Contacts 3.0: Bringing together research and design teams to reinvent the phonebook

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Abstract

We present a narrative of the design of Contacts 3.0, a service and updated phonebook application on a mobile device that combines on-device communication with communication from online social networks to create a central hub for communication on the device. We discuss how research and design teams worked together to create design assets, technical architectures, and business cases around this concept.

Keywords

Cross-functional teams, mobile, contacts, social networks, social media

ACM Classification Keywords

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

General Terms

Design, Human Factors

Introduction

In this case study, we describe a collaboration between research and design teams to create a new phonebook and service for mobile devices, centered on providing a
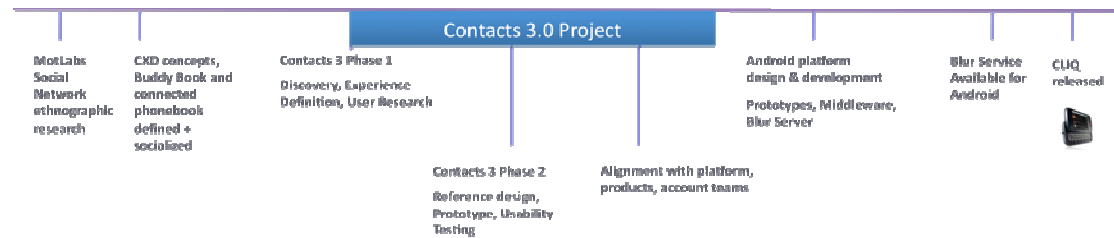
figure 1: Timeline of the Contacts 3.0 project and related initiatives with major milestones defined.

single destination for multiple types of communication and maintaining an awareness of friends' and family's activities. Many of the concepts from this work can now be seen publicly in the form of the MOTOBLUR service on Motorola's Android devices.

This collaboration began with the surge in the popularity of online social networks MySpace and Facebook and the growing trend to update online services with various types of status (Last.fm, Twitter, etc.). We saw the need to provide access to all of this information in one place on the mobile device instead of siloed in individual applications. We decided early on that this place should be the phonebook. We wanted to take a static list of names and numbers and transform it into a destination that users could visit for the latest information and photos from their friends as well as a comprehensive view of their communications history.

This work built on several years of research from the Social Media Research Lab, early concept development work in our design organization, and research published in academic venues as well as the popular press.

The Contacts 3.0 experience design project ended with transitions to platform design, software development and product management teams. The work performed by those teams to bring these concepts to market fall outside the scope of this case study.

The rest of this paper will introduce the core teams involved in this work and then describe the process the team used in designing the Contacts 3.0 service and application.

Teams Involved

Several teams contributed to the core team for this work. These teams came from what was then Motorola Labs and from the Consumer Experience Design (CxD) group in the Mobile Devices business of Motorola.

The Social Media Research Lab existed from 2005-2008 as a part of Motorola Labs, the corporate research arm of Motorola. The lab's mission was to create applications and services that help people feel more connected to each other. This lab was previously known as the User Centered Solutions Lab and the Applications Research Lab and had existed with much
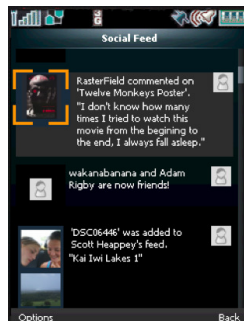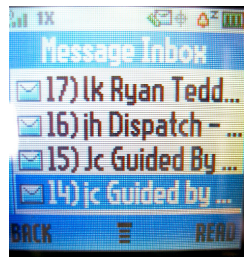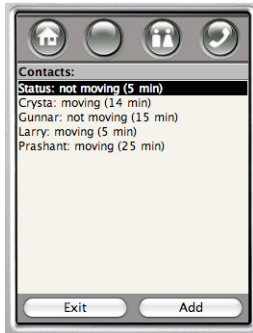
figure 2: Initial concept applications were created to help understand how context could be used in real-world situations. Motion Presence, Music Presence and Photo Presence.

of the same staff since 2000. This staff included cross-disciplinary researchers with backgrounds in Anthropology, HCI, Computer Science, Cognitive Psychology, and Electrical Engineering. The lab worked with design and product teams across Motorola's businesses to commercialize concepts developed through its research programs. At this time, the lab had two main programs: Ambient Communications and Context Enriched Communications.

