

Business-Consumer Networks

<http://businessconsumer.net>

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Abstract

Social services provide a wide spectrum of functionalities for personal communication. At the same time the market of web services for businesses (corporate blogs, messaging to customers, events invitations, discounts, viral ads, loyalty programs, online CRM and market analysis) is relatively uncrowded.

We propose to build a unified system with two types of accounts: for businesses and for customers. Basic version will provide tens of functionalities with many more in perspective. We set four goals for system design: (1) make every business account be a primary Web identity of the company, (2) enable direct two-way communication between businesses and customers, (3) motivate sharing business relations and facts, and (4) develop infrastructure for integrating existing specialized business services.

Project goals are to design the system, develop a prototype, perform initial social testing, and prepare materials either for venture investment or for using our technology for existing web companies.

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1 Market Opportunity: Web Solutions for Businesses

Advances in web technologies can lead to much better (comparing to search ads and context ads) marketing solutions for businesses:

- Personal messages between businesses and consumers.
- Viral propagation for product information: from loyal customer to his/her friends.
- Collecting and mining market data.
- Getting feedback from customers. Providing technical support through the web.
- Acquiring reputation (getting positive reviews, building list of loyal clients, be voted up).
- Running loyalty programs online.
- Spreading corporate news. Sending invitations to company's events.

Implementing any particular functionality is costly: attracting users, asking for registration info, starting another reputation system, news feeds and notifications. Most likely, majority of functionalities will reside on some business platforms. Here business platform is a system for customers and businesses that provide some set of functionalities and support third party applications.

1.1 Related Work

Up to moment, Facebook business solutions is the most complete platform for business-services. So far, they provide the following opportunities for businesses:

- Free business profiles
- Ads in news feeds
- Tracking on-line purchases (Facebook Beacon)
- Sponsored polls
- Targeting based on profile information and user activity
- Viral propagation for Facebook apps

However, Facebook business platform has some serious non-technical limitations:

- System perception. Facebook is a place for communicating with friends. Not a shop, not a reviewing system, not search engine. Currently, all business applications considered to be just noise.
- Control over applications. In general, application quality is low (so far, competition between developers does not help). Users and businesses application choices are hardly overlapping. It's easy to implement a new feature but hard to force users really use it.
- Proprietary data control. Probably, some businesses are not happy to lose the control over their business relations data. That gives the chance to distributed business platforms.
- Closeness. Facebook platform does not provide a free external programming access to most of Facebook data. At the same time, Facebook itself does not present any global services like full-functional search, statistics or mining.
- Limited resources. Facebook business solutions are powered by just one of the teams within a 150 engineers company. Coming to a large scale requires new management hierarchy and adaptation period for newcomers employees. At the same time, the leaders of the web industry can start building their own business platforms. Existing Google and Yahoo solutions can be quickly incorporated into any Facebook competitor.

Besides that, current solutions lack many features that can hardly be implemented as third-party apps:

- Business-consumer communication. Usually, business accounts do not reply to users wall messages. They can not send/receive private personal messages.
- Search. Currently, discussions, reviews, wall posts, and notes are not searchable. There is no geo-search either. Note, that relevance algorithms have to be quite different from the web search.
- Reputation system. It is required to incentive users to write reviews and disclose business relations.
- Billing system. Facebook user identity can not be used as a customer identity in any online shop.

- Deep integration with specialized services (shopping engines, real estate, employment). There is no way to make cross-integration of these services via Facebook apps.
- Independent opinions on businesses and products.
- Businesses can not use their Facebook identity for any action (commenting, review answering, posting vacancy) outside of the system.

Many companies are now starting development of multi-functional web solutions for businesses. Here is an incomplete list: Amazon, eBay, Alibaba, Ning, LinkedIn, Plaxo, Xing, Bebo, Orkut, Slide.com, Yelp, ePinions, Yellowpages.com, SugarCRM, Salesforce.com, Microsoft Dynamics CRM. Besides that there is a number of specialized services: shopping engines, cars, real estate, employment search, classifieds, movies, books, music, reviews, local search, travel.

2 Proposed Solution: Business Consumer Networks

2.1 Main Ideas

Business-consumer network is a system with two types of accounts: for businesses and for consumers. A number of functionalities is provided in order to achieve the following four goals:

Business identity. A business account should become the primary identity for the company in the whole Web. This identity should be enabled for all basic activities: keeping clients list, messaging, event management, blogging, reputation acquisition.

Direct business-consumer communication. Every business and every person should have a technical possibility to send a personal message to *any* other member of the system. Indeed, reputation system will be used as a primary spam-protection tool.

Sharing business facts. We are looking for techniques to motivate participants (mainly customers) to share information about their business relations, opinions and preferences. Obtained data will be automatically converted into well structured RDF-based format. Opening business data will provide wide opportunities for market understanding and building better marketing tools.

Synergy. Many aspects of current web technologies are calling for integration: identities, services, relations, reputations, data. We want to simplify user/business experience. Any action taken once should automatically propagate to all interested parties. Ideally, every object (product, event, review, vote, link) created in some service should be accessible for all other services.

Achieving above goals is nontrivial. The challenge here is in adversarial nature of the problems. In many cases interests of developers, customers and businesses contradict to each other. Opening information can hurt any particular participant but market openness in general is beneficial. Thus, the goal of our project is to design mechanisms that will lead to the optimal choices in business-consumer interaction.

