Digital Government through Social Networks: How citizens can aggregate their money and votes to define digital government

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Abstract

Politicians seek only money and votes. Citizens control all the money and votes but have never participated broadly and systematically to allocate their control of those resources to affect governance. North Americans possess a "participatory surplus" fueling open source software and presidential campaigns, energizing millions. Well-understood social networking services could provide a barackobama.com for constituents of any politician and for the stakeholders of any government agency or service. How might campaign web site experts design and host a network to govern governance?

"Surrounded" online by fully empowered and well informed, networked constituencies, our politicians and government employees would be motivated by self-interest to attend carefully to any policy formulations carrying the force of voters' money and votes. Online, a plurality of anonymous but authenticated voters can pledge their future votes and donations contingent on government behaviors. When issues-based commitments to votes and donations are aggregated, published and audited, politicians are likely to behave as if the entire government were online, a stepping-stone to digitizing government itself. A virtual congressional district is the epitome of politician advice and consent, guiding a representative's policies as effectively as an airplane's "trim tab" governs its far more unwieldy rudder. Proponents of Digital Government could use Virtual Districts to break down the resistance keeping the US on paper.

Such a system must engage real-world mechanisms to control the existing levers of government. Politicians are moved not by pure argument or the honest expression of their constituents' preferences, but by their career interests. Any social network aimed at empowering constituents must take those realities into account. The overarching reality is that political power—governance—is regional. Voters' networks for governance must map to voters' real-world, geographical jurisdictions.

General Terms: Human Factors, Theory, Management.

1. INTRODUCTION

The 2008 U.S. presidential campaign proved Clay Shirky right, having observed that we have a "huge, and largely unused, participatory surplus of people who are ready to contribute to efforts and causes larger than themselves."[1]

Since 2003, the authors have developing (one as principle designer and two as advisers) on a software platform designed to tap the "participatory surplus" of the citizenry. We have learned that, to tap those resources, it is not enough simply to provide citizens with a large, open, virtual space. A social networking system designed for participatory governance must work the way government works, and must provide structured work flows by which politicians, agencies and citizens can affect one another.

This paper describes the context and the political/social considerations that taught us the overwhelming power of citizens who aggregate their money and votes to manage politicians and the digital government they naturally embrace.

2. A PARTICIPATORY SURPLUS

In his seminal book, "Here Comes Everybody", Clay Shirky suggests that citizens are better equipped to manage their governments than most of us think, and that our society has been here before.[2] Speaking at the Web 2.0 Conference on April 23, 2008, he explained:[3]

> "...the critical technology, for the early phase of the industrial revolution, was gin.
>
> "The transformation from rural to urban life was so sudden, and so wrenching, that the only thing society could do to manage was to drink itself into a stupor for a generation. …
>
> "And it wasn't until society woke up from that collective bender that we actually started to get the institutional structures that we associate with the industrial revolution today. Things like public libraries and museums, increasingly broad education for children, elected leaders….
>
> "…Starting with the Second World War a whole series of things happened—rising GDP per capita, rising educational attainment, rising life expectancy and, critically, a rising number of people who were working five-day work weeks. For the first time, society forced onto an enormous number of its citizens the requirement to manage something they had never had to manage before—free time.
>
> "And what did we do with that free time? Well, mostly we spent it watching TV."

Savvy Presidential campaign managers have harnessed the emerging online participatory surplus to transform American

politics. The Godfather of the online campaign is Joe Trippi, campaign manager for the Howard Dean presidential campaign. In 2003, he put the campaign on the Web because it offered the only real hope of raising sufficient money for Dean's insurgent campaign.[4] Within three months, not just money but participatory surpluses of energy and resources flowed in to Burlington Vermont from all over the country, like iron filings to a magnet. Many volunteers showed up uninvited, but most logged in from home. Every revolution starts with baby steps, usually unheralded at the time, and this revolution started with the simple concept of registering voters at a web site.