The Experience Planning team is a group within the Mobile Devices' design organization that investigates markets, trends, new technologies and customer behaviors to define strategic product and service experiences. The group's primary outputs are the identification, definition and modeling of key experiences for Mobile Devices.

The Platform Team in the design organization focuses on the user interface development, designing for features across mobile devices and working with software development and product management teams to ensure the integrity of the user experience in final implementations.

Research Foundation

A variety of research fed into the beginnings of the Contacts 3.0 project. Both the research and design organizations had been working through similar ideas and concepts before joining together for this project. Teams were also influenced by secondary literature from the HCI, Ubicomp, and Psychology domains.

Labs Research
Beginning in 2005, the Social Media Research Lab created a research program called Ambient

Communications. The program's goal was to investigate ways to create a sense of shared experience between people at a distance while not interrupting their primary activities. This research built off of previous work in the lab on photo and music sharing [5] and included both ethnographic research and concept prototyping/evaluation.

The first project, in the fall of 2005, was an investigation into the ways that people currently share their location in mobile phone calls [3]. In this study, we had our participants record their phone calls (with the other party's permission) and we later analyzed these recordings for instances of location and activity sharing. This study led us to the insight that people are often aware of the general context of their close friends and family and often just need a quick confirmation to be sure of one's availability or location. We also learned that many instances of location sharing are ancillary to the topics being discussed in the phone call and serve to create a sense of shared environment (e.g. talking about sights and sounds currently being observed by one party). Our later research would attempt to share these same types of information.

Starting in the Spring of 2006, we created a series of concept probes that we built and field tested with participants over several week periods. These concepts were created to better understand how context would be used in real-life scenarios. The first concept was an augmented phone book that showed when close friends and family were moving between places, or at a place [4]. This Motion Presence application demonstrated that a simple presence cue such as motion can allow people to infer many types of useful information about close friends and family using existing social

knowledge. Examples included location, destination, time to destination, and activity (e.g. walking the dog). Beyond the basic inferences, we observed that our participants truly felt connected to the activities occurring at a distance, despite the basic information being shared.

Another concept was created that allowed for sharing metadata of currently playing music [2]. The Music Presence application displayed the track name and artist of music for close friends. Once again, we observed this simple cue being used to infer location, availability, or mood. We began to see the importance of sharing this type of information in an ambient way.

Finally, the Social Media Research Lab and the design team met together to work with a startup company creating a mobile photo sharing application to complement their existing web site. In this project, we observed the power of shared imagery to allow people to see into the worlds of their friends and family in near-real-time [2]. We also observed the power of commenting on media directly from the mobile device. This project was conducted in parallel to the Concept Formation stage of Contacts 3.0 described below.

This foundation gave members of the Contacts 3.0 team first-hand experience with how users interact with mobile media and ambient presence. This helped shape later concepts like the Social Dashboard which emerged in research as a concept called the Presence Aggregator in parallel to the design group's early exploration into new phonebook concepts.

figure 3: Initial Presence Aggregator concept.

Design Concepts

Early on, the mobile devices design organization was looking at several topics that eventually led to the Contacts 3.0 project. The contacts application, while being one of the most used on the device was for the most part static and required manual entry of data. The current interaction model/information architecture for contacts would not hold up against the large amount of content that was planned for it. We were also exploring the social networking trend and defining the role that a mobile device should play in the anticipated evolution of the trend. On a larger scale, we were exploring how to change a siloed, technology-driven application interaction paradigm. One common element among the topics was how people-based data/information could be handled on a mobile device.

Secondary Research

In addition to our own research, members of the Contacts 3.0 team read as much secondary literature as possible on social network use. We enjoyed danah boyd's work on Facebook/MySpace use among teens and the ways in which these services were integrated into the lives of her participants as places to hang out and be "with" their friends [6,7].
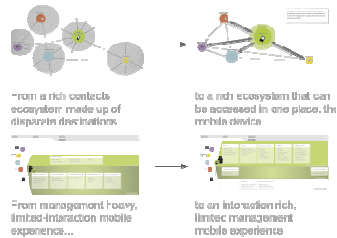
Other important work in this area included Ling and Yttri's concept of Microcoordination [10]. We began to see presence-augmented phone books and social dashboards as ways to keep others aware of one's progress in the act of planning to meet up in person.

