

wePoker

Dries Harnie (sat)
Lode Hoste

Hoi

Elisa Gonzalez Boix
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$$\arg \max_{fun(x)} \{x \mid x \in \mathcal{P}\{\text{Phone, Tablet, Google TV, SmartWatch}\}\}$$

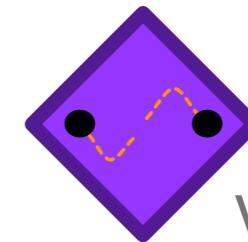
~~arg max~~ $\{x \mid x \in \mathcal{P}\{\text{Phone, Tablet, TV, SmartWatch}\}\}$

Networks composed of **mobile** devices connected **wirelessly**

Scales of Connectivity



Zero
Infrastructure



Volatile
Connections



Wouldn't it be nice ...



Yesterday's connectivity



- Continuous (non-volatile) internet connectivity
- Less spontaneous setup (setting up rooms)
- Less social interaction (random strangers!)
=> Not compatible with 'on the road' scenarios



Connectivity today

- Spontaneous setup

Use of newest “ad-hoc” communication functionality:

NFC, QR, Wifi-Direct

- Multi-User FUN

Poker game up to 8 players

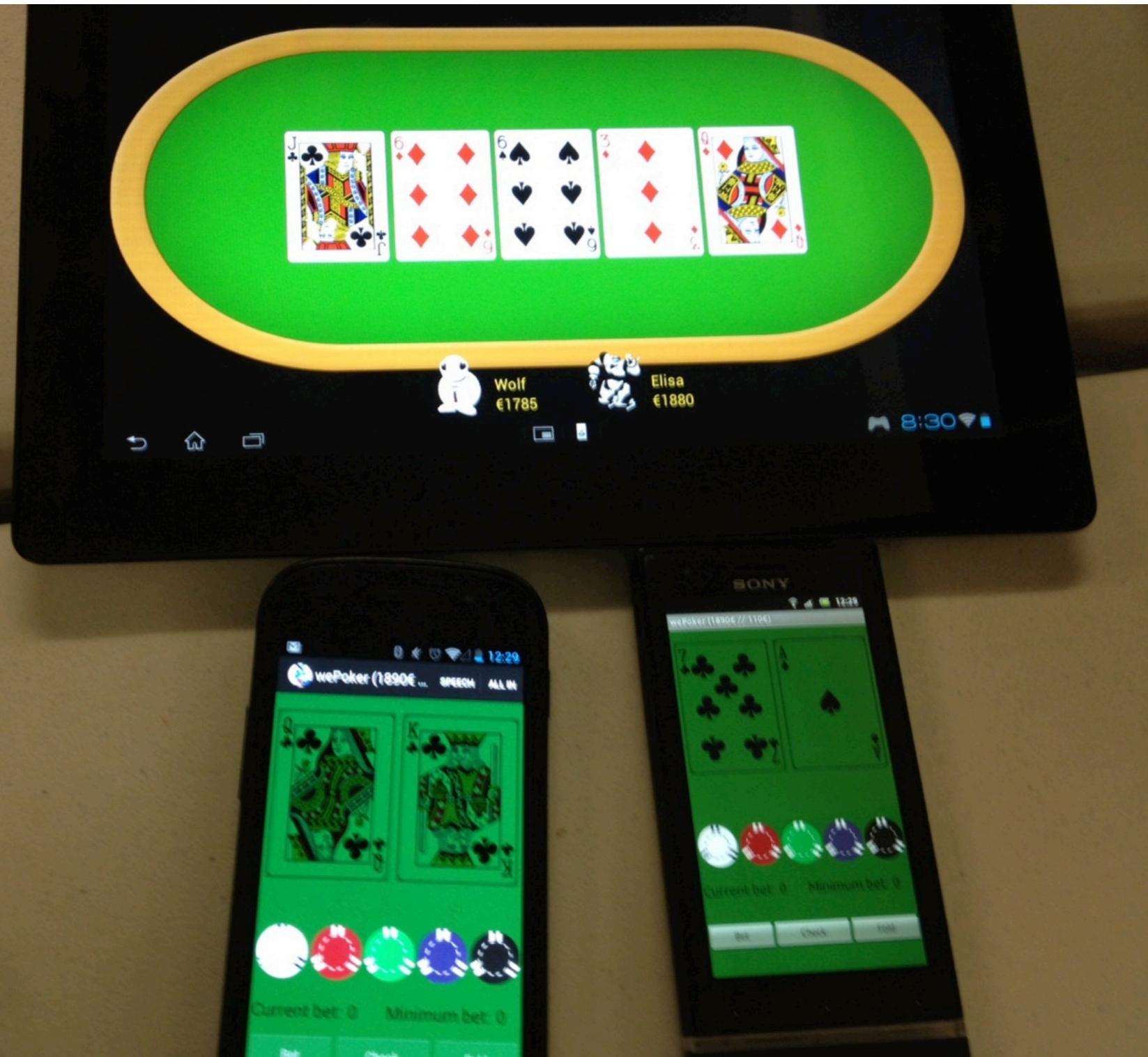
- Cross-Device

Phones, Tablets, Watches and TVs

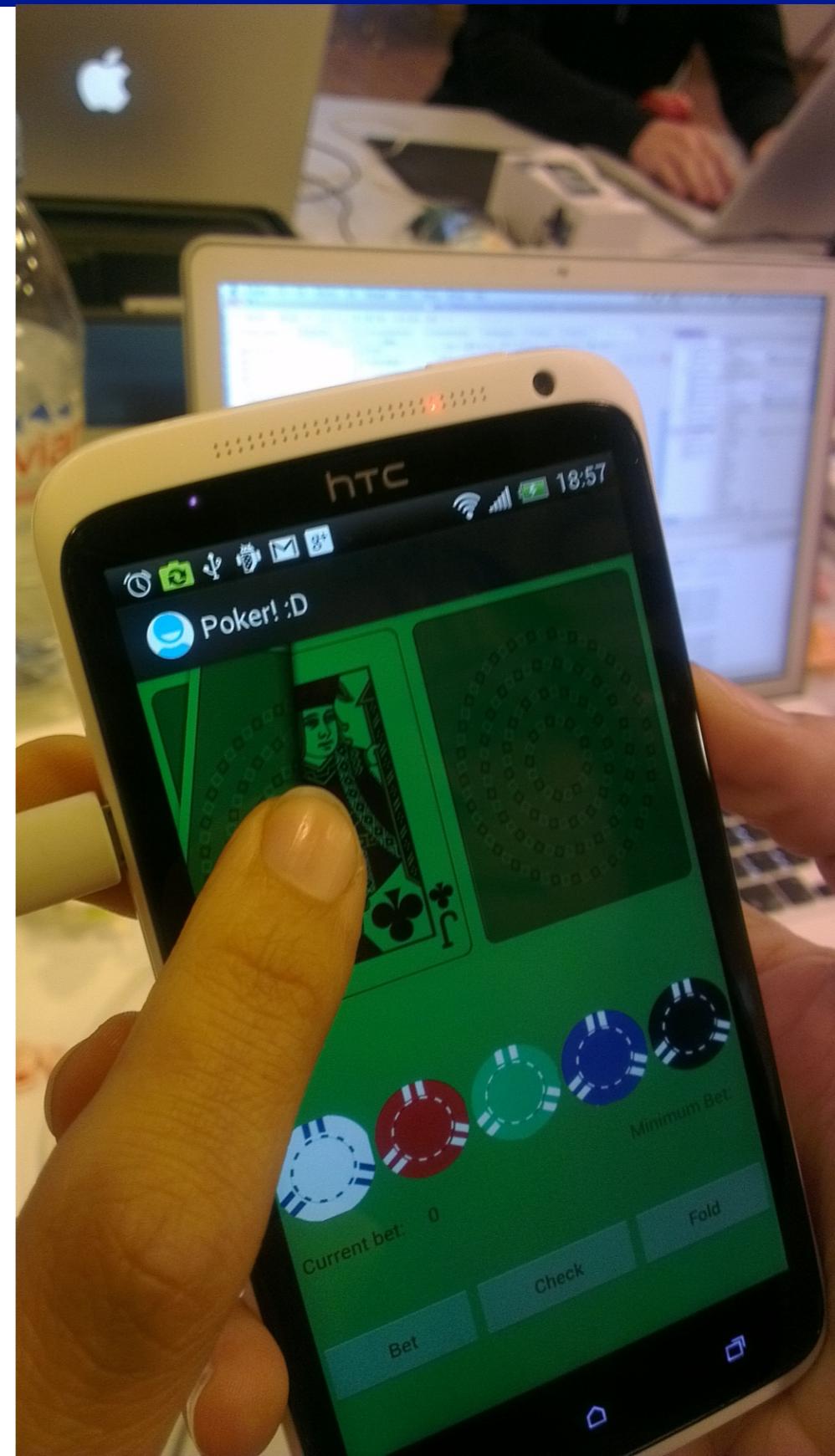
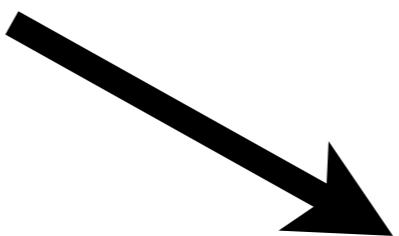


