interaction design

interaction design

User-experience design

Information architecture

Communication design

Interaction design

Industrial design

User-interface engineering

Human factors

Usability engineering

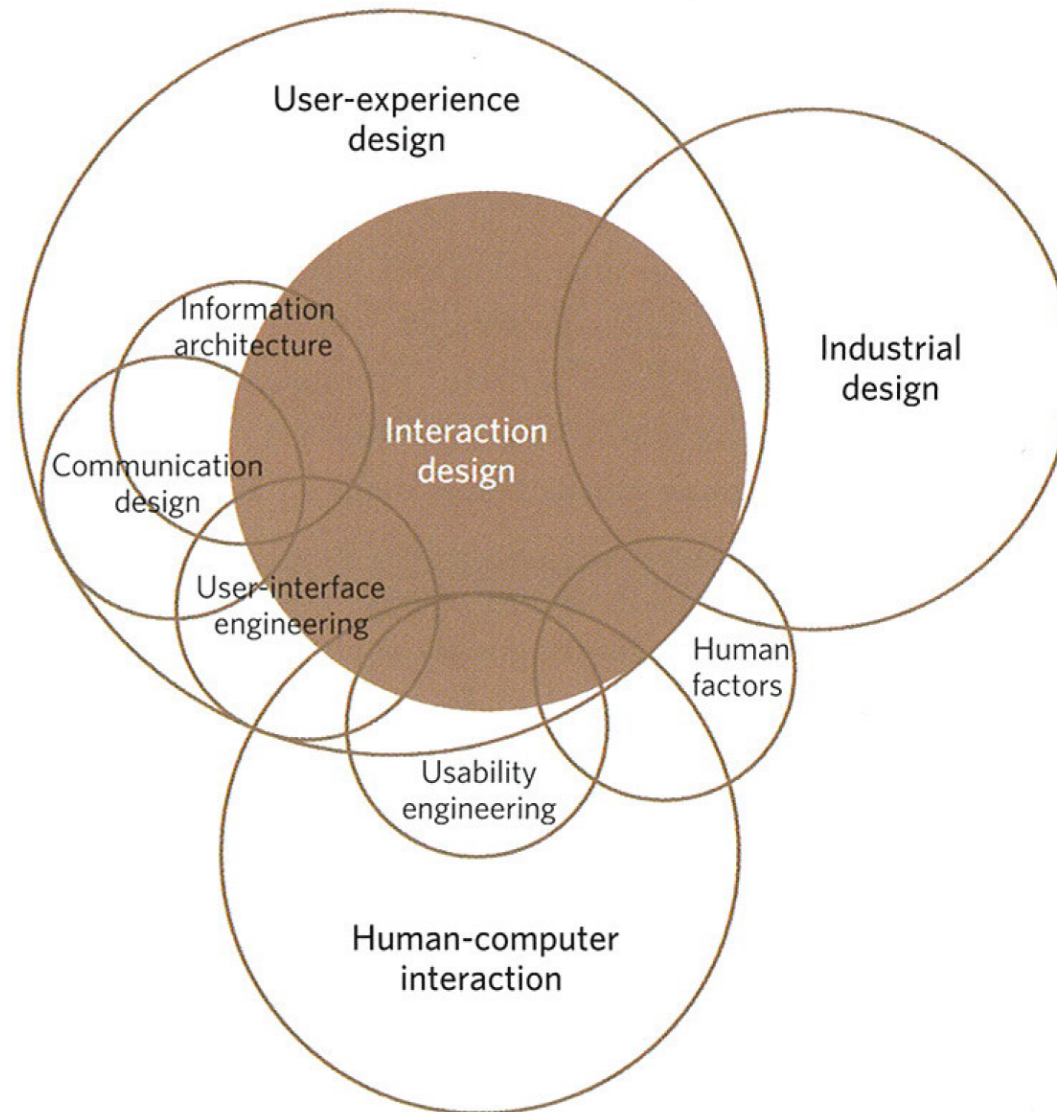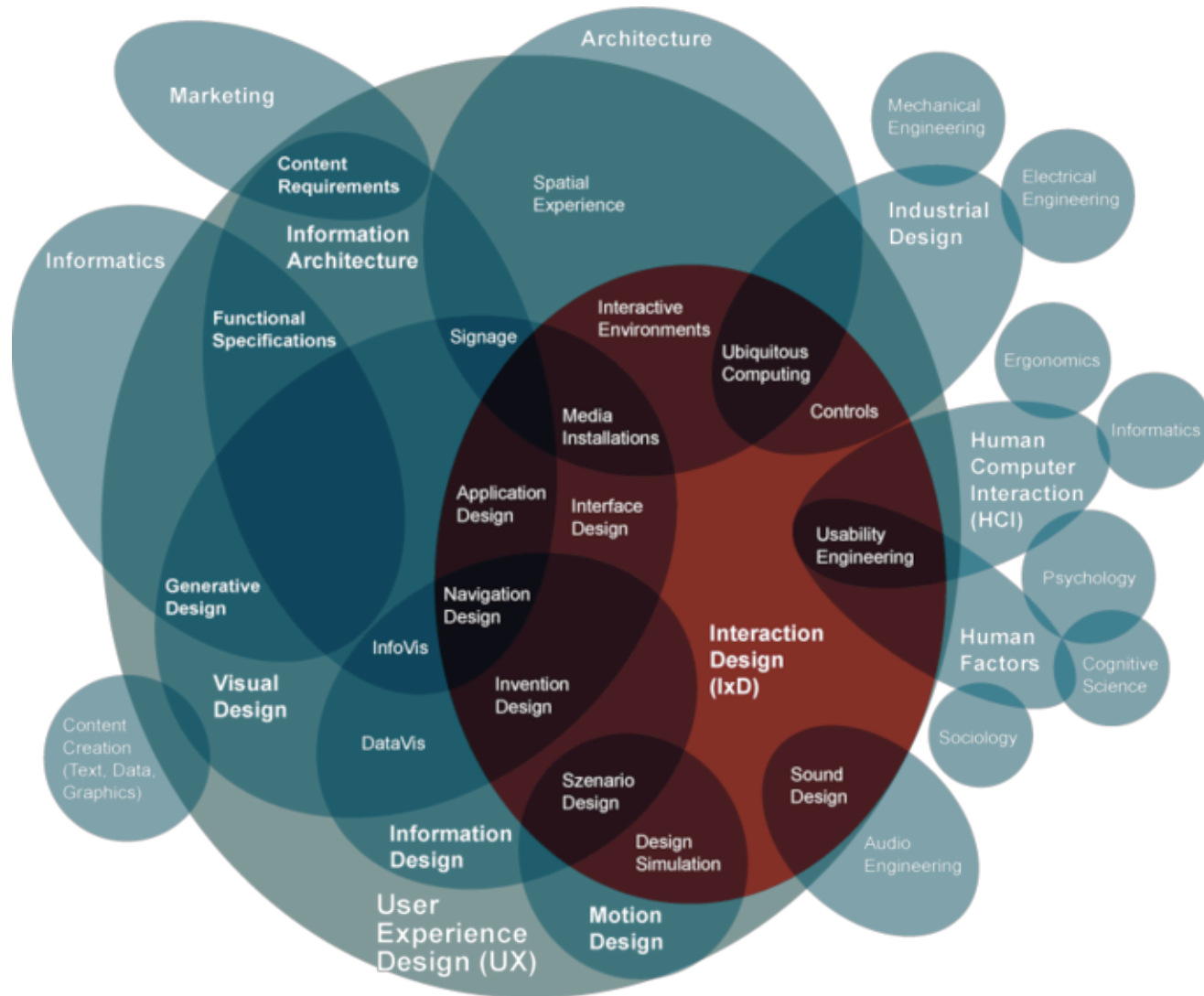Human-computer interaction

interaction design

Copyright :envis precisely (2009)
based on »The Disciplines of User Experience« by Dan Saffer (2008)
www.kickerstudio.com/blog/2008/12/the-disciplines-of-user-experience

interaction design > interface design

Modeling

Concept model – at a high level, how does your solution solve your users' needs?

Interaction Framework – begins to describe how users will interact with your solution.

Structure…Flow…Process (how do the pieces begin to fit together?)

Design at the system level

aka "Interaction Design"

Affordances (what does this button do? What is its purpose?)

Design at the screen level

aka "Interface Design"

modeling

modeling: concept models

How do users think about your system?

What are the activities that they can do?

What are the different types of users that will use your system?

What are the different modes in which they might use it?

What are the different phases that they might associate with your system?

How is it different than what they used before?

Is there a familiar metaphor that will help users understand your system?

modeling: interaction framework

What should your system do?