Before 2003, no political campaign had "members," just marketing targets. But because it's customary for a web site to seek viewers to register as members and customers, so did Dean's campaign. When the campaign started a blog, daily visits exploded. When the blog was opened to comments, members of the campaign started their own conversations, cross-talking in the comments. They saw themselves as owners of the campaign, communing in the ad hoc groups forming around every blog post. Eventually they got the power to hold their own mini-fundraisers and house parties and "meetups." But, what they were *not* equipped to do may have cost Dean the nomination: They could not form persistent groups to champion the issues that mattered most to them.

The Obama campaign fixed those lacks and several more, and defeated the most powerful shoo-in nomination in modern times. But it was still just politics, not governance. Or was it more than that? Did the Obama campaign point the way to a revolution in policy formation?

3. FROM ONLINE CAMPAIGNING TO ONLINE GOVERNING

Society discriminates between politics and governance. Partisan politics so thoroughly drives policy that we decry its apparent waste of time, money and energy, idealists wondering why we can't just get along. But the US has just witnessed a masterful online campaign, engaging so many disparate people with such a powerful outcome, that we need to assess whether these successful campaigning techniques are transferable to governing and policy formation.

Every element of governance involves a large or small campaign. Behind every law, amendment, confirmation, veto and override are the four elements of consequence that also govern every campaign:

1. Viewpoints
2. Money
3. Votes
4. Careers

When a viewpoint–a stance on an issue–is backed by sufficient money and votes, with career consequences for the participating politicians, the outcome is predictable.

The money and votes platform is based on that obviousness, equipping citizens to connect those four levers, to give voters a way to *govern* government just as an airplane's or sailboat's "trim tab" governs its far larger, more unwieldy rudder.

4. HARNESSING ONLINE CAMPAIGN WORKFLOWS FOR GOVERNANCE

The progression from passive observer to fire-breathing activist is implied by a study published in 2006 by Forrester Research, describing the progression of online participation more broadly. It presents engagement as a ladder with six rungs, from the least active to the most engaged[5]:

1. Inactives
2. Spectators
3. Joiners
4. Collectors
5. Critics
6. Creators

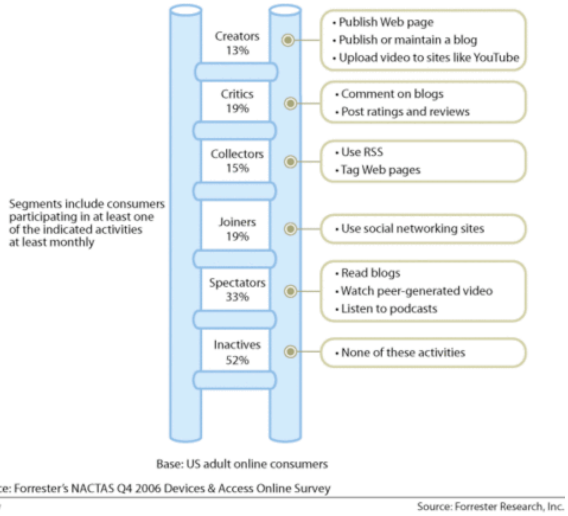

Figure 1. Forrester Research Ladder of Engagement

Forrester's Ladder of Engagement is generalized to all "social" online activity, so we developed a more granular ladder to model the activist's progression. In both cases, only some people will make the full progression, but any progression by any member of the campaign adds to the campaign's success. We have seen this same progression in the four U.S. presidential campaigns that made the most innovative and "webbiest" use of the Web:

Howard Dean, 2003-4
Ron Paul, 2007-8
John Edwards, 2007-8
Barack Obama, 2007-8

When applied to political engagement, "creators" are not the top of the activist ladder, but just below the middle:

