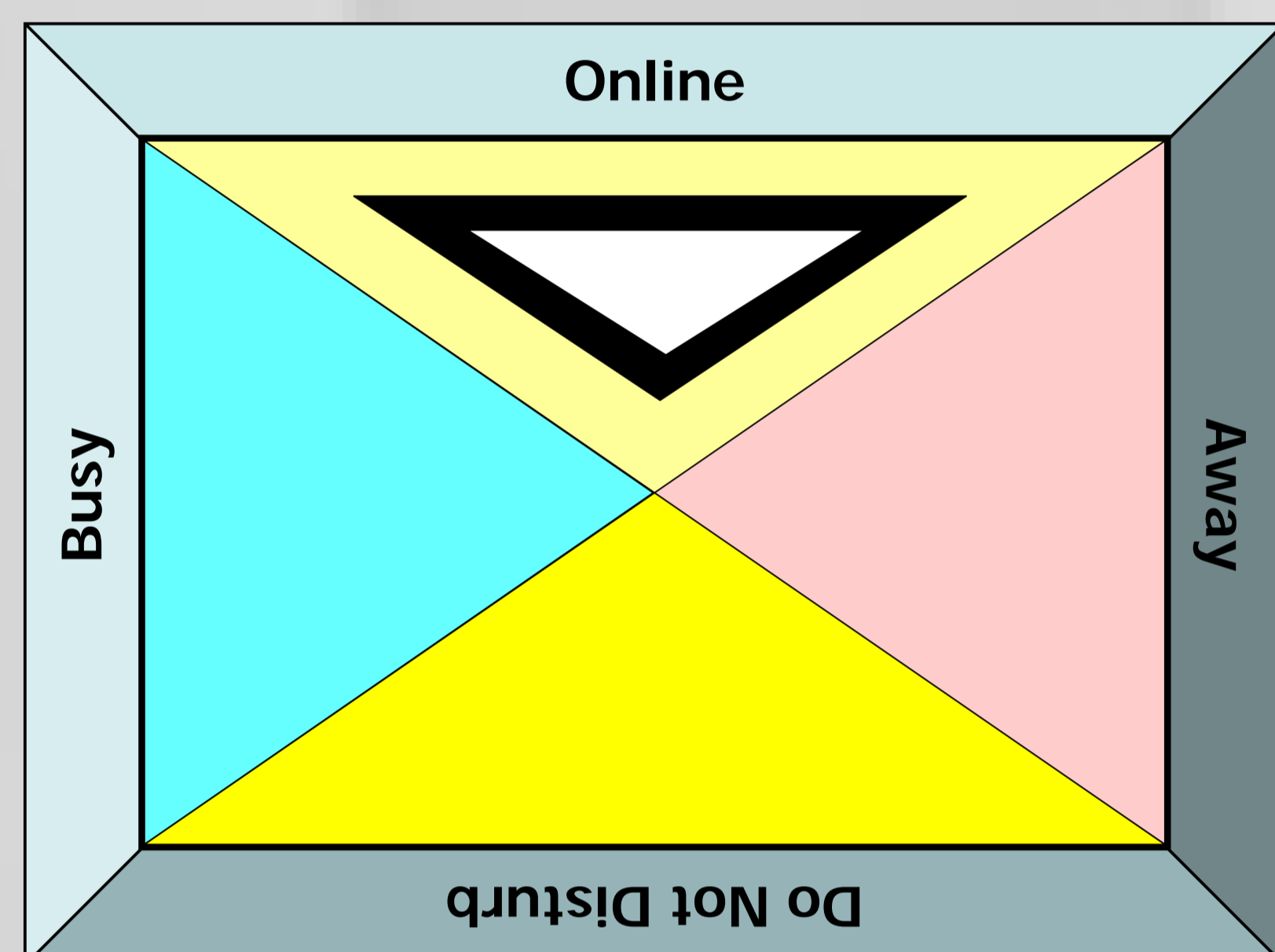
Alice regularly uses instant messaging systems. However, she very often forgets to change her state according to her activities. She also has several messaging systems and finds it tedious to manually change each of them.

Nearly all such systems have in common that the user can set his or her own state

The set of necessary states is limited: *Online*, *Offline*, *Away*, *Do Not Disturb*, *Busy*

Each position of the display is mapped to one of the states

Turning the casing such the display faces down on its screen, e.g., means *Offline*



Technology

- A Particle Computer serves as hardware controller and
- A display to show possible and current state as well as states of other devices
- Two 2-axes accelerometers to get information about the state of the device
- A small built-in speaker for notification purposes

Communication

- Short range communication implemented using radio frequency
- Indirect wide range communication via bridges that receive radio frequency signals, pass them through the internet using host computers

The displays can also be accessed through a HTTP server



Application 2: Decision Finding / Voting

Five friends (*Alice*, *Bob*, *Chris*, *Denise*, *Eric*) work at different locations

They are often trying to arrange something for the evening

Even though the choices are pretty much set, they often have problems in agreeing to one of them

Some problems are that people tend to think:

- "I'd like to go to ..., but of course *not alone*"
- "I guess the others might want to go to I'll *join in* if they do."
- "Any *suggestions* what to do?"
- "I have no time to argue / explain. Writing emails takes long, you have to ask if everything is ok,"