Functionality should map to goals
Life Goals – beyond the system, but help explain why trying to accomplish end goals
Experience Goals – how someone wants to feel while using the product
End Goals – outcomes users expect from using the system
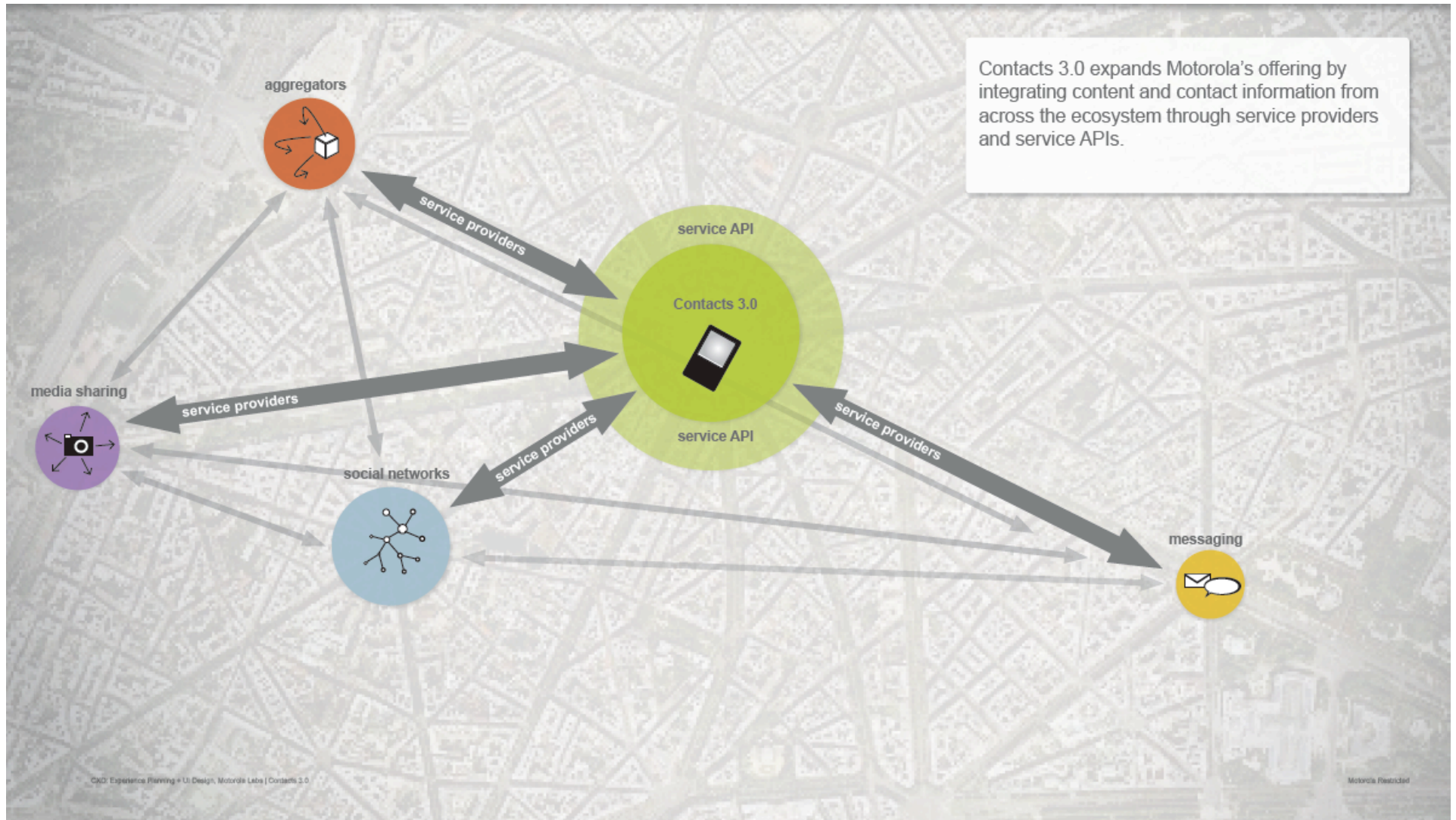
How should it work?

Cooper's Interaction Framework
1. What is the form factor and input methods?
2. What are the different views?
3. What are the functional and data elements? (basically, parts of a larger key path)
4. What are the functional groups and hierarchy? (sequence, groupings of containers, functionality – based on form
   factor and input methods)
5. What does the interaction framework begin to look like?
6. What are the key path scenarios? (primary actions and pathways through the system, e.g. viewing and composing emails)
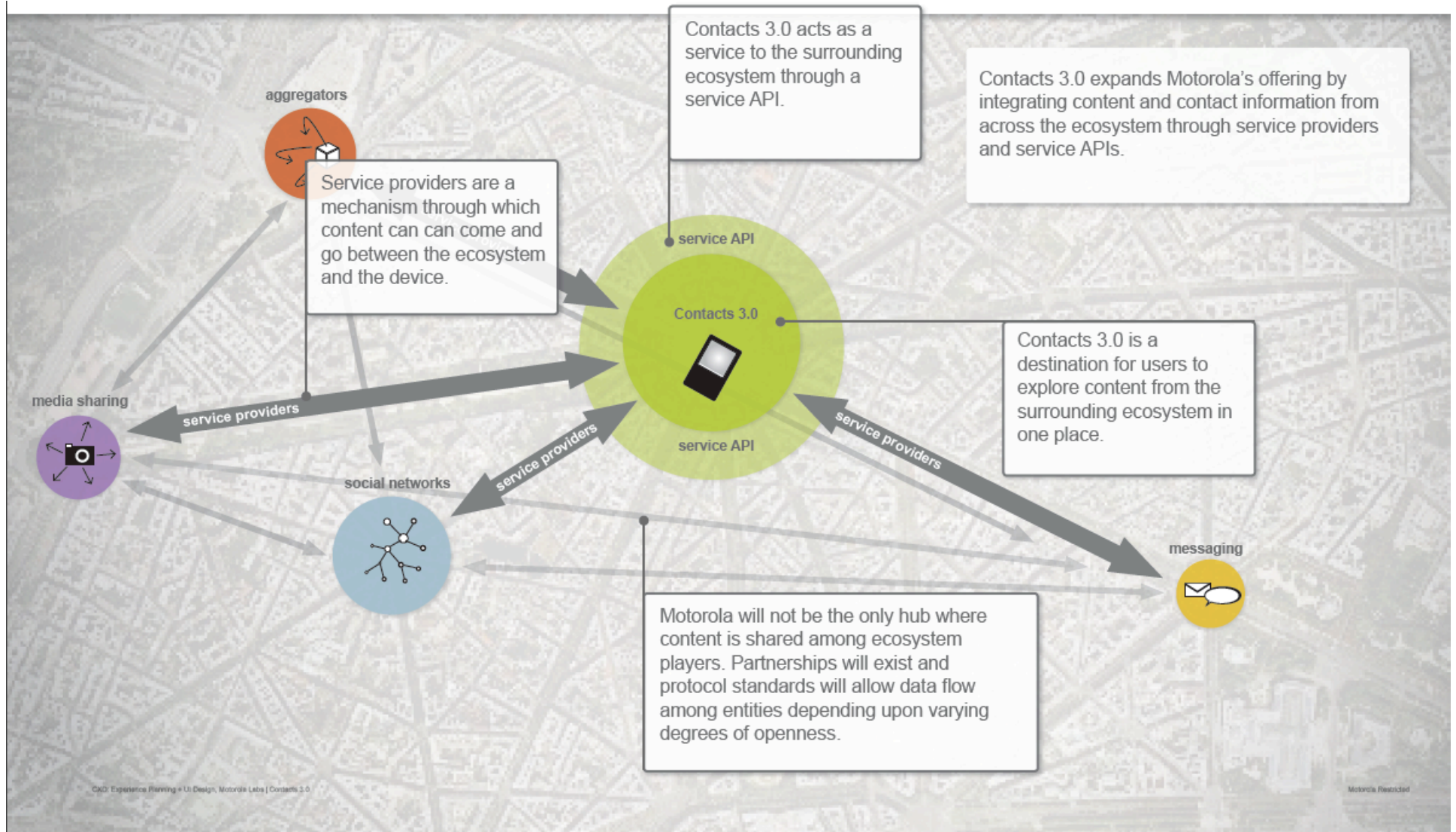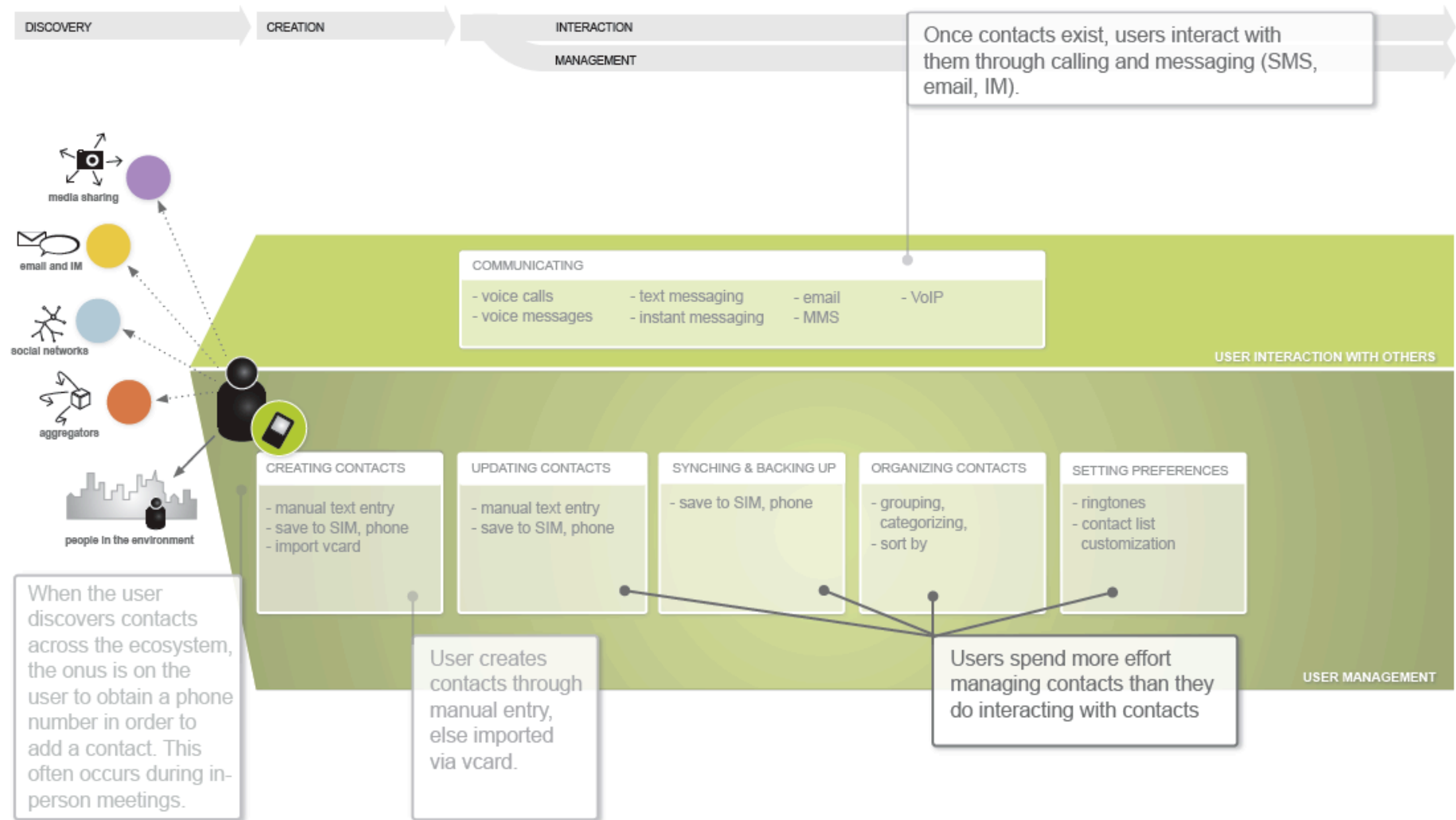
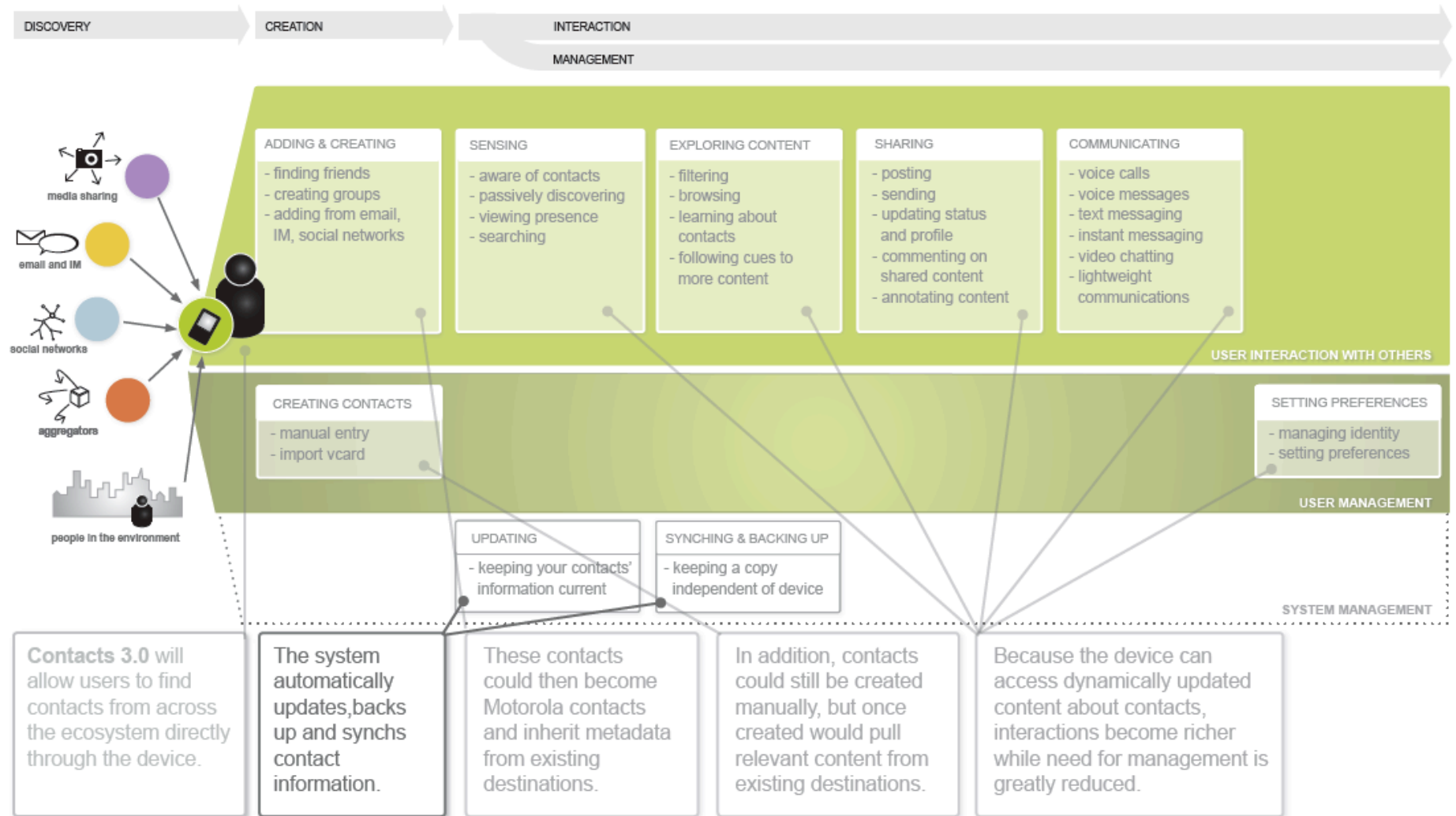# modeling: using metaphors