1. Readers
2. Critics
3. Creators
4. Joiners
5. Doers
6. Leaders

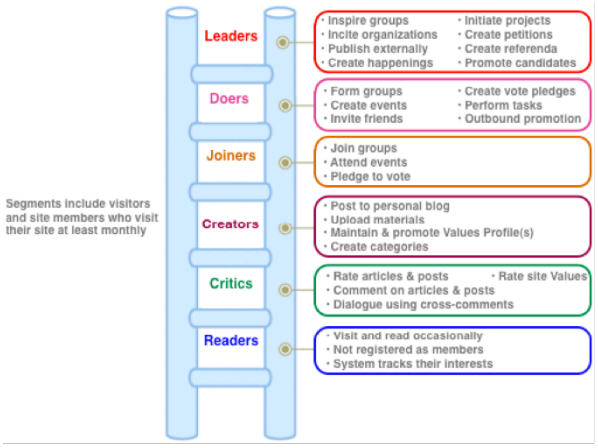

Figure 2. Citizen governance Ladder of Engagement

By any standard, people progressing through that sequence within any campaign comprise a social network, whether they're on line or off, whether they know each other before or because of the campaign, whether by name or an obscure "handle". All that matters is that an individual voice has an evolving reputation visible to others, with weak or strong ties among them, and that their effort is perceived as a shared and growing success. But only when the campaign is coordinated online can it unlock the full force of its members' participatory surplus.

"Real" campaigns–mailings and meetings and calls and glad-handing and fervor–live only in collective, faulty memories and ephemeral news reports.

Counter-intuitively, a "non-real" (online) network is continuously accessible to its members, to inform us, impress us and to add to whenever we want. Invisible bits of magnetism on unseen machines present and maintain for us evidence of our actions and importance to each other, apparently permanent and always meaningful. Improbably, online networks are far more real and accessible, so we use and rely on them more and respond to their signals with more alacrity.

5. A NETWORK OF 435 VIRTUAL CONGRESSIONAL DISTRICTS

The online network may be "unreal" and ignore geographical distances, but the process by which citizens engaged with government cannot. As Steven Clift has said, representative democracy is based on geography:

> "...content created by citizens must be identified by place instead of simply organized by issue. Content, from a news story to an online comment to a picture or video, needs to automatically be assigned (or "tagged") with a geographic place. In addition, content bounded by a state or region or identified as global will be essential.
>
> New content must be easily searched and aggregated for community-level display. As neighbors gravitate to talk about local issues online, so will our elected representatives tap our public pulse online."[6]

In developing our software platform, we took this advice to heart. Clift states that we need a citizen-owned barackobama.com for every congressional district, senate seat, state and hamlet. For good measure, throw in a few thousand more, to support and guide each agency and bureau–and the Presidency: why should candidates own our presidential conversation? Our platform therefore makes it easy to create thousands of barackobama.com's by locality, nested localities, agencies, and candidates, and enables these to interact in ways that reflect their real-world interaction.

The gold standard for a US governing network would be a network of 435 virtual congressional districts, each of which is associated with one of the 435 "real" districts:

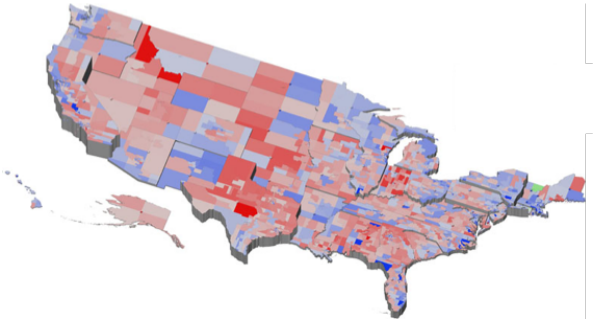

Figure 3. America's 435 Congressional Districts

We are therefore building a platform that provides a public toolset for each of the US Congressional districts.

Providing a toolset is not enough. In the "real world", voters feel powerless because they see the US federal government as an unapproachable monolith even when, rarely, it is depicted as 435 diverse districts. U.S. voters generally don't think of a district as a tangible political entity. They generally don't know the boundaries of their district. And if they do, they often feel it is too large for them to affect.