Connectivity

Ad-hoc connectivity between Server and Client



Interaction

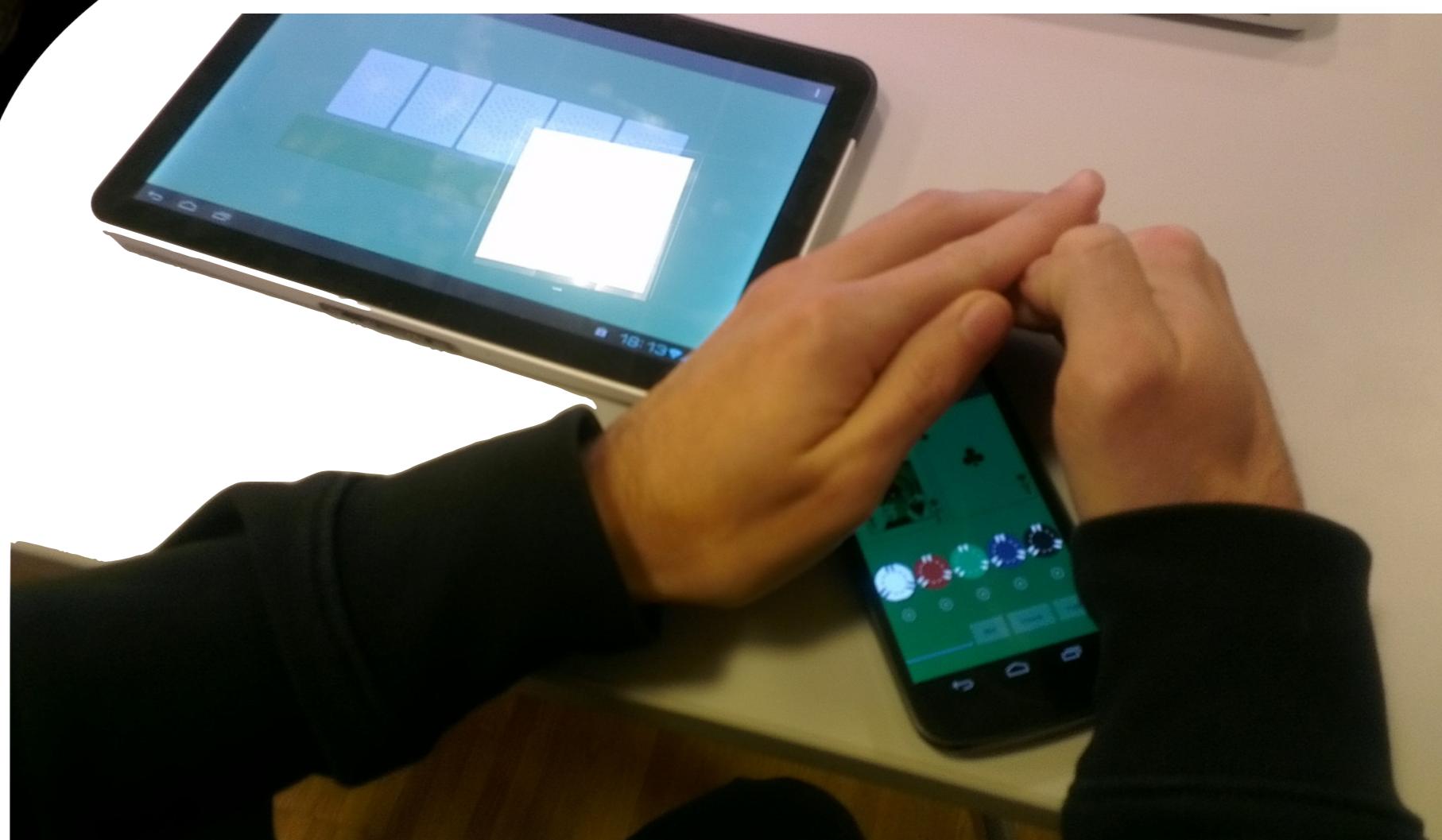


Curled cards for
private viewing

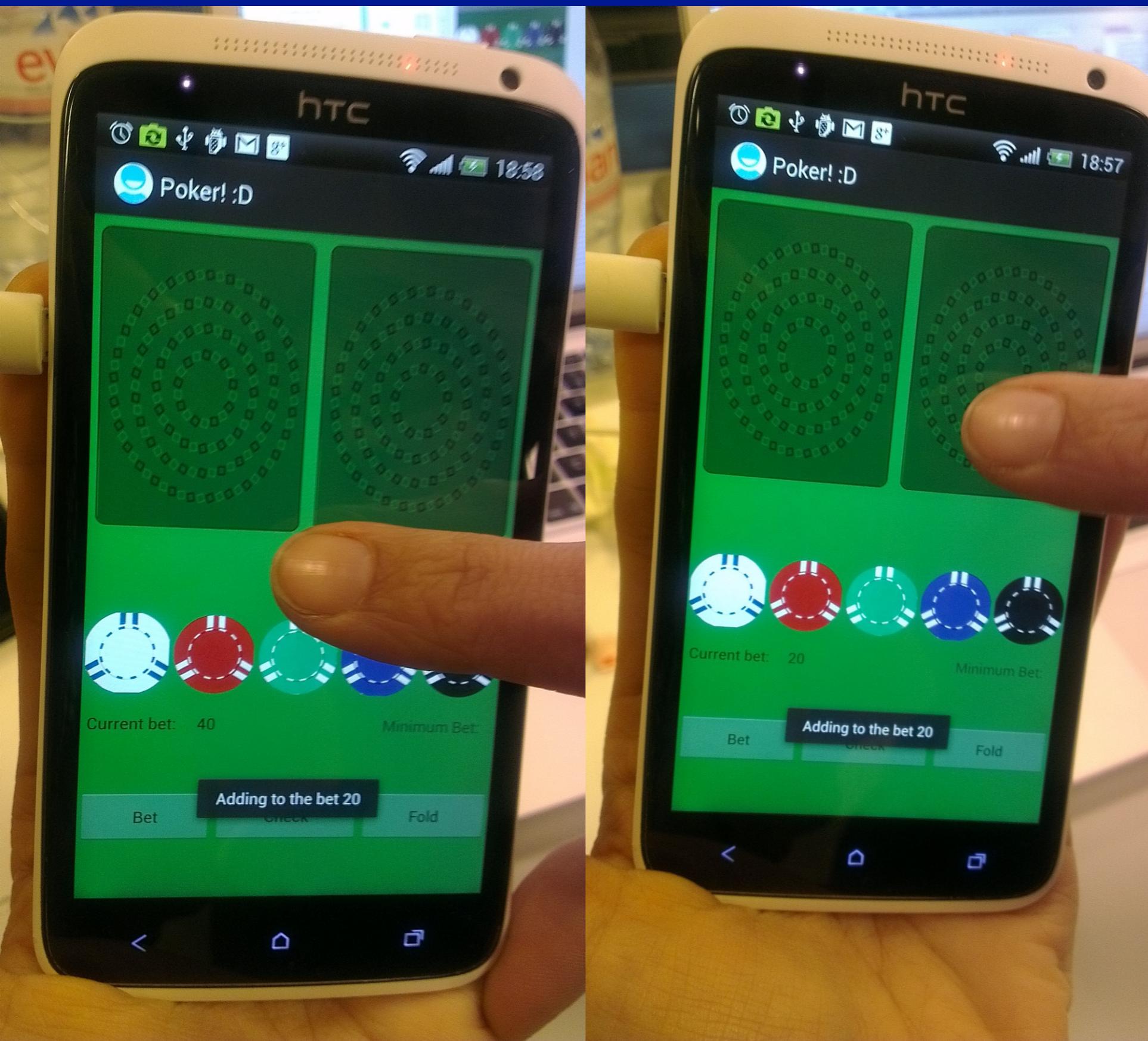
Interaction



Cards only display when
it is safe to do so.