modeling: using metaphors

Contacts 3.0 expands Motorola's offering by integrating content and contact information from across the ecosystem through service providers and service APIs.

modeling: using metaphors

modeling: before + after

DISCOVERY	CREATION	INTERACTION
		MANAGEMENT

Once contacts exist, users interact with them through calling and messaging (SMS, email, IM).

media sharing

email and IM

social networks

aggregators

people in the environment

COMMUNICATING

- voice calls
- voice messages
- text messaging
- instant messaging
- email
- MMS
- VoIP

USER INTERACTION WITH OTHERS

CREATING CONTACTS

- manual text entry
- save to SIM, phone
- import vcard

UPDATING CONTACTS

- manual text entry
- save to SIM, phone

SYNCHING & BACKING UP

- save to SIM, phone

ORGANIZING CONTACTS

- grouping, categorizing,
- sort by

SETTING PREFERENCES

- ringtones
- contact list customization

When the user discovers contacts across the ecosystem, the onus is on the user to obtain a phone number in order to add a contact. This often occurs during in-person meetings.

User creates contacts through manual entry, else imported via vcard.

Users spend more effort managing contacts than they do interacting with contacts

USER MANAGEMENT

CXD: Experience Planning + UI Design, Motorola Labs | Contacts 3.0

Motorola Restricted

modeling: before + after

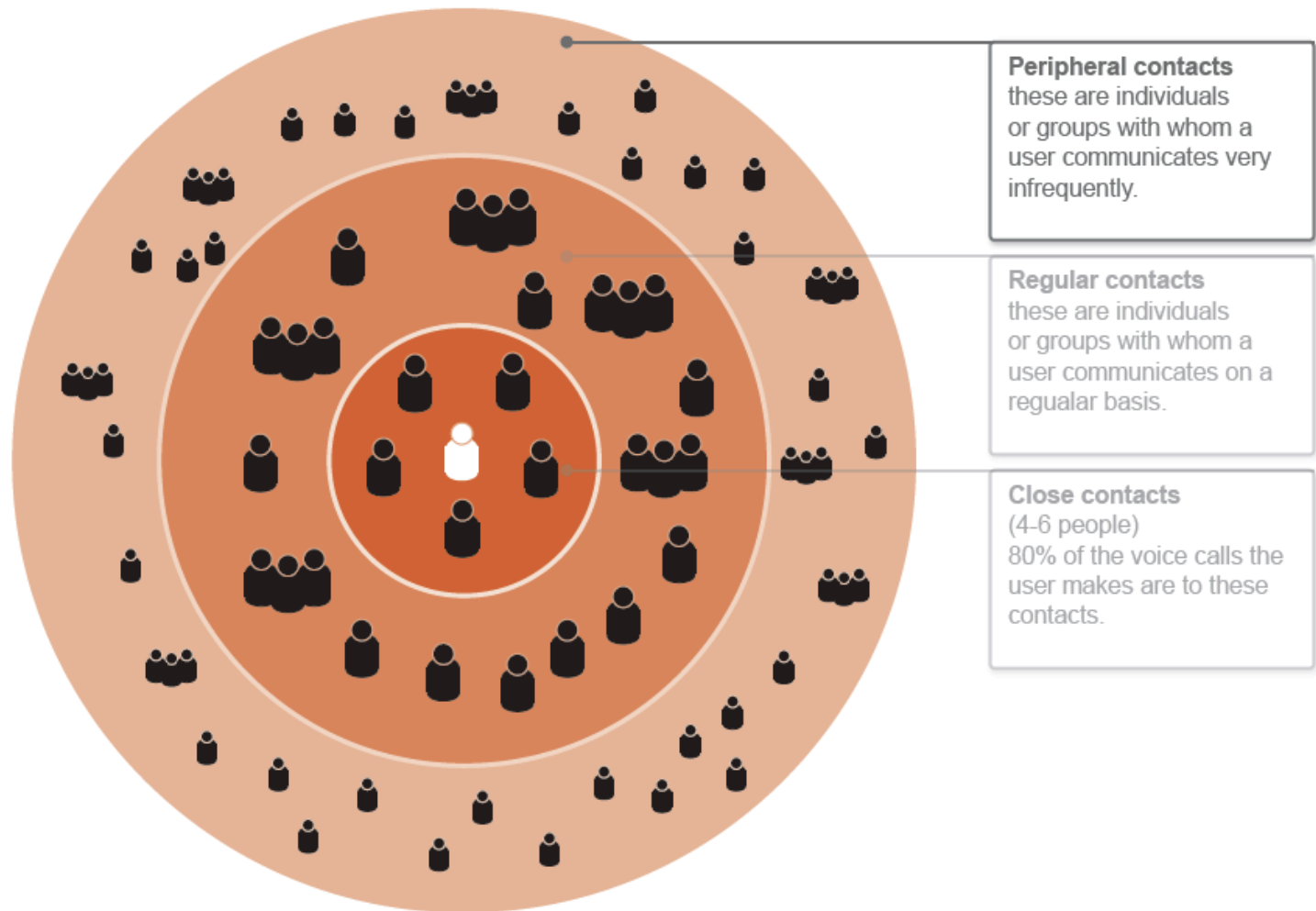| DISCOVERY	CREATION	INTERACTION
		MANAGEMENT

media sharing
email and IM
social networks
aggregators
people in the environment

ADDING & CREATING
- finding friends
- creating groups
- adding from email, IM, social networks