Intimate social networks resolve the dilemma. Voters in this example, California's 12th District, which includes Silicon Valley, could easily colonize a virtual district:

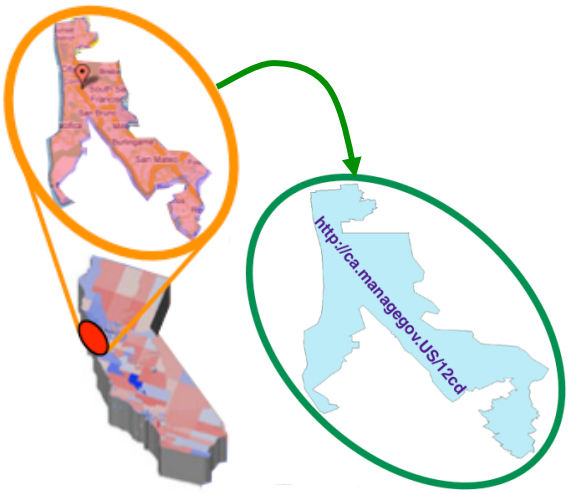

Figure 4. A virtual congressional district

Any virtual congressional district could support a dramatic increase in the voters who know what district they're in, its boundaries and the issues they want to push to their representatives. Members of a "virtual" district would

quickly discover how few votes it takes to thrill or frighten their representative.

Virtual district members would be positioned to crack the shell maintained by every congressperson, each consumed with the need to raise $3,000 each day to fund the next campaign. Paul Simon, a fiercely ethical congressman and senator, once noted,

> "When you're handed a stack of messages at the end of the day, most of which are from people you've never heard of, and one from someone who has given you $1,000, which call do you think you're going to make?"[7]

Politicians know that money is simply an abstract, as close to buying votes as they can get. Direct collaboration with their voters' governing network could easily earn more money and votes, more reliably, than glad-handing donors at a $100,000 fundraiser costing $40,000 to host. They just don't have a way to do it.

At the very least, virtual congressional districts would give citizens a better sense of their real Congressional districts… by letting them inhabit it, online, at their convenience.

6. All Policies "is" Local

Thomas "Tip" O'Neill famously taught Americans that "All politics is local". As a national network of virtual districts develops, its members could achieve strategic policies by coordinating local politics. A national consensus might deplore a politician's vote on an arcane but crucial issue in committee, but today's environment provides a cloak of legislative anonymity. Constituents can't see how their representative's actions have serious national consequences. The national network's issues champions would see those connections and could recruit the politician's voters to correct unwelcome behaviors.

It's unlikely that lobbyists or special interest donations would be more convincing to a politician than an online, visible protest over a committee vote that does not affect the district's voters more than any other voters, but who are willing to support their peers on the larger network.

For proponents of Digital Government, virtual districts could break down the resistance keeping the US on paper. Moreover, it's likely that a vibrant network of jurisdiction-tagged social networks would be the best friends that government professionals have ever had.

In a virtual congressional district, the congressperson, her staff and surrogates would be required to reason with the district's stakeholders and to collaborate rather than pontificate, due to the conversational Web's abhorrence of didactic or marketing language:

> "Conversations among human beings *sound* human. They are conducted in a human voice." *The Cluetrain Manifesto*, 1999.

The simple requirement for government representatives to talk in a human voice may turn out to be one of the highest barriers to acceptance for the platform we are building or any other like it.

The obvious question is whether an open, public conversation can develop the high quality of discourse, since so many blogs exhibit such low quality. However, social networks and indeed, the blogosphere itself, often generate cases where the blogosphere leads the mainstream media, rather than follow or reflect it. An early example is the Trent Lott case, where blogs pursued an issue after the media discarded it as yesterday's news. Harvard's Kennedy School for Government uses it as a case study[8]:

> "This case tells the story of how the controversy grew, with particular emphasis on the role of non-traditional media—specifically on the role of those political writers who distributed their views through "web logs". The case describes how the Lott story spread from the keyboards of such "bloggers" to the more mainstream print and television press—to the point at which public pressure culminated in Lott's resignation from the Senate leadership."