A collaboration between the research organization and Yahoo! Research Berkeley on the ZoneTag[1,11] system allowed us to observe mobile photo sharing, viewing, and commenting in real-life situations.
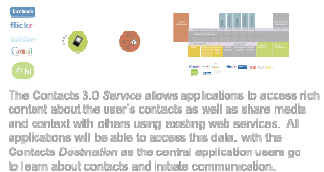
> Contacts 3.0 advocates a paradigm shift

—from a rich contacts ecosystem made up of disparate destinations

to a rich ecosystem that can be accessed in one place, the mobile device

From management heavy, limited-interaction mobile experience...

to an interaction rich, limited management mobile experience

> Contacts 3.0 will be a **service** as well as a **destination**

The Contacts 3.0 *Service* allows applications to access rich content about the user's contacts as well as share media and context with others using existing web services. All applications will be able to access this data, with the Contacts *Destination* as the central application users go to learn about contacts and initiate communication.

> Contacts 3.0 **orients** experiences and interactions **around people**

Contacts 3.0 will enable users to see new and fresh content relevant to any given contact but also to view and find people organized *by content*. For example, new media or calendar events might surface specific contacts and groups of contacts. In addition, a Social Dashboard will surface contacts according to most recent content.
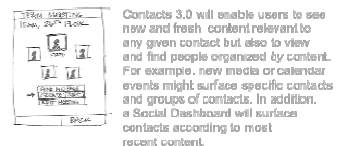
> Contacts 3.0 gathers **content that inspires communication**

In addition to enabling general social awareness, dynamic content also inspires users to get in touch with one another in real time and exchange lightweight communications about the content they share.

figure 4: Selected themes from the Concept Definition phase of the project.

Finally, we kept ourselves connected to theory by reading classic psychology literature such as Goffman [9] to be reminded of the ways in which people seek to present themselves to others in differing contexts.

Concept formation

The team began its joint work with an initial goal of defining the concept of a next-generation phonebook that integrated multiple forms of communication and presence. Initial work on the project was funded by Motorola's internal acceleration group that provides funding and guidance for innovation projects that don't fit the normal product development cycle. The changes that we anticipated making to the phonebook application were considered risky and needed to be pursued on an alternate path to the standard product development cycle.

Previous collaborations had established a rapport among the team and had revealed complementary philosophies and compatible working styles. The team was unified in its goal to develop experiences and interactions around people in a way that was grounded in users' mental models about their contacts.

The team followed a fairly straightforward human-centered design process. We mapped emerging technology trends, the competitive environment, the internal landscape, the ecosystem of the device and possible service models. The internal landscape that the team mapped looked at related initiatives within Motorola and assessed them as possible collaborations according to early experience concepts.

User needs were gathered from Labs research, secondary research, customer service feedback, and user trials. The varied inputs were synthesized into experience principles that guided the development of interaction scenarios and concepts.

The design research team supported the initial phase of the project efforts with an innovative approach to quick and inexpensive research. In order to get research results for a wider cross section of people, they collaborated remotely with their research colleagues in the London and Beijing studios to conduct the same research.

Although the majority of the team was from the design organization, much of the work in the initial phase did not involve crafting interaction. The final deliverables from this phase included a conceptual design, use scenarios, and preliminary business models and architecture options for a solution in this space.

Architecture and Business Implications

Successful design means more than just the visual design and layout of an application. In order for us to feel confident that Contacts 3.0 would be viable for our product organizations, we wanted to ensure that it could be built on Motorola's platforms and have a solid business case behind it. We utilized the backgrounds of members of our research and design teams to explore these service and technical design activities.

There were several different high-level system architectures that could have been chosen for the Contacts 3.0 system, and each had particular business implications associated with it. A critical difference between the options was whether social data was 'pushed' to or 'pulled' on the device. We explored models where all social networking data was

aggregated in the network and pushed to the device; an architecture where the network service managed contact metadata but social updates were pulled on the phone; as well as a model where all data and network account management was pulled on the device. Each of these models had impacts both on business opportunities and user experience and the team addressed these together, often while working in the same room and exploring consequences of a particular path together.