SENSING
- aware of contacts
- passively discovering
- viewing presence
- searching

EXPLORING CONTENT
- filtering
- browsing
- learning about contacts
- following cues to more content

SHARING
- posting
- sending
- updating status and profile
- commenting on shared content
- annotating content

COMMUNICATING
- voice calls
- voice messages
- text messaging
- instant messaging
- video chatting
- lightweight communications

USER INTERACTION WITH OTHERS

CREATING CONTACTS
- manual entry
- import vcard

SETTING PREFERENCES
- managing identity
- setting preferences

USER MANAGEMENT

UPDATING
- keeping your contacts' information current

SYNCHING & BACKING UP
- keeping a copy independent of device

SYSTEM MANAGEMENT

Contacts 3.0 will allow users to find contacts from across the ecosystem directly through the device.

The system automatically updates, backs up and synchs contact information.

These contacts could then become Motorola contacts and inherit metadata from existing destinations.

In addition, contacts could still be created manually, but once created would pull relevant content from existing destinations.

Because the device can access dynamically updated content about contacts, interactions become richer while need for management is greatly reduced.

CXD: Experience Planning + UI Design, Motorola Labs | Contacts 3.0   Motorola Restricted

modeling: mental models

User Mental Model
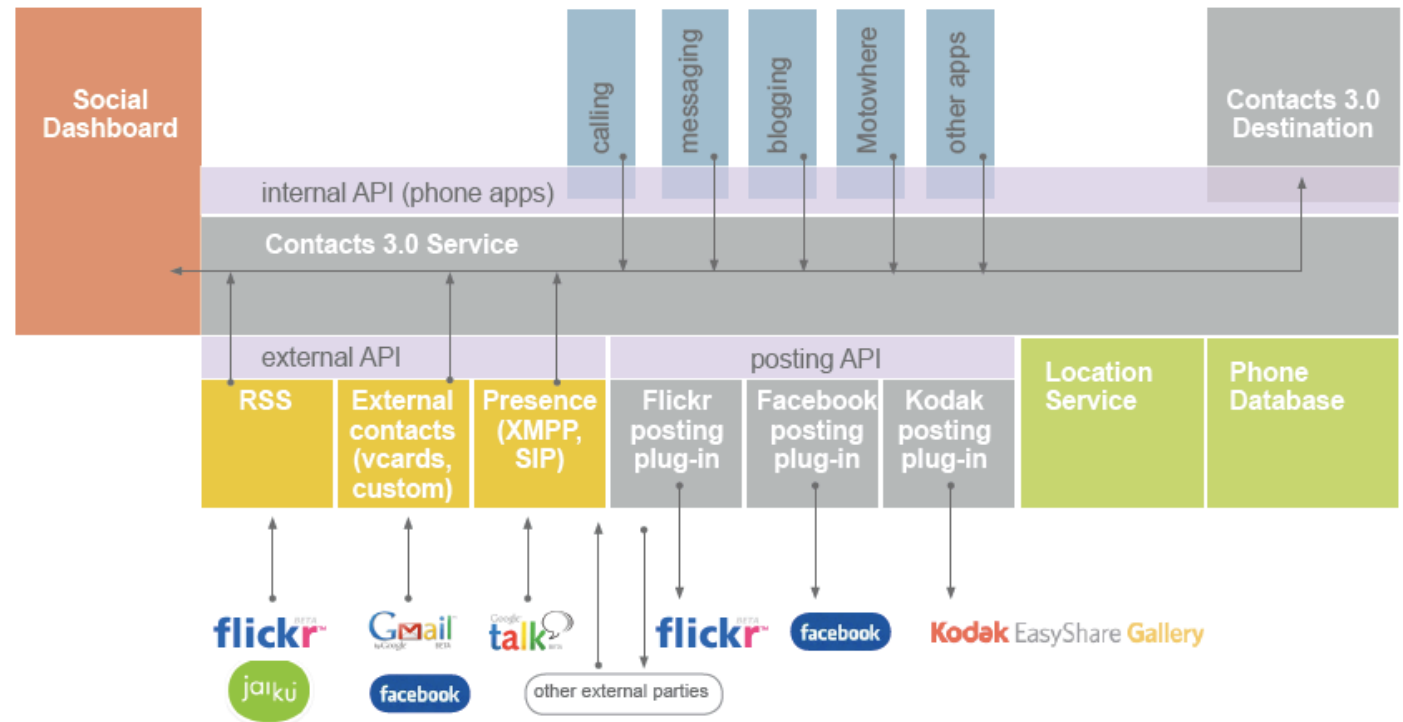
> Close contacts
> Regular contacts
> Peripheral contacts

Peripheral contacts
these are individuals or groups with whom a user communicates very infrequently.

Regular contacts
these are individuals or groups with whom a user communicates on a regualar basis.

Close contacts
(4-6 people)
80% of the voice calls the user makes are to these contacts.

modeling: system diagrams

Software Architecture: Destination *and* Service

No more silo-ed applications

structure…flow…process

structure…flow…process: user cases + user flows

Developing the structure of the system

Its not a linear process – iterate back and forth between user flows + wireframes

Showing user experience flows vs system/business flows

Flows demonstrate users movement through time – how the user begins,
ends and the clearly marked path that they take

Demonstrating cause + effect

Consistency is key in diagramming systems – there is no "right" visual language

Visual vocabulary – borrowing and adapting to make it your own

structure…flow…process: use cases

Use Case Catalog

Click here to access this document on Compass.

Key
C = Core
I = Important
N = Nice to have

Communicating	Priority
Call a Contact	C
Send Message (or reply to) a Contact (SMS/MMS)	C
Send Message a Group (SMS/MMS)	C
Email a Contact	I
Email a Group	I
Send Lightweight Communication to Contact	N
Send Lightweight Communication to Group	N
Instant Message a Contact	N
Instant Message a Group	N
Send Voice note to a Contact	N
Send voice note to a Group	N
Send Message to a Contact through an online service (i.e. Facebook)	C
Post on someone's Wall on Facebook (or equivalent for another Service)	C
Request info from a contact (Location, Contact Info, etc.)	I
Comment on Contact's media	C

Learning	
View Contact's Status Message from online services (i.e. Facebook)	C
View Contact's Mood	N
View Contact's exact Location (cross-streets, address, dot on map)	I
View Contact's vague Location (City, State)	I
View Contact's user-defined Location (home, store, tag, etc.)	I
View Contact's time zone	I
View Contact's distance from me (exact - .2 mi)	I
View Contact's distance from me (general - same city, near, etc.)	I
View Contact's Motion Presence (moving/not moving; duration)	I
View Contact's preferred communication method	I
View Contacts Music Status	I
View Contact's current/recent photos	C
View Contact's comment on a photo	
View Contact's recent posts/online activities (short: eg. Twitter)	C
View Contact's recent posts/online activities (long: eg. Blog)	C
View Contact's comment on a Blog post	
View Contact's Facebook Profile update	
View Communication History with Contact (Recent Calls, etc.)	C
View Business specific data (Hours, Locations, etc.)	I
View Contact's IM Status now	I
View Contact's Calendar availability	I
View Contact's Calendar	N
View Contact's contacts, network	N
View Contact's online profiles (Facebook, Myspace, LinkedIn)	C
View Contact's weather where they are (attach Widget to a Contact?)	I
View Contact's Ring Profile (Ring, Vibrate, etc.)	N
View basic Contact Information (Phone number, Email, IM, etc.)	C

Sharing	
(From My info section on the Social Dashboard)	
Set my Status (make avail. OR push)	C
Set my photo (to appear in others' Contact lists)	C
Set my Mood (make avail. OR push)	N
Share (make avail. OR push) my exact Location	I
Share (make avail. OR push) my user-generated Location	I
Share (make avail.) my Motion Presence	I
Share (make avail. OR push) my vague Location (City, State)	I
Share (make avail. OR push) my Time Zone	I
Share (make avail. OR push) my Calendar	I
Share (manage permissions for) my current media (what I'm watching, Blogs, Music?)	C
Share my preferred communication method	N
Share (make avail.) my IM Status	I
Share my online identities (url to any online profiles that a user has)	C
Share myself as a Contact (my Vcard)	I
Share my Contacts/my Network	
Make an introduction to a Contact (like LinkedIn) (sending Contact Info (like sending Vcard))	I
Send content to a contact (link to media, Blogpost, etc.)	C
Send content to a group (link to media, Blogpost, etc.)	C
Send Meeting/Event invite	I
Share business-specific data (if Contact is a business)	N

Searching/Finding/Browsing	Priority
Search for a Contact on-Device	C
Search for a Contact off-Device	
Search by Tag	
Browse Contacts	C
Filter/sort Contacts Main by:	C
Tag	C
Location	I
Now (or recently) Playing [media]	I
Recency of communication	C
Recent Updates	I
Calendar (Upcoming)	
Franchise Specific activity (Now playing media)	
Group	
Favorites (suggested by frequency)	C
Filter/sort Social Dashboard Content (Device + Social/Web updates) by:	C
Group (from Contacts App)	C
Media Type (off-Device)	C
Recency (time-based by default)	C
Communication Type (on-Device: Calls, Messages)	C
Web (off-Device)	
Phone (all on-Device)	
Web Service	C

