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-jfhwejhb
END:VCARD