Business case definition typically does not fall within the domain of an experience design team; however, the Contacts 3.0 team knew that a preliminary analysis of the service components would be essential in convincing internal stakeholders of the feasibility of delivering an actual implementation in the market.

The team reviewed the experience in three broad categories: the core phonebook application; integration with other applications such as Messaging; and components of the experience that could become a service. Experience tiers were then mapped to potential service tiers based on assumptions on user data plans, cost distribution, carrier strategies and so on. A key assumption related to the business model was that users would be more likely to adopt data plans in order to gain access to the increased functionality offered by these concepts.

The Contacts 3 team also reviewed carrier requirements for phonebook implementations. Social networking initiatives were beginning to take off at many major carriers. In most cases, we found the framework and experience design to be complimentary and compatible with carrier initiatives. The team also

began discussions with several leading social networks to better understand what data could be accessed via public or private APIs by Motorola and their willingness to participate in such a service.
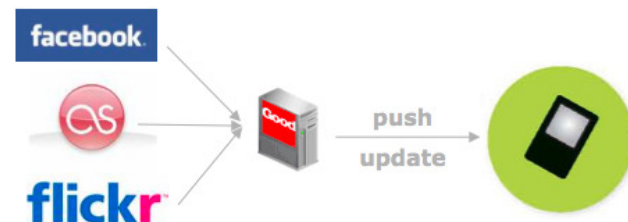
Proposed Architecture

figure4: Proposed push architecture for the Contacts 3.0 Service

In the end, we recommended a push architecture. This allowed Motorola to have a strong customer-facing service as well as gave us opportunities for configuration over the web where it would be easier to add social networking services and mange contacts. On the device, this meant lower power consumption and less network traffic, as only one connection would have to be maintained while large, mostly repetitive RSS feeds would not have to be continually pulled from each site. For the user, the most current data would always be available, and there would be no lag while the content refreshed over a pull connection. An always-on push connection would also allow for additional services to be added in the future.

On the device, we recommended a central process to manage all of the social data and provide it to each application. One of our platforms already had such a
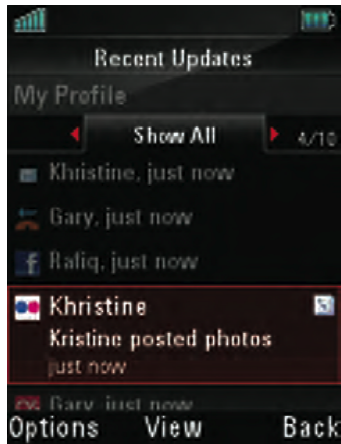
figure 6: Screens from the Social Dashboard prototype. Top: Recent Updates screen showing updates across communication types. Bottom: Managing linked accounts.

platform component, and we decided to utilize that for early prototyping activities.
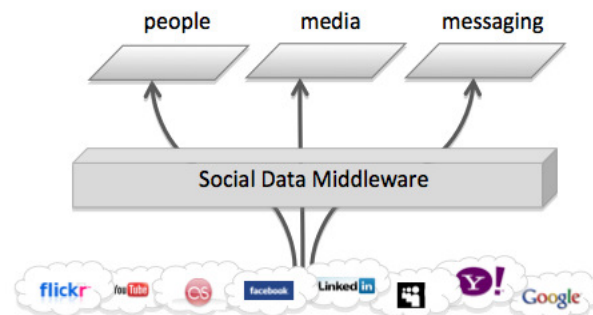

figure5: Proposed middleware architecture on device to provide contact information to all applications.

Prototyping and Usability

In parallel with design activities, we partnered with a prototyping team from the design organization and a software platforms research lab to create a functional prototype of key aspects of Contacts 3.0. We decided to focus on the Social Dashboard concept. The goals of this prototype were to understand some of the technical limitations of our existing software platforms in creating experiences like this as well as getting working technology into users' hands to get feedback on the dashboard itself and the setup process. Example screenshots are displayed in Figure 6.

When choosing a prototyping platform, we considered a number of criteria in selecting a target platform from several available options. Motorola's LinuxJava platform was chosen primarily because the design and technical

teams were more familiar with that platform and many of the required enablers were readily available for it. The choice of a platform was made to best meet the goals of the prototype at that time, and was not indicative of which platform we would ultimately launch Contacts 3.0 on.