Creating	
Create a Group (from Tags)	C
Create a Group from a shared group (a Contact send/shares the Group with another member)	C
Create a Group from a Message (sending to multiple recipients)	C
Publish Group (notify Contact that they are in a Group and give option to add group)	I
Create a Group from scratch	C
Create a Contact from Web Service (custom API for Facebook, etc.)	C
Create a Contact from another Device (including "kissing" and tagging location)	N
Create a Contact from scratch	C
Create a Contact from Structured Data	C
Request an Introduction to a Contact (requesting Contact info for another person)	I
Rate Contacts (make Favorite)	N
Block a Contact	C
Block particular feeds for a Contact	C
Block a Group	C
Disband a Group	C

Syncing/Backing up/Storing	
Sync/update Contacts with Web Service	C
Sync/update Contacts with another Device (PC or second phone)	I
Save Contacts to SIM	C
Save Contacts to Phone	C
Save Contacts to Service (NGP - back-up?; carrier?; 3rd party?)	I
Customize/set preferences for Contacts Detail	C
Customize/set preferences for Contacts Main	C

| Setting up	
Import Contacts from Online Service	C
Reconcile/merge Contacts across information sources (matching John on Facebook to John in Contact List)	C
Set which content sources I want from a given Contact	I
Receive notification that a Contact has edited their Contact info and there is a conflict (following Auto-Sync)	I
Respond to conflict alerts following automatic sync/updates with online services (in background)	I
Set sync (Web services) option to manual	C
Configure Automatic Sync	
Choose who to add from a given Service	C

8

structure…flow…process: use cases

| Identifier	Use Case	Priority		
Communicating				
A	Call a Contact	C	x	x
B	Text Message (or reply to) a Contact (SMS/MMS)	C	x	x
C	Text Message a Group (SMS/MMS)	C	x	x
D	Email a Contact	I	x	x
E	Email a Group	I	x	x
F	Send Lightweight Communication to Contact	N	x	x
G	Send Lightweight Communication to Group	N	x	x
H	Instant Message a Contact	I	x	x
I	Start a Group chat from Group Detail	I		x
J	Send voice note to a Contact	N		x
K	Send voice note to a Group	N		x
L	Message a Contact on online service (i.e. Facebook)	C	x	x
M	Communicate via service specific methods (i.e. Post on someone's wall on Facebook)	C	x	x
P	Request information from a Contact (exact location; duration, contact info)	I	x	x
	Request information from a Contact (Introduction to another Contact)			x
Q		C	x	x

structure…flow…process: organizing info + user flows

Information architecture

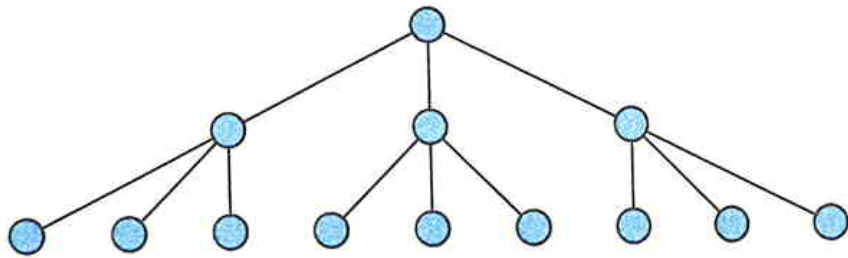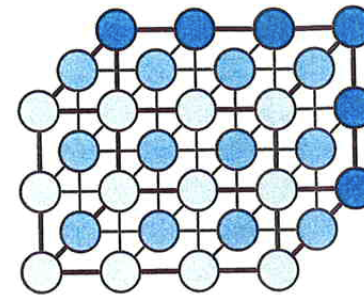Especially important for heavy content (more at the interface level)
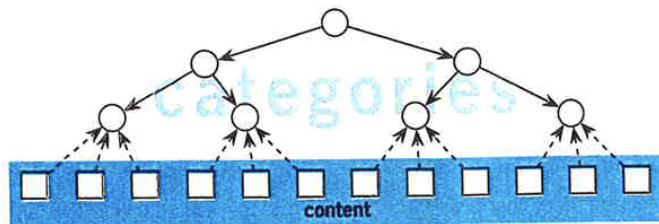
top down
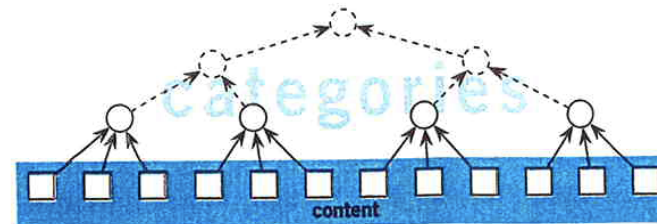
bottom up
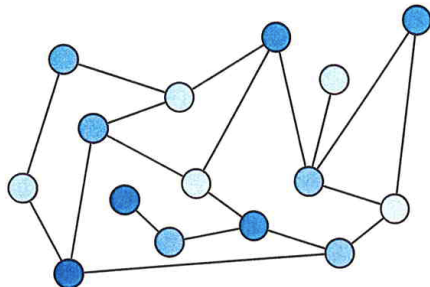
structure…flow…process: organizing info + user flows

Architectural Approaches

Hierarchical parent and child relationships

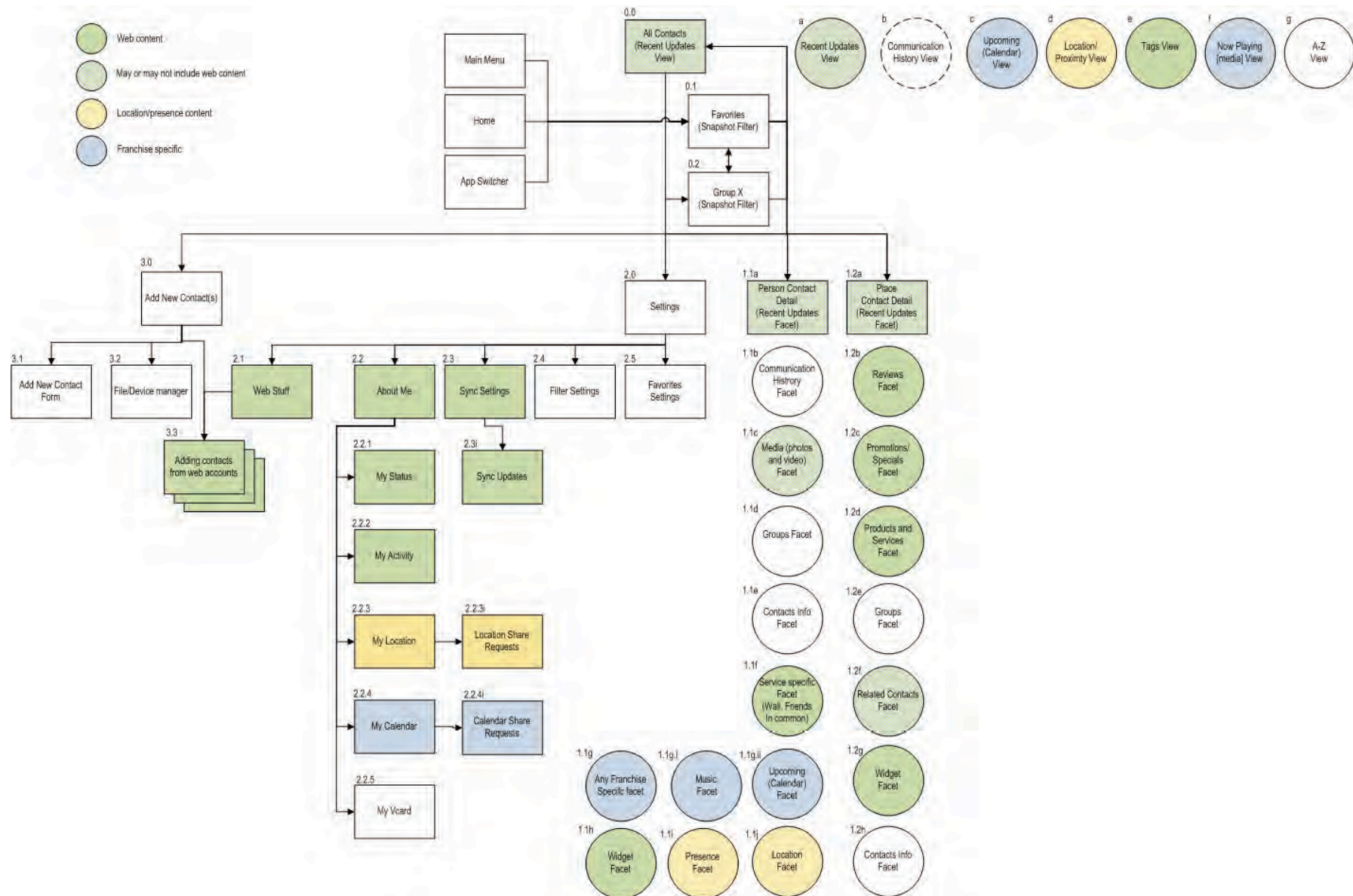**Matrix** 2 dimensions (sometimes 3?)
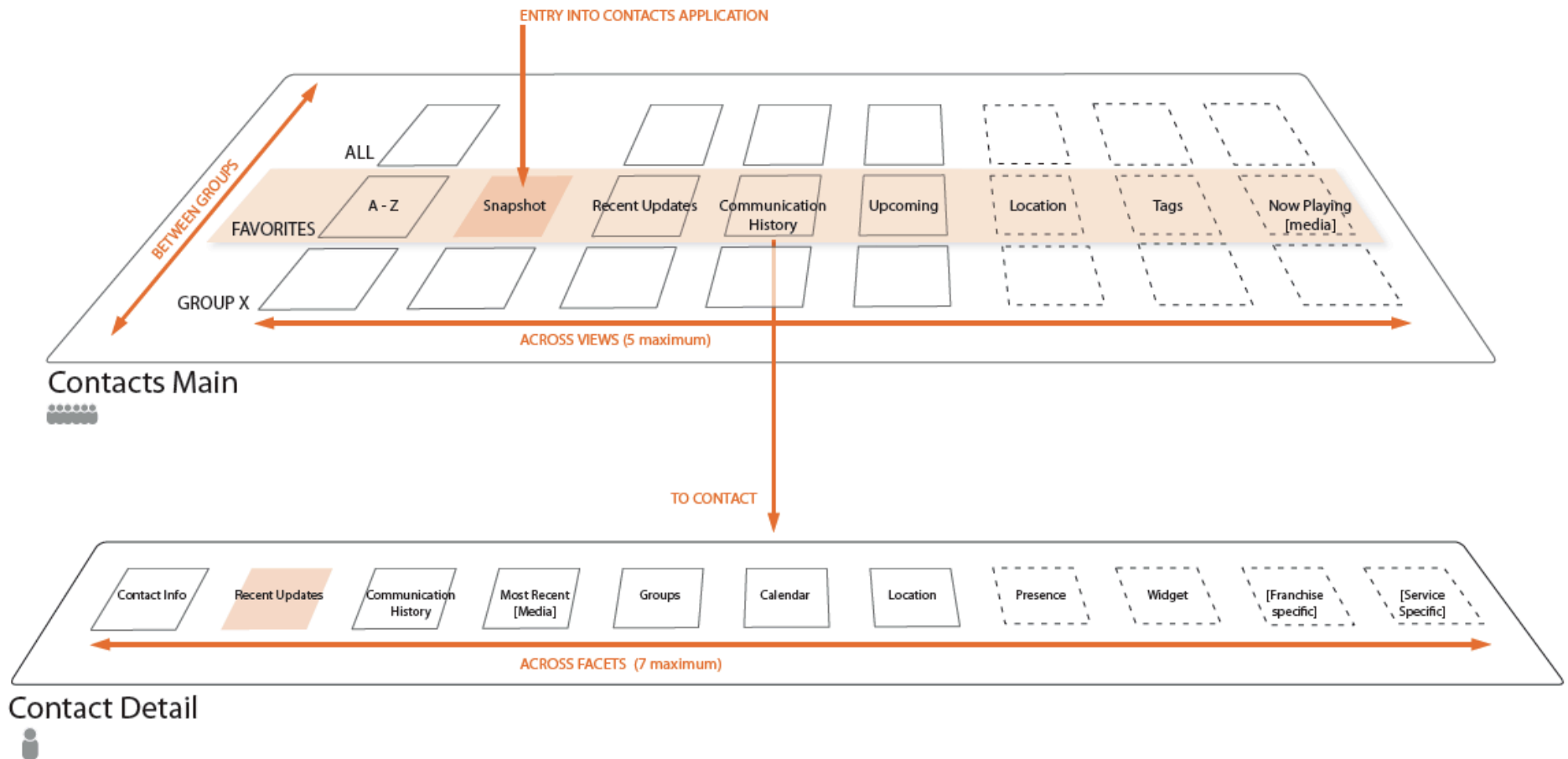