Betting



Multi-Touch
Gestures
for betting

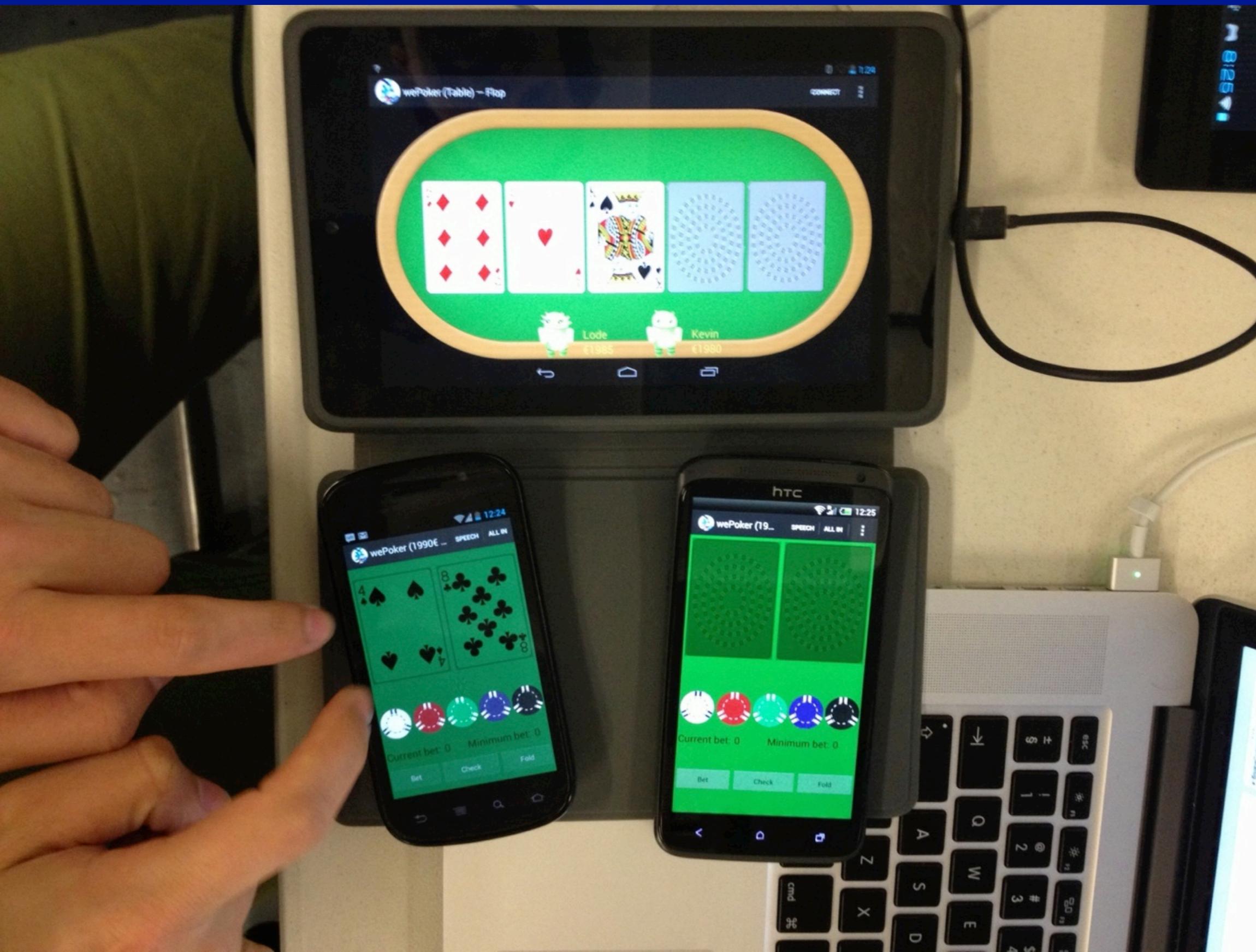


Flick finger

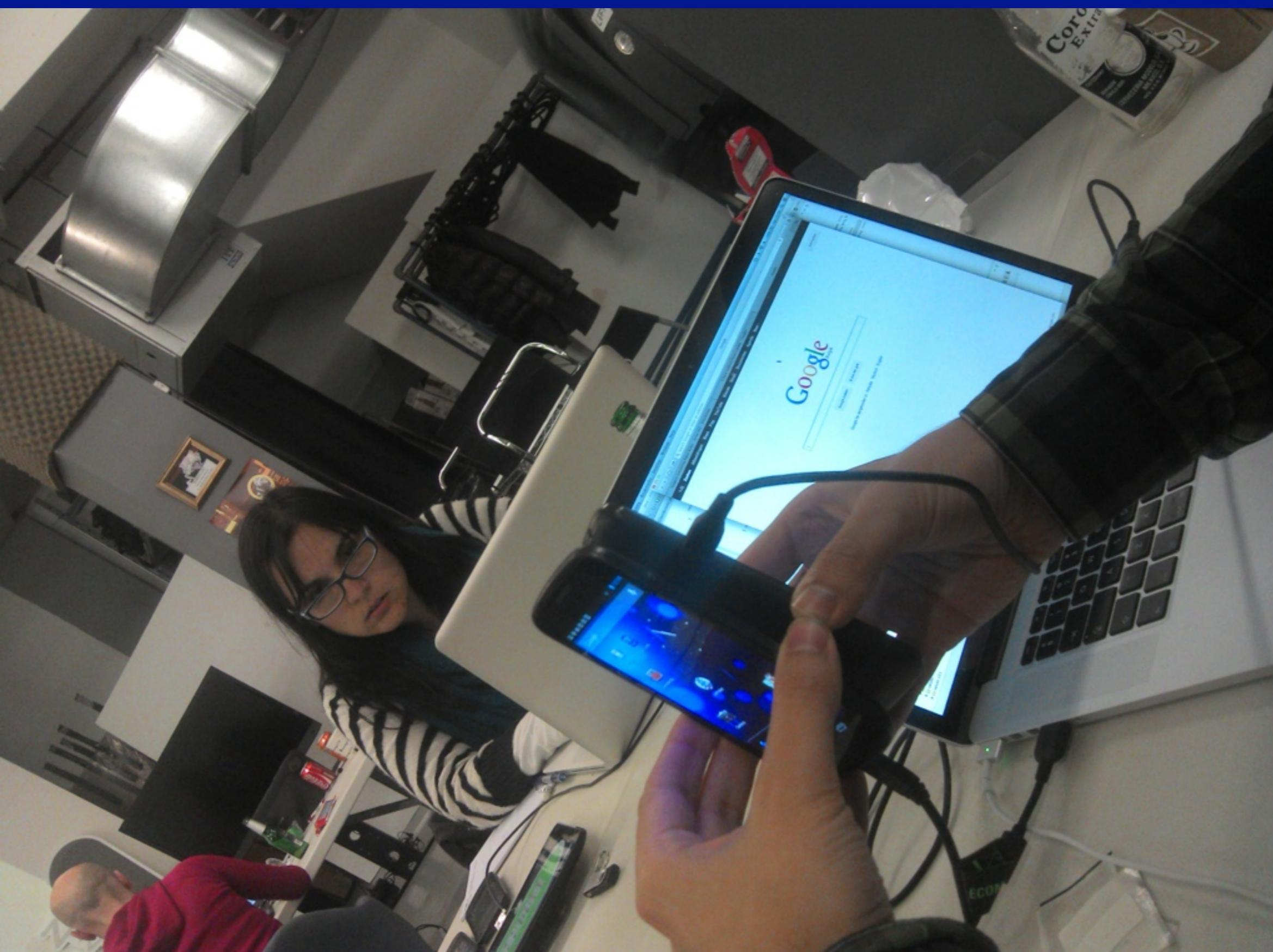