The prototype allowed users to add Facebook, Last.fm, and Flickr accounts to their phonebook and would attempt to merge online contacts with existing contacts. Where no merge could be made, users had the opportunity to add new contacts or try to manually merge conflicts in a wizard-like interaction.

Once accounts were integrated, the prototype pulled updates from each service every few minutes and displayed updates in chronological order on the Social Dashboard screen. This dashboard also included communication on the device such as missed/answered calls and incoming text messages.

We tested the prototype with seven externally recruited participants. Specific tasks were given to the participants to check their understanding of the system as well as to test the process of importing services and merging contacts with real-world data. Several improvements were identified which were folded into the design process that was occurring simultaneously.

Design

The design task for the Contacts 3.0 team was to create a *reference design*—a substantiation of the next generation phonebook user experience in the form of platform-agnostic design documentation. The reference design would include an information architecture, interaction model, use case catalogue, and wireframes

and flows. The intent of the reference design was to provide resolution to the breadth of Contacts 3.0 experiences that could then be used by platform design teams to further define and implement the Contacts 3.0 user experience across any number of Motorola's mobile software platforms.

How we worked

In order to redefine the phonebook on the mobile, we needed to draw on each others' domain expertise to define the details of how the experience should come together on screen in a user interface. Interaction design alone could not solve for the design challenges inherent in deeply integrating networked social content throughout the mobile device. Several elements of the way our project was structured enabled our combined expertise to all play a critical role in guiding and informing the reference user interface design for Motorola's next generation phonebook.

A critical element was the shared project war room whichenabled close collaboration across domains. The shared room allowed us to meet routinely to saturate ourselves in the design challenges and work together through potential solutions by sketching screens and flows, identifying where networked data could live on-screen, and defining how the combined on and off-device content could contribute to a creating a new, but consistent mental model for the user. It allowed us to pin up ongoing work and solicit ideas, feedback and critique from managers and work partners. The war room communicated a live visual snapshot of project status to both team members and external stakeholders.

This detail—our shared room—was an instrumental tool in establishing a truly collaborative team. By contrast, our teams typically work with only a *digital* dedicated space. All project teams share a limited number of conference rooms. For this particular project, though, we were fortunate to have a consistent *physical* space. The key values of the room that contributed to overall success of the project were that it 1) contributed to a collaborative ethos truly unique to this project and team, 2) provided a sense of continuity throughout our process, and 3) created an important transparency to others in the organization that helped us communicate with work partners and illustrate the breadth of Contacts 3.0.

One of the first artifacts we created together was a master use case catalogue. This represented an exhaustive collection of potential use cases that could be enabled under a new truly dynamic vision of a phonebook infused with social data. This master list was a solid shared footing that addressed how all the different parts of the system would manifest in the user interface. Because research and design team members contributed to its making, it accounted not only for primary use cases like lightweight sharing and discovery of social content, but also use cases related to synching data, merging contact records from multiple sources, dealing with intermittent connectivity, and accounts management. Because domain knowledge was embedded in the team, these were topics we could easily work through without dependence on a myriad of engineering and business teams.

Together, we prioritized those use cases that were truly unique to a socially networked address book and worked iteratively through the interaction design of the

figure 7: Photo of artifact from Design Research Study # 1: participant's clustering of people with whom they like to be in touch.
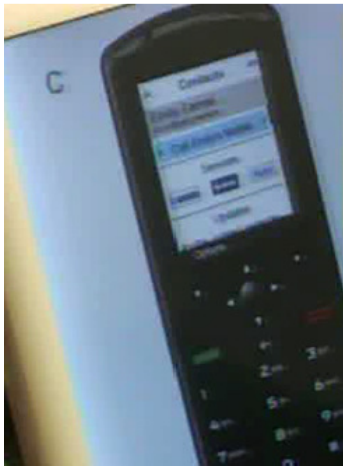

figure 8: Photo of simulation from Design Research Study # 2 illustrating a Contact Details screen with local and networked content.

prioritized use cases to illustrate the unique nature of the Contacts 3.0 experience and to address organizational uncertainty as to how this could all come together for a user. Though the team's primary interaction designers illustrated the details of the design, all members critiqued and evolved the design throughout the process to ensure an informed, consistent, and truly evolved user experience that accounted for real-world constraints.