Organic no consistent pattern

Sequential step by step

structure…flow…process: information architecture

structure…flow…process: interaction model

affordances

affordances/interface design: interface design principles

Wodtke's 8 principles

1. Design for way-finding – where you are, where you can go, how to get there
2. Set expectations and provide feedback
3. Ergonomics design
4. Be consistent and consider standards
5. Provide error support – prevent, protect, and inform
6. Rely on recognition rather than recall
7. Provide for people of varying skill levels- intermediate is fine
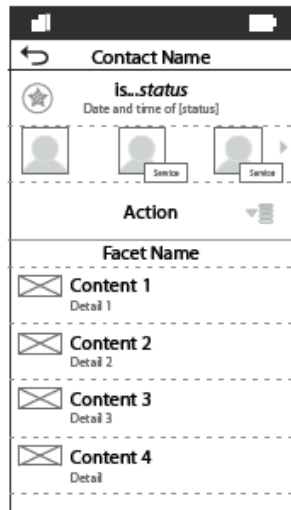8. Provide meaningful and contextual help and documentation

Blueprints (or user flows and wireframes) are just good thinking written down

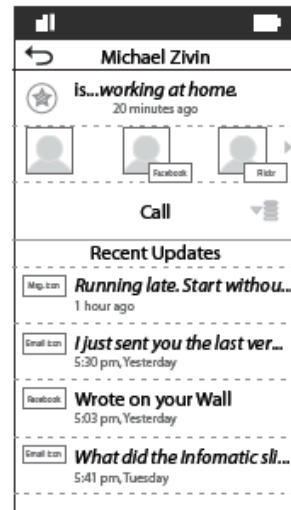Beware of easy-to-get, easy-to-remember answers.

affordances/interface design: screens

Anatomy of the Contact Detail screen (for a person – 1/6)

1.1 Person Contact Detail (*Generic*)
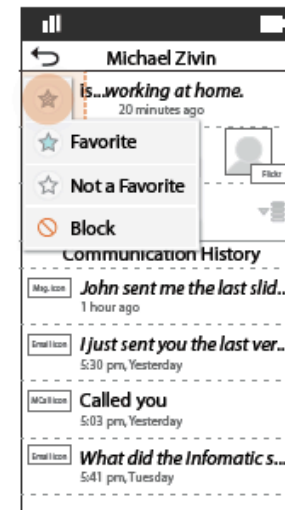

1.1a Person Contact Detail (*Example*)

Basic

The next six pages will step you through the Contact Detail screen, explaining necessary widgets and interactions.

1.1b Person Contact Detail, Favor/Block Dropdown

1.1b Person Contact Detail + Status touch area

Section 1:
Favorite, Block, and Status

Favorite/Block functionality

Facebook Status

⭐ In this example, the contact has been nominated by the system as a "suggested Favorite" (striped star indicates their nomination). Go to *Groups Settings* (2.4ll) for more on how a contact becomes nominated a Favorite.

⭐ If the selects nominates the friend as a Favorite, they will appear in the Contacts Main "Favorite list".

⭐ If the "Not a Favorite" option is picked, the user goes back to being just an average Yoo-hoo.

🚫 If the block option is picked, the Contact profile will grey out and only this dropdown will be accessible to the user (to Unblock).

The icon of whichever option is picked, will remain on-screen to show what's active.

The Favor/Block Dropdown will time-out after a few seconds of inactivity. Otherwise, closed by pressing the top of the menu (top star).

The "Blocked" strategy requires proper investigation and design solution (see the Next Steps section).

This area contains the latest update to the Contact's status (coming from Facebook, or other services that provide live presence/ status information). If the Contact does not have an account with one of these services, this space will display the last contact/communication (sent or received) with that Contact or their last social update (Web activity).

19

affordances/interface design: screens

Anatomy of the Contact Detail screen (for a person - 2/6)

Section 2:
Account
Profile
Images

1.1a Person Contact Detail

Michael Zivin
is...working from home.
20 minutes ago

Facebook   Flickr

Call

Recent Updates

Msg. Icon *Running late. Start withou...*
1 hour ago

Email Icon *I just sent you the last ver...*
5:30 pm, Yesterday

Facebook **Wrote on your Wall**
5:03 pm, Yesterday

Email Icon *What did the Infomatic sli...*
5:41 pm, Tuesday

1.1f Person Contact Detail

Michael Zivin
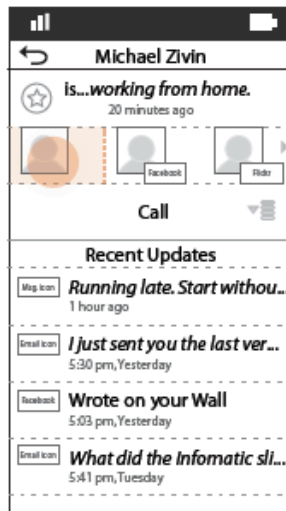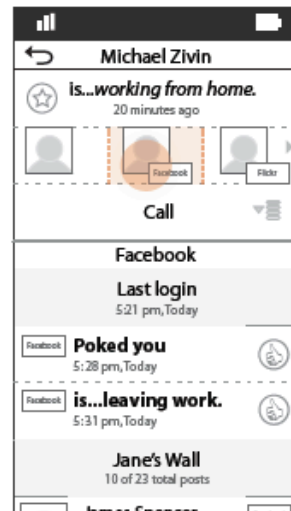is...working from home.
20 minutes ago

Facebook   Flickr

Call

Facebook

Last login
5:21 pm, Today

Facebook **Poked you**
5:28 pm, Today

Facebook **is...leaving work.**
5:31 pm, Today

Jane's Wall
10 of 23 total posts

James Spencer

Find Contact's [x] Account

The first photo in the row is the default profile photo for that Contact (what appears with incoming communication, such as the photo you see when Michael Zivin calls).

When the first photo in the row pressed the Recent Updates Facet (1.1a default) is displayed.

Rule: The profile image of the first service added to the Contact automatically becomes the default image for that Contact.
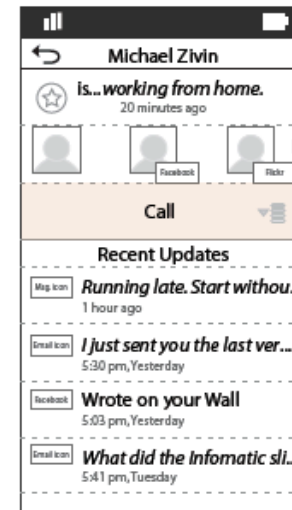
The default photo can be changed via the Contact Information Facet (1.1e) or the Media Facet (1.1c) within the Contact Detail. This may seem redundant, but the reason for both is to keep what's familiar while providing an alternative that just makes more sense.

