# Sync scenarios

#### Two-party sync

- Problem: Two "work" phone numbers and each side changes one of them.
  - Solution: PID for each phone number, each side knows which one changed, updates both of them.
- Problem: Each side adds a new "work" phone number, PID=5; we want to keep both.
  - Solution: We each have to keep track of what we've added, agree on the PIDs for both of them.

## "Remote" sync

- Problem: You send me a vCard, but I've modified my copy of it for my own purposes.
  Then you send me a new vCard, changing one of your "work" phone numbers.
  - Solution: PID allows me to integrate your change into my copy of your vCard.

## Triangle sync

• Problem: A syncs with B and C. All three cards are now the same. B and C each add a new (different) "work" phone number, numbered "PID=3". A syncs again with B and gets a new "PID=3". A syncs again with C and now they each have different "PID=3" phone numbers. A changes its "PID=3" to "PID=4". When A next syncs with B, what happens?

#### Triangle sync

- Solution (Current): Use comma-separated PIDs, such that next time we sync, we can see what the old PID was. "PID=4,3"
- Additional problem: What if "triangle" sync becomes "square" (pyramid?) sync?

#### Triangle sync

Solution: CLIENTPIDMAP

**BEGIN:VCARD** 

VERSION:4.0

UID:urn:uuid:77a01597-0603-40f3-8138-36deca8618da

FN:Jane Doe

TEL;PID=1;TYPE=home:tel:+1-800-555-5678

TEL;PID=**4.0,3.1**;TYPE=home:tel:+33-01-23-45-67

EMAIL;PID=1:jdoe@example.com

EMAIL;PID=5:fred.smithdoe@example.com

IMPP;TYPE=personal,pref:xmpp:jdoe@example.com

CLIENTPIDMAP:0:f0iwuf904uf-898-jhwf-2idjshf

CLIENTPIDMAP:1:34tuhergh-347w8yur-jfhwejh

**END:VCARD**