Throughout the design phase of the project, the team also created Flash simulations of key aspects of the Contacts 3.0 application, such as Social Dashboard, Contacts Main and Contacts Details. The simulations were helpful to visualize the interaction and application flow in order to further iterate design. They were also instrumental in communicating the experience concepts to stakeholders outside of the core team

Design Research
Because we redesigned perhaps the most fundamental application on a mobile phone, user research played a critical role in guiding design decisions. We conducted three qualitative user studies during the design phase of the project:

DESIGN RESEARCH STUDY # 1: RELATIONSHIP MAPPING AND GROUP CLUSTERING ACTIVITY
Our first user study sought to examine user's mental models of their social networks. Participants identified important people their lives, wrote them on a single sticky note and arranged these sticky notes while talking aloud. This exercise revealed that users think about contacts in terms of clusters related to different aspects of their lives. These groups tend to be fairly dynamic over time. This learning informed how the

reference design had to accommodate the use and creation of groups across a spectrum of static to dynamic.

DESIGN RESEARCH STUDY # 2: USER REACTION TO SOCIAL CONTENT AND ON-DEVICE CONTENT AGGREGATED FOR A CONTACT
The goal of the second user research study was to validate our hypothesis that a people-based contacts application—aggregating on-device and off-device content for any one contact —would be an improvement to the existing contacts model prevalent on mobile phones. Participants completed common tasks on 2 different contacts simulations—one that represented the new contacts design and the other represented the existing design. Most participants responded positively to integrated social content. However, the study did provide some warnings that helped influence our design. A few participants feared the new model would become cumbersome in everyday use. Drawing on these findings, in the final reference design we sought to maximize the utility of dynamic content in helping users complete their expected tasks while also providing a destination they could go to find out what their friends are up to across networked services.

DESIGN RESEARCH STUDY # 3: UI ELEMENTS FOR FILTERING AND GROUPING CONTACTS
In our final user research study, we tested different possibilities for presenting groups and filters on contacts in the user interface. Users participated in an exercise combining their own phone and web contacts in one list and completed tasks while interacting with a simulation that provided filters in the UI. All participants understood and responded either neutrally

figure 9: Reference Social Dashboard screen

figure 10: Reference Contacts Detail screen

or positively to seeing their phone and web contacts in one place. Participants responded most positively to groups and filters they could create themselves or that adapted to their device usage.

Reference Design
Contacts 3.0 faced some unique challenges since it went against conventional paradigms of how a phonebook should work and behave. Not only would it visibly grow with an influx of social data, but Contacts 3.0 puts the user's contacts at the center of the mobile experience. This new way of interacting with contacts required that we design an interface that was familiar to the user, yet allowed for the new experiences created by the application.

This larger challenge manifested itself in smaller ways throughout the design process. For example, given the large amounts of social data that comes together in the application, where would we put it and how would we make it most useful? Until now, traditional Phonebooks were typically an architecturally shallow combination of a contact list and their related details. The user manually populates the data fields such as to enter a phone number. By contrast, Contacts 3.0 inevitably had a much larger information architecture and the contact's data is automatically pulled from multiple sources, such as Facebook, without much work on the part of the user.

Maintaining a level of familiarity was also a challenge. If we changed the Phonebook completely, we feared that the user may initially feel lost and unsure as to how best to use the application. It was important that Contacts 3.0 strike the right balance between being new and innovative while also being familiar and

comfortable to users. We relied on user research to validate users comfort levels throughout the process.

We were also finding that new applications needed to be created outside of Contacts. For example, My Accounts, which helped users manage multiple web service accounts such as Facebook and Last.fm, was crucial for Contacts to work but did not necessarily belong inside the application. This was not a surprise but an anticipated challenge; selling more than one application to product teams would be more difficult than if all was nicely packaged in one application. Since Contacts 3.0 could not survive without My Accounts, it was imperative that both made it into each product.

Designing for more than one interaction paradigm also proved to be challenging. The reference design needed to be flexible enough for varying interaction paradigms which included touch, combined touch (unique to MUIQ) and key-based interaction for lower tiered phones.