Account Profile

Users can scroll horizontally through multiple accounts if more than two accounts are linked to the contact.

When pressed, the Facet for that Service becomes visible (i.e. when the Facebook Profile Photo is pressed, the Facebook Facet (1.1f) appears).

1.1a Person Contact Detail

Michael Zivin
is...working from home.
20 minutes ago

Facebook   Flickr

Call

Recent Updates

Msg. Icon *Running late. Start withou...*
1 hour ago

Email Icon *I just sent you the last ver...*
5:30 pm, Yesterday

Facebook **Wrote on your Wall**
5:03 pm, Yesterday

Email Icon *What did the Infomatic sli...*
5:41 pm, Tuesday

1.1a Person Contact Detail, Action Dropdown

Contact Name
is...working from home.
20 minutes ago

Facebook   Flickr

Call
Last Call: 2:43 pm, Monday

Send Message
Last Msg: 3:31 pm, Wednesday

Write on Wall
Last post: January 31, 2008

Edit Contact
Last edit: February 3, 2008

Manage [Name]'s Accounts
Edited on March 21, 2008
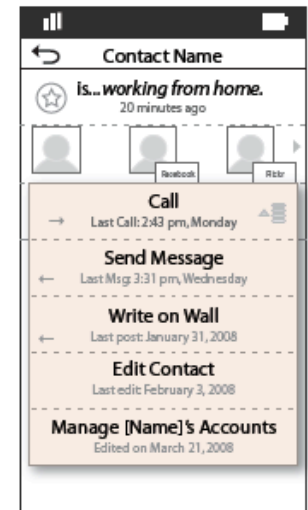
Section 3:
Action
Dropdown

Action line item

If a phone number is stored for the Contact, the Action line item will be 'Call'. If pressed a call will be placed to the Contact in view.

If there is no phone # for the Contact but the user has an email address or is a friend on Facebook, the Action line item will be 'Send Message.'

Action Dropdown

The Action Dropdown is lightly dynamic. The first option will always be 'Call' (if a # is stored) or 'Send Message,' but the remaining options will vary based on the facet that's available.

See the Action Dropdown Detail section of this document for the rules around what options will appear, when.

20

affordances/interface design: screens

Anatomy of the Contact Detail screen (for a person - 3/6)

What is a Facet?

Facets are similar to Views. They share a common interaction (swiping), and information sets (Social Updates, Location, etc.). What makes a Facet different is that it is specific to a Contact, displaying content for one person only. A Facet is also visually unique in that it is situated on the bottom half of the screen. Each Facet contains a dynamic and focused set of information about a Contact that can come from local and/or Web sources. For example, the Communication History Facet is a log of all incoming communication from a Contact. This information is largely drawn on local on-device information and relies little on the Web. The Friends in Common Facet, on the other hand, is a list of Friends that the user and a Contact share on Facebook, is completely reliant on the web and the Facebook Service.

Facets are not to be confused with applications or lite-versions of applications. In some instances, such as the Calendar or Location Facet, the View may look similar to a device application, but it just provides a preview of information about a contact and does not replicate full functionality of the Calendar or Location application. It is possible to launch the full Calendar or Location application from those facets.

Basic Rules: 1. Facets should have a title at the top. 2. Facets are scrollable. 3. Every Contact Detail can have a maximum of 7 facets. 4. Facets are sticky. 5. Facets affect the what options are available in the Action Dropdown (see the Action Dropdown Detail for more information). Default facets (Standard Contact): Recent Updates, Communication History, Media, Groups, and Contact Information

Connected facets (Web Contact): Main [Service] Facet (1 per service), Additional [Service] facets and Widgets

Future facets (Eventual Contact): Calendar (Shared), Location and Presence

Section 4:
Facets

1.1 Person Contact Detail (*Generic*)

1.1a Person Contact Detail
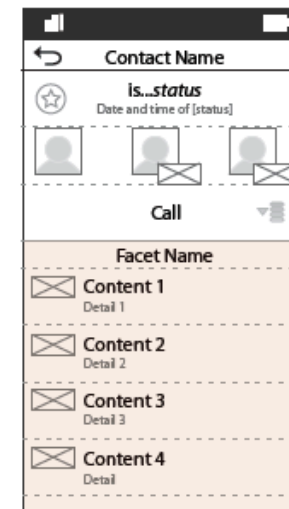
Facet Basics

The following facets are covered in this design:
- Recent Updates (All web and device activity)
- Communication History
- Media
- Groups
- Calendar
- Location
- Presence
- Widgets
- Franchise specific
- Main [Service] Facet
- Additional [Service] Facet
  (i.e. Friends in common - Facebook)
- Contact Information
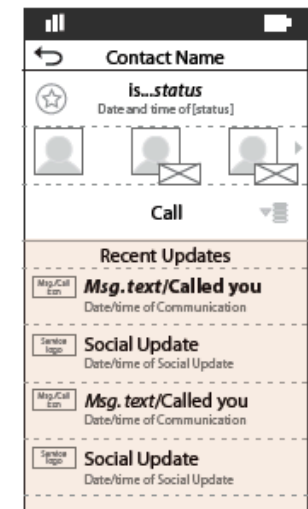
Recent Updates Facet

The Recent Updates Facet logs all incoming Web and device activity. Updates that have not been viewed have bold titles. When the update has been viewed, it is not longer bolded.

The number of updates in this list will be determined by time or capacity.

21

affordances/interface design: screens

Anatomy of the Contact Detail screen (for a person – 4/6)

1.1b Person Contact Detail

Contact Name

is...*status*
Date and time of [status]

Call

Communication History

Msg/Call Icon | **Msg. text/Called you**
Date/time of Communication

Msg/Call Icon | **Msg. text/Called you**
Date/time of Communication

Msg/Call Icon | **Msg. text/Called you**
Date/time of Communication

Msg/Call Icon | **Msg. text/Called you**
Detail

Communication History Facet

Communication History includes all private one-to-one communication, such as Calls, Messages (Email, SMS/MMS, Facebook Messages), IM Conversations (+ small group chats), etc. A Wall post, which is considered one-to-one is not included because the message/post is public. This list only includes incoming communication.

Communication History updates are always chronological, with the most recent at the top.

When an update is selected, a detail of that update is revealed (Content Detail).

1.1d Person Contact Detail

Contact Name

is...*status*
Date and time of [status]

Call

Groups (#)

Group Name 1 (#)
Contact N, Contact N, Contact N, C..

Group Name 2 (#)
Contact N, Contact N, Contact N, C..

Group Name 3 (#)
Contact N, Contact N, Contact N, C..

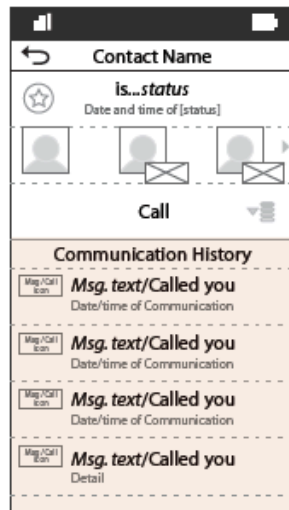Group Name 4 (#)
Contact N, Contact N, Contact N, C..

Groups

The groups facet includes groups that were created on the device and system suggested groups. This list does not contain groups from Facebook or other social networks. Group info. from social networks is used as metadata.

Regardless of whether or not a contact is in a group or is suggested by the system to be in a group, every contact will always have a Groups Facet.

1.1j Person Contact Detail

Contact Name

is...*status*
Date and time of [status]

Call

Location

22.3 miles apart
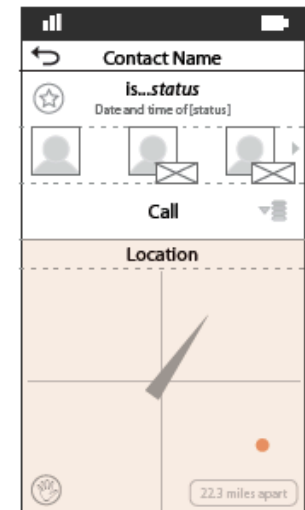
Location

Although this area has yet to be finalized, there are a lot of ideas floating around about how it might be approached.

In this concept the phone acts like a compass so that the user might face the other contact (directionally) and send lightweight comm. such as a wave. The users may be 22, one hundred or thousands of miles apart, but they may feel closer if they know that they are facing one another.

If user doesn't have permission to see contact's location, here they can request location permissions (2.2.3).

affordances/interface design: screens

Anatomy of the Contact Detail screen (for a person - 5/6)
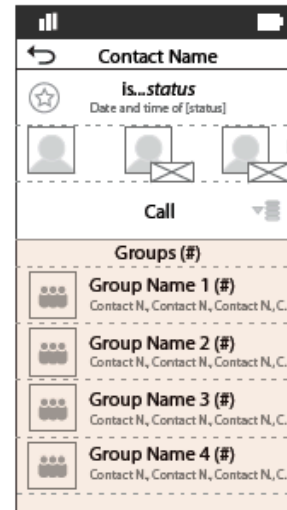
1.1l Person Contact Detail

Contact Name

is...*status*
Date and time of [status]

Call

Presence

Moving (25 min.)/Still

MySpace **Mood: Happy**
Date/time of Mood change

Profile: Ring
Date/time of switch

Presence

Presence Information is perhaps less useful burried with a Facet. What this design hopes to illustrate, however, is that each type of Presence has been considered. Whether or not all presence information should live in the "status" area is still up for debate.