Folding



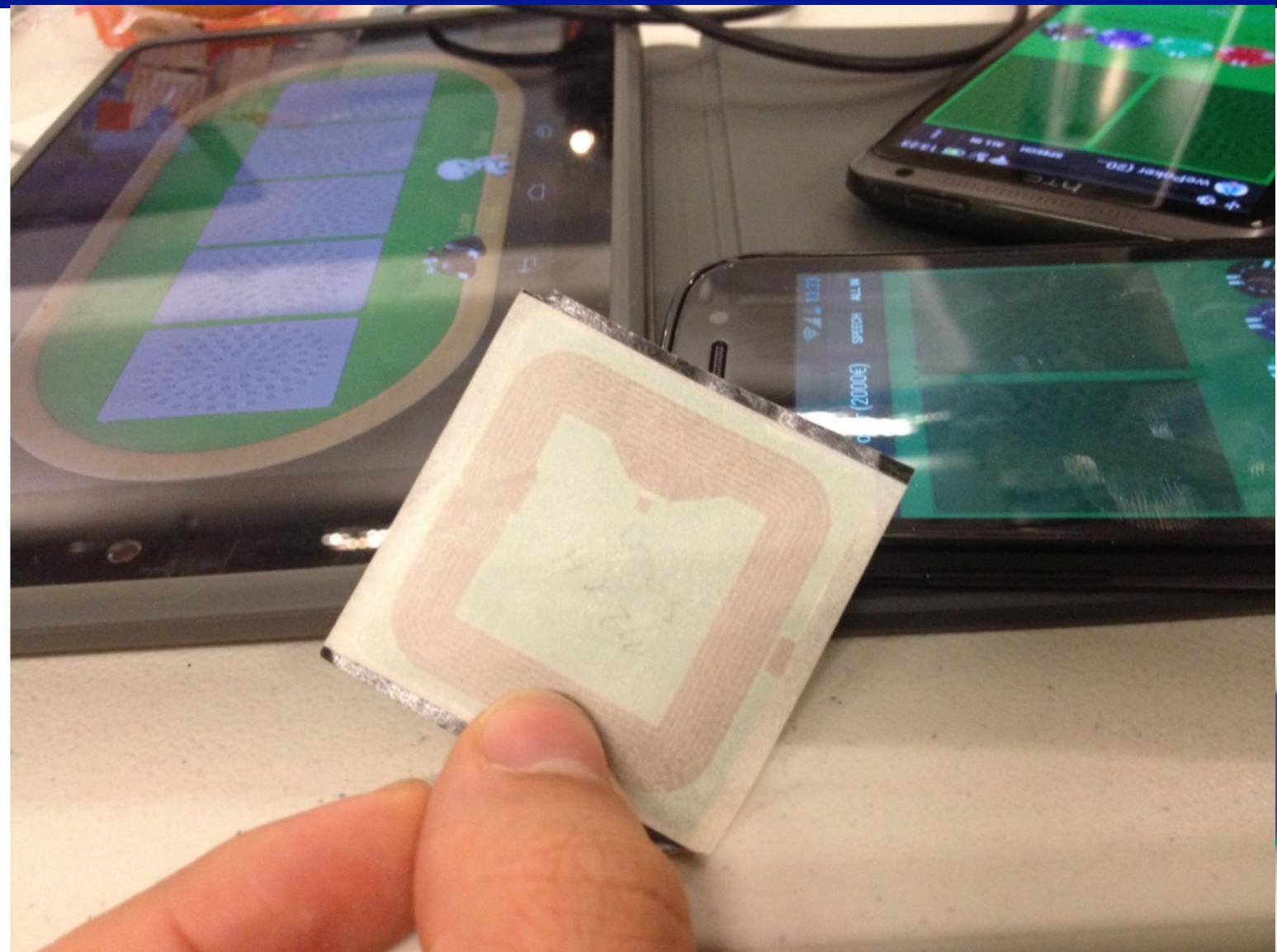
Wifi-Direct and NFC



NFC Beam (propagating invitations)