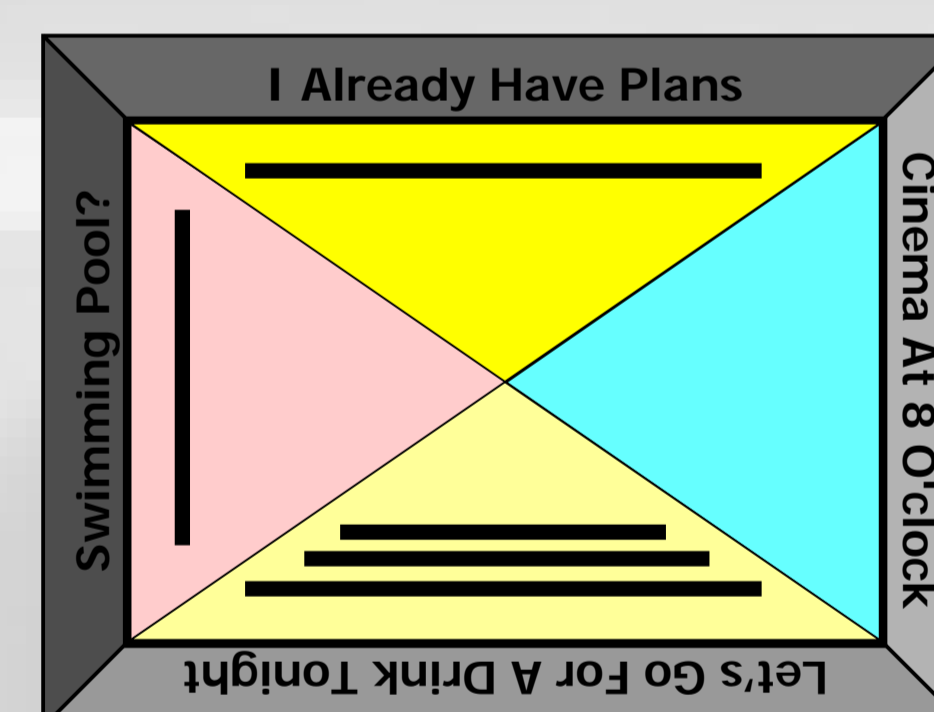
Each of the five friends has a display. They use them to negotiate their plans:

- 1) Alice turns her display and places it such that her choice is on top ("Let's Go For A Drink Tonight")
- 2) The displays of her friends each show a line in the appropriate section indicating her choice

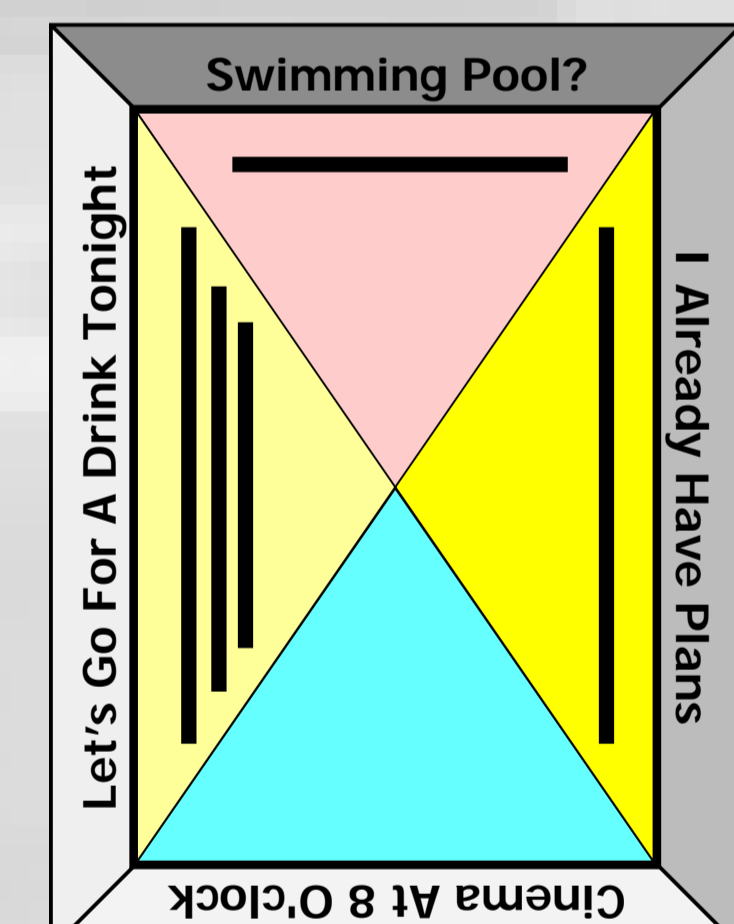
Alice:



Bob:



Chris:



Denise:



Erik:



Contact

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<http://www.hcilab.org>



Displayed Connectivity
<http://www.hcilab.org/projects/displayedconnectivity/>

The Particle Computer, TecO Karlsruhe

<http://particles.teco.edu/>

Particle Display Add-On Board

<http://www.hcilab.org/projects/particles/particles-display-add-on.htm>

HTTPServer for Displays

<http://www.hcilab.org/projects/displayserver/>