The design portion of the Contacts 3.0 project presented unique challenges. The premise of infusing the Contacts list with social data made sense, but defining a tangible vision of how the user would interact with a new Contacts UI forced difficult decisions and tradeoffs. An integrated design research process helped us answer questions, validate hypotheses, and move the design forward. Our cross-disciplinary approach and shared project space eased one of the hurdles common to next generation innovation: disconnect between design, technical architecture, and relevant business models. Our approach enabled us to create a reference

design that aligned to realistic technology constraints and relevant business model opportunities.

In the end, our design allowed users to navigate between several views in their phonebook, getting different filters and sorts on all of their social data (see Figures 9-11). For example, one view in our Android solutions allows users to view all contacts in order of recent status updates with those updates displayed next to their name. Another view is the standard A-Z contact list. A large set of views were defined, and platforms and products could pick from these according to their needs. Likewise, the contact detail screen (see Figures 10-11) also had several facets that a user could explore to learn more about a specific contact from status updates and posted photos, see a communication history with that contact across phone and SNS interactions, or get the traditional contact details such as phone number and email address.
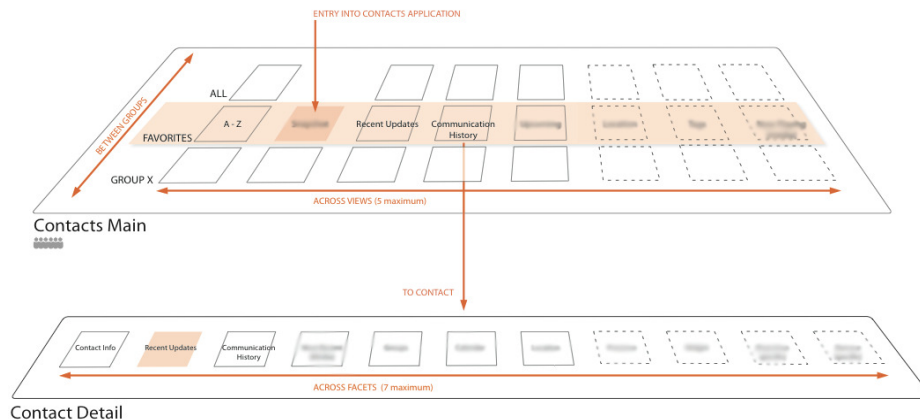
figure 11: Interaction Model from Reference Design illustrating how the different screens on the contacts application would relate to one another.

This design allowed for the Contacts application to become a destination for users to visit to explore the lives of their contacts and met many of the mobile social presence use cases from early research in Motorola Labs.

Throughout the design phase of the project, the team created Flash simulations for key aspects of the Contacts 3.0 experience, such as Social Dashboard, Contacts Main and Contacts Details. The simulations were helpful to visualize the interaction and application flow in order to further iterate design. They were also instrumental in communicating the experience concepts to stakeholders outside of the core team

Platforming

Motorola's Multiple Platforms
The Contacts 3.0 core team had created a set of reference deliverables that were scalable across Motorola's multiple mobile platforms. At that time, Motorola supported several software platforms - these included proprietary LinuxJava and P2K; industry standards Brew, Symbian, Windows Mobile and the emerging Google/Android; and for the mass market, various Original Device Manufacturer (ODM) platforms that supported Java applications. For the new social phonebook to have maximum impact across Motorola's global device portfolio, it had to be delivered across as many of these platforms as possible.

A variety of software platforms provided Motorola a great deal of flexibility in its device portfolio - we could create devices for just about every consumer segment and tier of the mobile market. At the same time, multiple platforms meant greater complexity in software development, lower efficiencies of scale and,
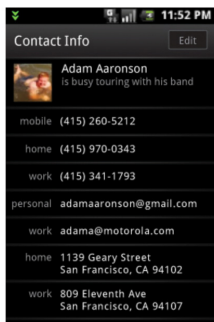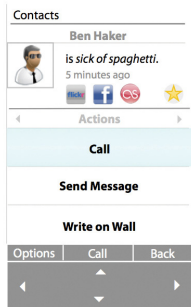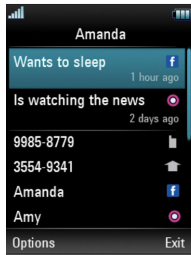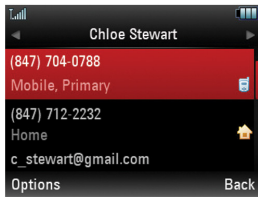
figure 12: Contact detail screens for multiple platforms. From top to bottom: P2K, Java MIDlet, Symbian and Android