1.1f Person Contact Detail

Contact Name

is...*status*
Date and time of [status]

Call

Service

✉ Content 1
Detail

✉ Content 2
Detail

✉ Content 3
Detail

✉ Content 4
date
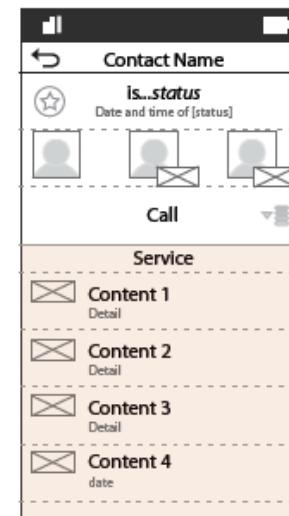
Main [Service] Facet

An example of a Service Specific Facet is the Facebook Facet. Once the user has linked the a native phone Contact to the Contact's Facebook identity, a Facebook Facet is automatically added to their Contact Detail.
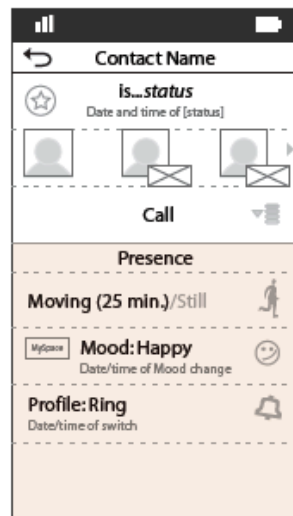
1.1f Person Contact Detail

Jane MacDonald

is...*leaving work.*
5:31 pm, Today

Facebook   Flickr

Send Message

Facebook

Last login
5:21 pm, Today

Facebook **Poked you**
5:28 pm, Today

Facebook **is...leaving work.**
5:31 pm, Today

Jane's Wall
10 of 23 total posts

James Spencer Facebook
12:21 pm, Today

Were you on the news last night? I could have sworn it was you!

Katie Hermish Facebook
5:13 pm, Yesterday

Can't wait! See you there! Oh! Don't forget to bring your hoober-skoober (j/k)!!!

Valerie Bloom Facebook
2:57 pm, Yesterday

Where are you guys going to meet up? I can't wait!!

James Peronis Facebook
2:57 pm, Yesterday

I wish I could go, but I need to work late tonight. I've been really busy all week.

affordances/interface design: screens

Anatomy of the Contact Detail screen (for a person - 6/6) he Person Contact Detail

affordances/interface design: screens + flows

Create a contact from scratch, person (1/2)

0.0a Contacts Main | All, Recent Updates

All (586)

Recent Updates

Amy Lee — 5 min ago — f wrote on Jane Hernandez's wall..

Fred Johnson — +2 hrs ago — f posted 13 new photos

Margo H. — +5 hrs ago — Called You

Billy H. — +9 hrs ago — "Hey what are you doing toni...

Peter Jenson — Yesterday — f commented on Jack Nicklaus' pho..

Peter Jenson — Tuesday — f commented on Jack Nicklaus' pho..

New Contact | Settings

3.0 New contact(s)

Create New Contact | Add from Web Account | Import from file

Place this new contact in

☐ Favorites
☐ Family
☐ Friends
☐ Work
☐ Places
☐ New Group

Next

3.0 New contact(s)

Create New Contact | Add from Web Account | Import from file

Place this new contact in

☐ Favorites
☑ Family
☐ Friends
☐ Work
☐ Places
☐ New Group

Next

3.1a.I New contact(s) | Create new contact form

Family

Add photo | First Name

Last Name

Phone number

Select... ▾   primary ⊙

Email address

Postal Address

Birthday

Select Ringtone ▾

Add New Field

☑ Find this contact on any of my registered web accounts

Preview accounts

Save

Media picker
Text Entry
Date picker pop-up
Greyed out if user has not registered any web accounts

3.1a.I New contact(s) | Create new contact form

Family

Add photo | Aaron

Jennings

833-564-1234

Mobile ▾   primary ⊙

New Phone number

Select... ▾   ○

Email address

Postal Address

Birthday

Innocent Man, Billy Joel ▾

Add New Field

☑ Find this contact on any of my registered web accounts

Preview accounts

Save

All List

From the All List, users access the New Contact and Settings buttons.

New Contact

Upon selecting New Contact, the user has 3 options (top): Create new contact (by default), Add from Web Account (see 3.2a) and Import from File, which would allow the user to import a csv file via a file manager. When in "Create New Contact" mode (above), the user is first prompted to categorize the contact by placing it in a group. This is not a forced action. The user can select 'Next' without choosing a group.

New Contact Form (right)

The New Contact Form presents a basic set of fields and the user can add fields as well. By default, a check box at the bottom is checked, indicating that the device will search for this contact on registed web accounts (see 2.1).

affordances/interface design: screens + flows

Create a contact from scratch, person (2/2)

3.1a.I Create new contact form

New contact(s)

- Family
- [Add photo] Aaron (required)
- Jennings
- 833-564-1234
- Mobile ⌄ primary ◉
- 447-567-9802
- Home ⌄ ○
- Email address
- Postal Address
- Birthday [Date picker pop-up]
- 🔔 Innocent Man, Billy Joel ⌄
- New Field
- ☑ Find this contact on any of my registered web accounts
- Preview accounts

Save

3.1a.II Create new contact, Confirmation and progress

New contact(s)

✓ Aaron Jennings has been saved as a contact

Checking web accounts for contacts named **Aaron Jennings** or phone numbers **833-564-1234, 447-567-9802**

56%

Cancel | Hide

Accounts Preview

Preview Accounts

Find this contact on my following accounts:

- ☑ Facebook
  Sam Adams
- ☑ Gmail
  SAdams06
- ☑ Linked In
  Sam Adams

[Greyed out if user has not registered any web accounts]

Close | Save

3.1a.III Create new contact, Matching results

New contact(s)

! Contacts matching **Aaron Jennings** or **833-564-1234, 447-567-9802** (2 results)

Facebook (1 result)

- ☑ Aaron Jennings
  Chicago, IL
  matches: Name and number

Gmail (1 result)

- ☑ Aaron Jennings
  ajennings04@hotmail.com
  matches: Name

Ignore | Merge → 3.1a.I Create new contact form updated with new info

3.1a.III Create new contact, Matching results

New contact(s)

! No Matches for **Aaron Jennings** or **833-564-1234, 447-567-9802**

Merge with existing contact

Done → 0.0 All

Adding Confirmation, Progress (3.1a.ii)

This confirmation and progress screen both lets the user know that the new contact has been saved and also that the device is looking for the new contact on web accounts. The user can cancel out of the latter.

Matching Results (3.1a.iii)

Here the device returns results that match the new contact's name, phone number, or email (which in this case was not provided). The user then has the option to merge these other identities into one meta-contact.

Accounts Preview (middle bottom)

This is a pop-up window that lets the user see exactly which accounts will be searched. If the user knows this contact is only on one account, then he or she can deselect the other accounts in this screen and tap 'Save.'

iterating with users

iterating with users: prototyping framework

Prototype	Function	Characteristics	Communicates with...	Design stage	Examples
Conceptual	• externalizes idea • shows overall plan with interrelationships • instrumental for getting early team focus and agreement	• often diagrammatic • highly abstract • holistic presentation of idea • goes through many quick iterations	• client • team members	early and when substantial structural changes are needed	
Behavioral	• supports interaction • uncovers users' intuitive cognitive operations and expectations	• seldom holistic • often a critical segment of the design idea • often crudely designed but with enough context for use • often looks nothing like the object being designed	• users (elicits natural action and feedback) • client (shows alternatives) • designers (answers questions) • team members (facilitates decision-making)	early and intermittment as behavioral questions arise	
Procedural	• verifies the logic of sequences • identifies patterns of use	• exhaustive integrated presentation of options and consequences	• users (elicits choice and planned consequences) • team members (facilitates execution)	later, but much before production — iterate as often as needed	
Appearance	• assists in aesthetic development • confirms sensory impact	• highly detailed • highly realistic • selected functionality • to scale, often 1:1	• users (verify quality) • team members (explore visual detail and consistency) • client (proof of concept)	late, but before production — iterate as often as needed	
Scenarios	• establishes context for use • connects early vague idea with details of life • embeds developed idea into daily life	• narrative • real-to-life story • sufficient detail to be believable	• team members (helps to establish context) • client (helps to understand concept) • public (promotes idea)	early, to understand how the concept fits in user lives middle, to communicate real life issues to team late, to spin the idea in a public setting	
Games	• supports speculation on relationships between complex and interactive aspects of a situation	• rule driven • includes chance, decision and consequence • simulates key aspects of a situation	• team members • key stakeholders	early, to uncover major conflicts a	

structure…flow…process: a few web resources

First Principles of Interaction Design

http://www.asktog.com/basics/firstPrinciples.html

Views and Forms: Principles of Task Flow for Web Applications Part 1

http://www.boxesandarrows.com/view/
views_and_forms_principles_of_task_flow_for_web_applications_part_1

Wizards and Guides: Principles of Task Flow for Web Applications Part 2

http://www.boxesandarrows.com/view/
wizards_and_guides_principles_of_task_flow_for_web_applications_part_2

A visual vocabulary for describing information architecture and interaction design

http://www.jjg.net/ia/visvocab/

A few good books

About Face 3: The Essentials of Interaction Design, Alan Cooper

Designing for Interaction: Creating Smart Appliances and Clever Devices, Dan Saffer

Elements of User Experience, Jesse James Garret

Information Architecture: Blueprints for the Web, Christina Wodtke

Designing Interactions, Bill Moggridge

Sketching User Experiences, Bill Buxton

Envisioning Information, Edward R. Tufte – all Tufte books are fantastic