QRCode and NFC/RFID

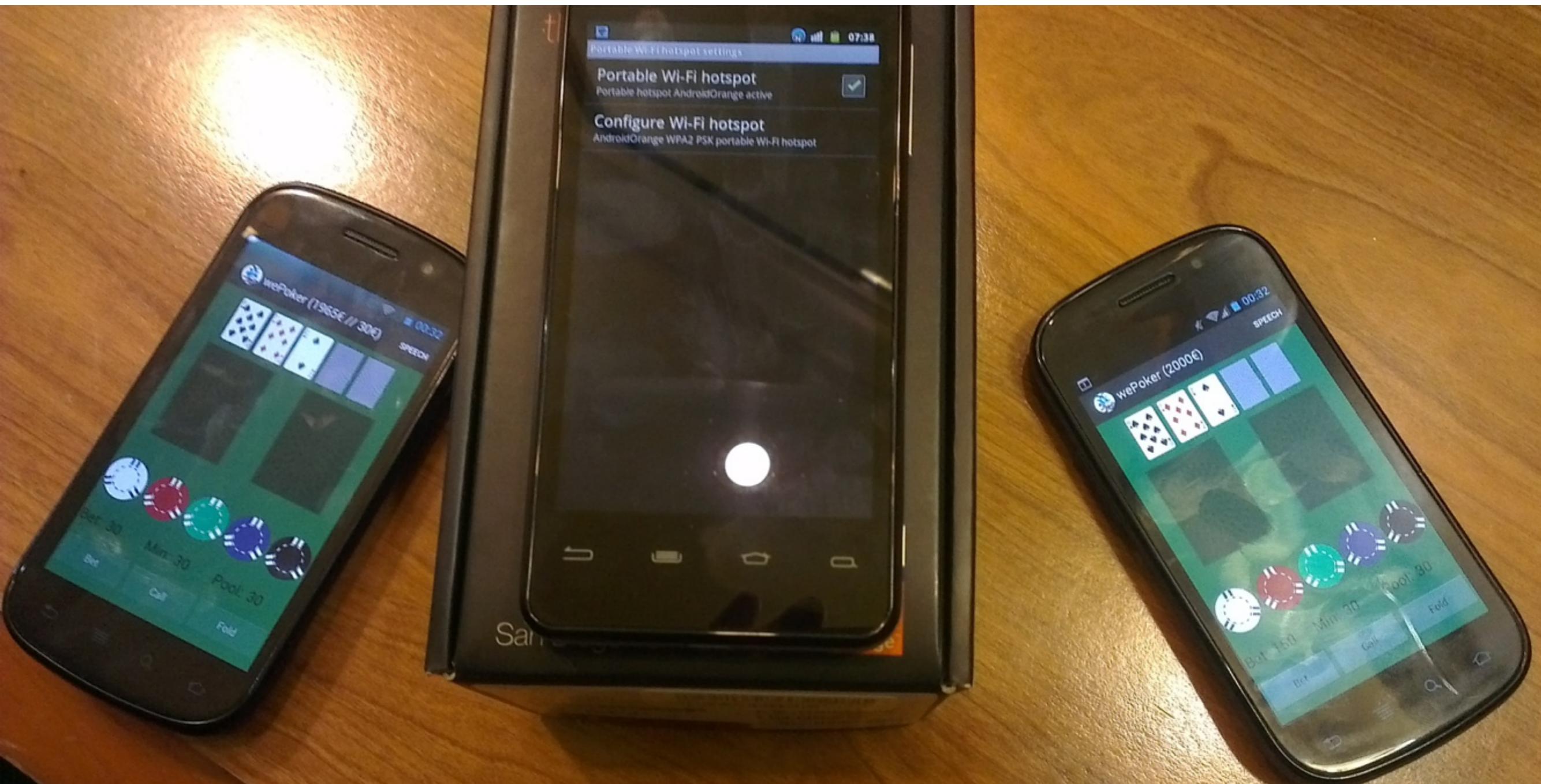


(when automated discovery is not possible)



Hotspot

- No wifi-direct
- No infrastructure

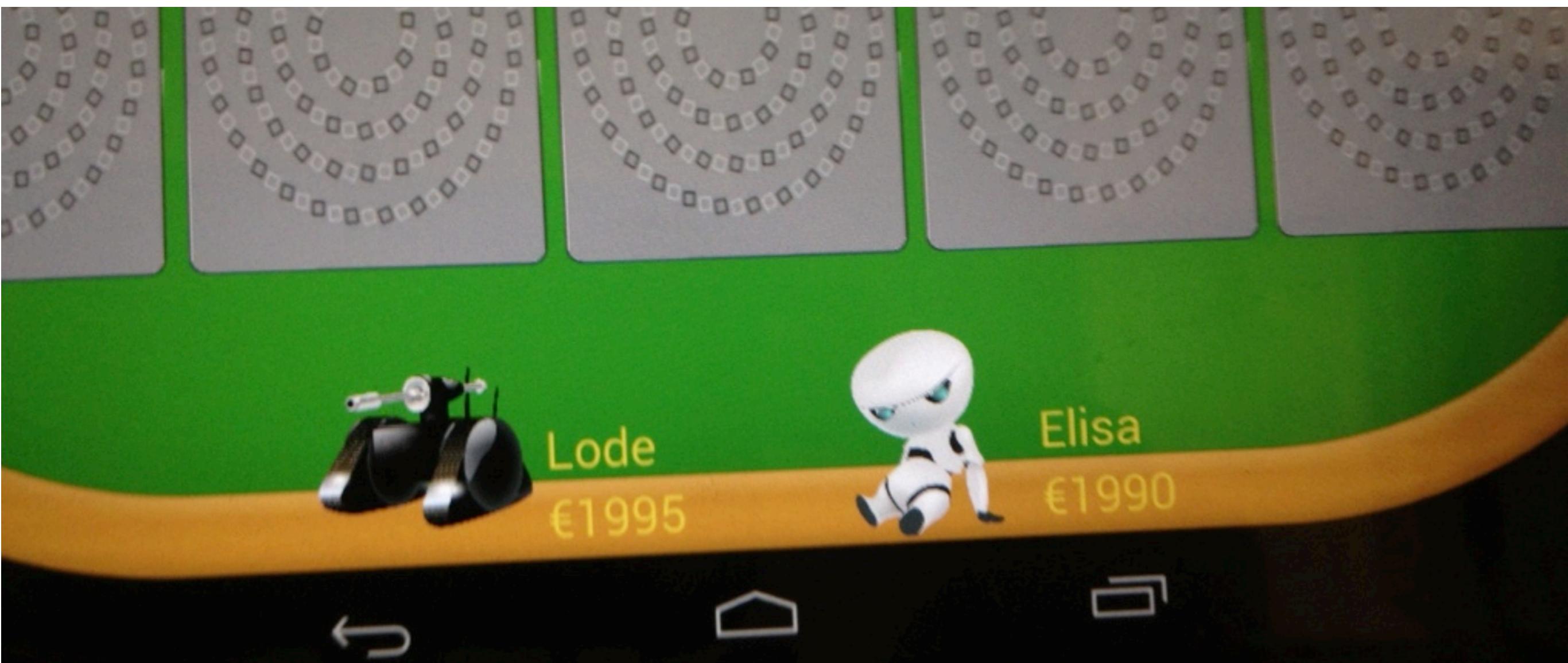


TV



Extra's

- Custom Nicknames
- Avatars
- SmartWatch



Accessibility (I)



immersion

- Haptic feedback (turn / win / lose)
- Custom Interface that allows visually impaired users to play versus sighted people
- Content-descriptions on OpenGL ES views
- Talkback for all new cards

Accessibility (II)



Bet <amount>
Call
Fold
All in

$$\text{lev}_{a,b}(i,j) = \begin{cases} 0 & , i = j = 0 \\ i & , j = 0 \text{ and } i > 0 \\ j & , i = 0 \text{ and } j > 0 \\ \min \begin{cases} \text{lev}_{a,b}(i-1,j) + 1 \\ \text{lev}_{a,b}(i,j-1) + 1 \\ \text{lev}_{a,b}(i-1,j-1) + [a_i \neq b_j] \end{cases} & , \text{ else} \end{cases}$$

