

Social Physics (socialphysics.org)

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The Mission; The Social Web

Introduction:

During the 90's the Web was seen as an open information medium. The miracle of the Web was that for no apparent reason people would make information freely available to total strangers. With the arrival of the browser, first the free Mosaic, then Netscape, and finally, Microsoft's Explorer, anyone could access websites. And with the availability of FrontPage and other Open Source tools, virtually anyone could create their own website. At that moment, the Global Web as an open information medium was born.

Soon afterwards, the internet also became a social, relational medium, through email, instant messenger, blogs, wikis, e-rooms, massively multi-player online role playing games, "spontaneous communities", "smart mobs", collaborative spaces, "peer production" systems and the like. People were learning to "link up", not only to share information, but to discover, cultivate, and manage social relationships. Soon enough the novelty of being able to reach virtually anyone was rudely displaced by the frustration of being inundated by virtually everyone, breaching security, privacy and confidentiality.

Yet the Web is increasingly about social relationships and managing them. The enormous success of online dating services, starting with Match.com, then moving to Friendster.com, and the emergence of business social networking services such as LinkedIn, Six Degrees, Friendster, Orkut, etc, is only the beginning of the Web evolving to a new, global social medium. The challenge at the moment, however, is how to set up and manage networks upon networks of social relationships, some personal, some professional, some confidential, some open, and some enduring, but most ephemeral.

Context and Accountability: Norm Coding

Just as the open browser was necessary for the Information Web, so too is an open browser/platform needed to launch the Social Web. Yet unlike the browser which encouraged the proliferation of raw information and anonymous interactions, the new platform needs to be two things at once; a highly open platform where virtually any type of social network can be created and managed, and at the same time, a way for achieving fine grained accountability, whereby any individual or group can write and enforce their own social code, in short *social protocols*. At the same time the individual must have total control over all information about themselves, their relationships, and how they are seen. The architecture should be such that there can be no means of compromising an individual's or group's security; no omniscient server that can spy and intervene; it must be a "free nation", as it were, a network of peers, based upon consent, authenticity, transparency, and a self-enforcing accountability. It should provide the means whereby disparate parties can come together, reliably know one another, selectively share information and services, negotiate, and enter into and dissolve socially binding "contracts." All should be free to invent their own methods of rating, to create trusted networks and to include and exclude others in their networks. No prior social code nor norm is implied nor required.

In short, the SP platform is part of a peer to peer network for "contextualing," and thereby framing how people (and software agents) interact in distributed social networks. By creating a context – through *social protocols* – members can set the conditions under which members interact, share information, rate one another's performance, assign and revoke decision rights and privileges, and secure privacy and identity. People would be free to invent, discover and advance their own conventions of civic society and participation. Again, the platform is totally agnostic as to what are the "best" protocols and conventions. The SP's platform's job is to enable the generative richness to express virtually any imaginable social convention.

Social Physics, Darwin, and Self-Organization:

The approach taken here is to regard social behavior as an evolutionary process whereby social interactions are treated as the product of generative rules. The term “physics” employed here takes its inspiration from the complexity sciences, Stephen Wolfram’s “A New Kind of Science,” and Ed Fredkin’s “digital physics”. Behaviors are seen as algorithmically derived and emergent from a relatively simple set of initial rules. (In our parlance, Social Protocols make possible Social Physics.) This notion when coupled with findings in evolutionary psychology, game theory, and the neurosciences, could provide a compelling scientific basis for replicating and leveraging the social protocols that varieties of social species have evolved over the millennia to coordinate their interactions and communications, There is also the enticing prospect of a scientifically testable basis for designing and evaluating scaleable social networks that are “evolutionarily stable strategies” for high trust interactions. In the future, it might be possible to design social protocols that both behave the way that people “naturally” behave, and as they “should” behave, if they were following evolutionary stable strategies.

The Power of Social Protocols: Coding for Social Norms

One of the challenges of the SP platform is to develop a robust representation for writing Social Protocols. It is our contention that Social Protocols define a social group as a particular kind of social network, and consistent with our algorithmic notion of Social Physics, groups are treated as an emergent property of certain types of rules, e.g. Social Protocols.

Social Protocols frame the following seven conditions for any social network:

1. Fine grained tagging of the types of content that can be shared;
2. Terms and conditions under which certain types of content can be shared/distributed;

3. Types of interaction between parties, specifically, “speech act combinations” (request, question, introduce);
4. Network roles of participants in interactions between the parties;
5. Rules for inclusion and exclusion,
6. Triggers for dynamic assignment and revocation of participation rights.
7. The behaviors and metrics parties can see about one another.

The premise is that social control is not simply the consequence of brute force and coercion, but rather that people have evolved elaborate forms of self-organizing social control through innate “social emotions” such as, shame and fame”, a sense of reciprocity, affiliation, and peer based reputation. Hence, self-organization and social control can be scaled for large distributed networks of strangers and familiars through Social Protocols enable selective visibility for social signaling.

Organization of social physics.org

SP is in its infancy and therefore is receptive to many positive influences. At the moment, the SP co-founder and technical architect, Paul Trevithick is creating the base layers of the SP platform. The platform is an extensible software framework to support the development and deployment of plugins from a community of contributors. It incorporates peer-to-peer technology from SUN’s open source project JXTA (www.jxta.org) software as well as the open source Eclipse plugin-based applications framework originally sponsored by IBM (www.eclipse.org).

We anticipate setting up to seven separate Working Groups to flesh out key aspects of the framework that would provide plug-in protocols for the SP platform. These are:

1. Network Visualization – graph analysis and rendering
2. Technical Architecture – data management, performance, scalability, security.
3. Metrics Computation regarding Interactions, Trust, Shared Awareness, Self-Synchrony, Social Density, Network roles, etc.

4. Content Metadata Tagging with respect to topics and types of interactions and digital conversations – email, instant messenger, blogs,
5. Group Context. Privacy, Selective Visibility
Tools for Writing and Testing Social Protocols
6. Interoperability – compatibility with existing and new collaboration tools across the range of supported operating systems.
7. Trust, Referral, Sense-Making and Recommender Network Protocols

ARCHITECTURE

Physical View