often, additional challenges in ensuring consistency of user experiences across devices. The Contacts 3.0 team faced the challenge of working with multiple stakeholders across the Motorola organization to ensure the integrity of the experience as it became prioritized and accepted across successive platforms. From an interaction paradigm standpoint, multiple platforms also brought challenges due to differing input methods and navigation paradigms for each platform.

Very early in the conceptual design phase, the Contacts 3.0 team began thinking about what it would take to actually build and implement the social phonebook concepts. It became apparent that Motorola needed a way to aggregate social data, and to provision common social data to multiple applications. In early architectural references the team began calling this the "social data middleware". It wasn't clear whether Motorola would build this internally or if we could outsource any of it to third party solution providers. An analysis of internal technology infrastructure projects ensued with the aim to find candidate technologies to marry up with the Contacts 3.0 experience design. Teams were identified who could create a push data service based on previous work. This evolved into MOTOBLUR.

Scalable Reference Design
The Contacts 3.0 reference design needed to work for the low tier key-based devices and the high tier smart phones of the future. Bottom line: it had to be all-around flexible. We needed to consider such things as changing software platforms, multiple input methods (i.e. key-based, combined touch, touch, etc.) and assorted product tiers. The flexibility of the design

would go on to support Motorolans in adapting Contacts 3.0 into future products.

There were several tools that we added to the reference design that made it flexible, three of which will be discussed here. A succinct list of what we called "signature functionalities" helped shape the snapshot identity of Contacts 3.0. This list was effective when introducing and identifying the concept and broad enough to allow for variation when it came to incorporating it into new products (e.g. "Novel visualizations give users new ways of looking at their contacts").

An exhaustive list of use cases was also drawn up and prioritized into what was considered Core, Important, or Nice to Have (e.g. View contact's motion presence). This catalog became incredibly useful in the negotiation discussions between design and software teams.

A tiering strategy was also created to help teams identify what their experience would look like when considering the technical constraints of the software and the price tier of their product. The Contacts 3.0 experience scaled across three tiers Basic, Enabled and Actualized. Each tier was characterized by broad terms of functionality and was useful in planning the evolution of Contacts over time.

Having the reference design made it easier to adapt to changing organizational strategies and meet expectations across multiple product teams.

Platform Outcome
By late 2008, the new Motorola co-CEO Sanjay Jha had made a strategic decision to shift significantly more of

the focus within Motorola's Mobile Devices business unit to the Android platform [6]. Therefore, most effort of creating platform-specific designs of this concept was focused there. On September 10, 2009, Motorola announced the MOTOBLUR service and the new CLIQ (DEXT in Europe) device with live social data deeply integrated across native applications like Happenings, Messaging and Contacts. This platform drew heavily from the work that was completed through the Contacts 3.0 project and many of our initial design concepts can be seen in the final product.

Conclusion

We believe that several factors led to the success of this project and that these factors can be replicated in other design scenarios.

First, the research team identified areas that the organization would be interested in several years in advance, as product teams are typically more focused on near-term delivery. Building an understanding of this space helped the research team contribute throughout the design process and helped the core team avoid design choices that conflicted with their findings. Keeping research involved as main team members in the design phases meant that key research findings continued to be represented in the final solution.

Having a cross-functional team together throughout the design process meant that we could always address all impacts of a decision from design, architecture, and business perspectives. Working in the same room meant that we could always bounce ideas off of each other, which kept the process moving and greatly improved the quality of the result.

Producing a reference design that included visual design, technical design, and business analysis made it easy to talk to different product teams, platforms, carriers, and social network services. It meant that we were never going in with "the solution" but had a starting point that opened conversations about the possibilities of the service on a given device or with a given potential partner. The reference design also helped us to keep designs for multiple platforms as consistent as possible and true to the key design components of the solution.

Overall, we hope this model can continue and can inspire other groups and other companies to apply similar processes to take work from research to product successfully.

Acknowledgements

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