2.2 Functionalities of Business-Consumer Networks

Priority A:

- Business profiles: company info
- Customer profiles: personal info
- Business-consumer friendship relation. List of business-contacts for every user.
- Business history: I have, I use, I buy.
- Private messages
- Reviews
- Business blogs / guestbooks / questions and answers
- Product pages, prices
- List of employees (photos, roles)
- Basic search
- System's pulse (what's going on)
- Customer wishlists

- Open ID support
- Invitations and notifications
- Vacancies
- Automatically generated (e.g. from ODP/Wikipedia) business profiles
- In business profile: “it’s also me” links
- Feedback mechanism. Voting for the most demanded features.

Priority B:

- Events
- Advanced search
- Personalized pulse (news feed)
- People-people friends
- Loyalty programs, coupons and discounts
- Reputations. Global popularity ranking for businesses.
- SocialGraph API support, API for data access
- Businesses: votings, feature requests, crowdsourcing
- Advertising campaign pages. Ads archives.
- Freelance offers
- Automatically computed “related businesses” box
- Marketplace
- Statistics: business pages visitors

Priority C:

- Photos
- Maps
- Billing
- Business authentication
- Paid services for businesses
- Customer suggest function
- Earning mechanisms for users
- Statistics. Market computations.
- Auctions
- Space for widgets, supporting OpenSocial
- Customizable design
- User generated lists

2.3 Use Cases

- Business book. A user identifies all businesses she is dealing in everyday life and keeps this contact list online.
- Question answering. A user comes to a business profile and publish his question to the business. The business answers it. All other users can also participate in the discussion.
- Reputation lookup. A user almost made a decision to use a particular product or service. Before making his mind he goes to the corresponding business profile and studies business’s reputation, reviews, and asks the fans of the business about their opinion.
- Market understanding. A business is browsing profiles of its fans in order to have a better understanding who are its customers.
- Loyalty programs. Business announces a discounts/rewards for users who are listed as its friends.

2.4 Deployment Strategy

Our goal is to develop social mechanisms that insure most effective communication between businesses and consumers. In future, the full-functional version of business-consumer network can be implemented within one of three strategies:

1. As an independent platform]
2. As a new service for existing company, say “Business.Yahoo”.
3. As an open source distributed solution

2.5 Challenges

System design challenges:

- Reputation system
- Privacy policy. Who can send messages to whom?
- Architecture of user interface.
- APIs for data access, third-party applications.

Research challenges:

- Object-level search taking into account reputations and business relations.
- Algorithms for personalized news feed.
- Robust algorithm for computing reputations of people, companies and consumers. Algorithms for detecting and blocking social spam.
- Marketing algorithms: customer suggest, data mining for business relations.
- New standards: for business relations (FOAF extension), for business accounts (OpenID extension).

2.6 Frequently Asked Questions

Business model. Profile pages are free both for customers and businesses. However, we can offer more paid services for businesses: advanced functionality (statistics, customizable design), cancelling limits (number of clients and messages/day), increasing priority (for search, popularity ranking), appearances in news feeds.

Attracting businesses/users to the system. First of all, our project is limited to designing and prototyping the system. Promotion campaigns is not included to the project. We believe that providing (1) useful, (2) unique, (3) high-quality services is the key for future success of the system. Collecting the following functionalities in a single place serves as our competitive advantage:

- For businesses: corporate blogs, messaging, event management, reputation acquisition tools, discounts and loyalty programs, social information distribution, customer statistics and market analysis.
- For customers: business/product search, reviews, direct communication to businesses, self-representation (“hey, that’s what I have”), keeping business contacts online.

How business profiles are created? Anybody can create it. Every profile has two sides: official (maintained by any company representative) and inofficial. Second one can contain reviews, discussions and is not controlled by the business.

3 Project Information

3.1 Team, Time, Outputs

Team.

- **Yury Lifshits**: idea, business analysis, system specification, algorithms. Education: SPBSU, Steklov Institute of Mathematics.
- **Mikhail Senkov**: prototype project manager. Education: SPBSU. Experience: JetBrains, Transas.
- **Anton Nazarov**. Education: SPBSU. Experience: Epam, VKontakte, Protei Ltd., vkontakte.net.ru
- **Dmitry Zvorygin**. Education: SPB ITMO. Experience: OpenWay.
- **Ivan Kuznetsov**. Education: SPB Press Institute. Experience: Yandex, Prophotos.ru

Time. March 1, 2008 — May 31, 2008

Outputs.

- The detailed paper describing social architecture of the system. Business plan.
- Prototype system with functionalities with priority A. Internally tested.
- Community around the project. Feedback on the concept.

Budget.

- Team: $2000\$ \times 3 \times 5 = 30000\$$
- Outsourcing: designer 2000\$ + sysadmin 2000\$ + consulting 5000\$
- Office: $2000\$ \times 3 = 6000\$$
- Dedicated server: 1000\$

Total: 46000\$

Recall, this is the budget for prototyping and initial social testing. Full-functional version and promotion campaign require the next round of funding.

3.2 Project Risks

- Team fail
 - Counter method: Evaluate every team member after few starting weeks and make changes to the team if necessary.
- Proposed system does not satisfy market needs
 - Counter method: keep the project open and collect feedback all the time.

3.3 Partnership and Participation

We consider two types of funding for the project:

1. Research funding. In this case we are focusing on designing a new technology and producing valuable intellectual property that goes to the funding company.
2. Angel investment. Here our goal is to prepare for venture investments. That is, to develop prototype proving that the concept is working and the team is capable. We will deliver detailed market analysis, launch strategy and business plan.

We are open to all kinds of partnership:

- Hiring: we are looking for experienced web programmers to participate in the project.
- Technology partnership: data exchange, integrating existing services into our prototype.
- Research collaboration: participate in algorithms/social design research.
- Informal: join our [Google group](#) for participating in open discussions.

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