Analytics

Flurry | App Advertising and Analytics - Google Chrome

https://dev.flurry.com/analyticsTechnical.do?projectId=241449&versionCut=versionsAll&intervalCut=allTime&segmentId=0&channelId=0&networkId=0

All Applications > wePoker > Analytics

TECHNICAL

All Segments ▾ Across All Time ▾

Top Device Models

#	Device Model	Sessions	% of Sessions
1	Sony Xperia U (ST25i/ST25a)	36	52.2%
2	Samsung Galaxy Nexus	20	29.0%
3	Samsung Nexus S	13	18.8%

Top Carriers

#	Carrier	Sessions	% of Sessions
1	Wifi / Other (GB)	58	84.1%
2	Mobile WiFi	11	15.9%

Flurry | App Advertising and Analytics - Google Chrome

https://dev.flurry.com/analyticsUsersSessionLength.do?projectId=241449&versionCut=versionsAll&intervalCut=allTime&segmentId=0&channelId=0&networkId=0&canCalculateHourly=true

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FLURRY Company: Company | manage

Home Company Applications AppCircle Publishers

Home Company Applications AppCircle Publishers

hoi.chuen.iam@gmail.com | logout

All Applications > wePoker > Analytics

SESSION LENGTH

All Segments ▾

Session Length Distribution

19.8 secs Median Session Length

All Applications > wePoker > Analytics

FREQUENCY OF USE

All Segments ▾ All Versions ▾ Across All Time ▾

Sessions Frequency

Daily

Median: 20.0 sessions / day

Weekly

Median: 0.0 sessions / week

Features

- Nomadic and Spontaneous Poker games!
 - Play poker even when disconnected from the internet or when no free wifi is available. This is much more common than expected: trains, Eurostar, airplane, bus, metro, car, at holidays, at the beach, cafe, ... And those are actually the places where you have spare time to play poker! No set-up or pin code or internet required, just launch the application and start playing with your friends.
- Multi-Device interactivity: max_fun(x)_{ x | x \in \{Phones, Tablet, GoogleTV, SmartWatches\} }
- Optimise experience based on available resources at that moment in time. For instance:
 - Two phones (or more) can start a local game
 - Add a tablet that can serve as the poker table
 - The GoogleTV serves as a high-end poker table where the audience can spectate at a distance. Pubs can offer a GoogleTV basestation with the opportunity to win beers!
 - Local gaming with a couple of friends also benefit from relaxed living-room environment. Furthermore, the stable connectivity of a GoogleTV allows users to join a game over the internet if wanted.
 - A SmartWatch enables intelligent, personalised poker estimates (i.e. what is the probability I can win this game?)
- Interactivity:
 - *Incognito-mode*: When hiding the phone, your private poker cards will be displayed
 - *Curling cards*: Obtain the slick physical feeling of curling cards
 - *Fold-on-backside*: Automated fold when phone is put on its back
 - *Swipe gestures*: Throwing chips at the table
 - *Speech support*: Google's Speech Recognition (with Levenshtein implementation to cope with bad recognition results)
 - *Talkback*: Text2Speech and customized content descriptions
 - *Haptic feedback*: Immersion's SDK
- Connectivity: Using the latest Android API's
 - With infrastructure (i.e. connected to Wifi):
 - *Automated discovery* of Poker games on the local Wifi.
 - Without infrastructure:
 - *Wifi-Direct*: Allows users to set up a local game without any infrastructure required (Android 4.1 or better). Our intelligent priority connectivity layer configures all complex Wifi-Direct settings automatically.
- Accessibility: we customized our interface for accessibility
 - Check for audio feedback (when the microphone plugged in)
 - Set content description for all UI fields to improve talkback
 - Enforced UI view where all cards are accessible (even if there is a dedicated poker table)
 - Allows visually impaired users to compete with sighted people without game-specific advantages for any side.
- Extra
 - Cheat mode: players can add money on the server view. All players get informed via visual and audio feedback about this sneaky interaction. This allows to customize the money rules.
 - Customize nicknames and avatars
 - Free gaming (no internet required)
 - Open source!



Technology Stack



Proximity
sensor



The team!



ANDROID APP ON

Google play

wePoker

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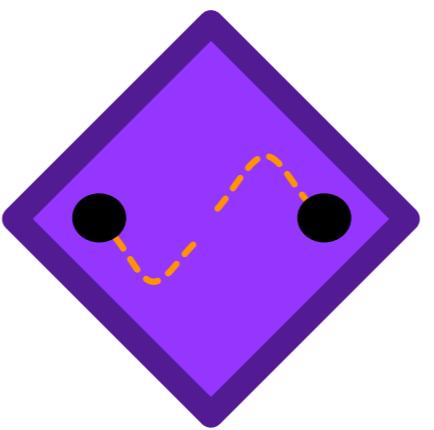
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we
poker





Volatile Connections



Easy API!

```
ConnectionInfo clci =  
CommLib.discover(PokerServer.class);
```

```
String args =  
    new String[] { address, port, "Texas Hold'em" };  
ConnectionInfo clci =  
    new ConnectionInfo(PokerServer.class,  
                       CommLib.export(clci));
```