The issue of "quality" is an important one when considering the character of an active public participating in unmediated development of policy. This concern is like judging journalism based on the quality of the shoppers' "Nickle Mailers" available in every hamlet. James Surowiecki laid to rest many of the quality objections with the many examples in his 2004 book, *The Wisdom of Crowds: Why the Many Are Smarter Than the Few and How Collective Wisdom Shapes Business, Economies, Societies and Nations*[9].

7. Who Owns the Networks that Govern Governance?

Social networks must be built for technical scalability, ensuring that the servers and bandwidth are adequate as the network grows. But a network that governs governance has consequences that attract greed and fear: greed in the opportunity to profit from networks as large as MySpace or Facebook and fear masked as backlash from powerful forces as voters gang up on their politicians. Therefore it's crucial that the networks not be under the control of the organizations or institutions that develop them. This calls for a novel form of ownership, because we've learned that few owners can resist an irresistible opportunity.

The network we imagine must share the virtues of the Internet to be safe from plundering. In 2003, Doc Searls and David Weinberger described the Internet as a "World of Ends." There, Doc Searls postulated the three core virtues of the Internet[10]:

1. No one owns it.
2. Everyone can use it.
3. Any one can improve it.

If our network of governing networks is to be safe from tampering, it must possess those three virtues. The first is the most difficult, for the second and third virtues are commonly achieved by basing the service on an open source code base. How do you isolate control of a service from the entity that devised the service? By an unconventional ownership and control model relinquishing control to the community of stakeholders.

Three classes of legal entities control 99% of all assets:

1. Individuals,
2. Corporations
3. Governments

Each owner type has well-established methods to control, constrain, abandon or sell anything it owns, with few ways for others to prevent the exercise of their sole control. Such independence, so admirable in a free society, is unsuitable for an asset as consequential as a nationwide network of networks governing the government.

But there is a fourth, poorly understood, class of owner known as a trust. A trust is a novel form of entity that requires no controlling board nor self-interested shareholders nor governmental approval to operate. Managing and disposing of tangible assets is the whole point of a trust, but a simple limitation can ensure that a trust can create a network of networks but is not able to control or sell it. For this purpose we have created a structure designated an "Internet services irrevocable non-corporeal trust." Such a trust is restricted from owning any tangible assets, like money, property or securities, because even the largest social networking web service needs only one property right to host its network: an intangible asset called a web hosting agreement. Naturally, the hosting cost is expensive and increasingly so. Where does all that money come from and how can the beneficiaries of the network be sure the service won't go dark?

The web hosting provider can agree to maintain a fundraiser on its own node on the network and advertise its costs so the members of the network can pay for the services they rely on to manage their government. In theory, the site would be hostage to the uncertainty of its members' continuing support, but that's no more a risk than its exposure to the members' continuing activity.

This is the direction we're taking with the platform we are developing.

8. A Case Study: Digital Signatures

With virtual districts established, a reproducible workflow would become possible. There are four obvious phases:

1. Draft legislation
2. Campaign in the Subcommittees
3. Campaign in the Committees
4. Get the vote out in each chamber

Here is how the specific steps of the process might work in the case of legislating the use of digital signatures in certain Internet transactions, a requirement favored by many cyber security experts:

1. Draft the legislation that informed experts support. This would happen by engaging a conversation online to attract interested parties to improve or edit the proposal. This conversation might appear at a site with a URL something like http://tsa.managegov.us/digitalsignatures. (www.ManageGov.us in this example is the home site for proposed virtual districts and other services. TSA is the Transporation Security Administration. Note that these are hypothetical sites, not existing ones.)
2. Encourage members to rate each others' posts and comments.
3. When the conversation reaches a steady state, the network's algorithm designates a manageable working committee to finalize the language. These are "delegates" chosen from among the highest-rated participants.
4. The committee works in public, with other group members commenting on and rating their work.
5. After the proposed legislation is drafted, group members are invited to indicate their commitment to it.

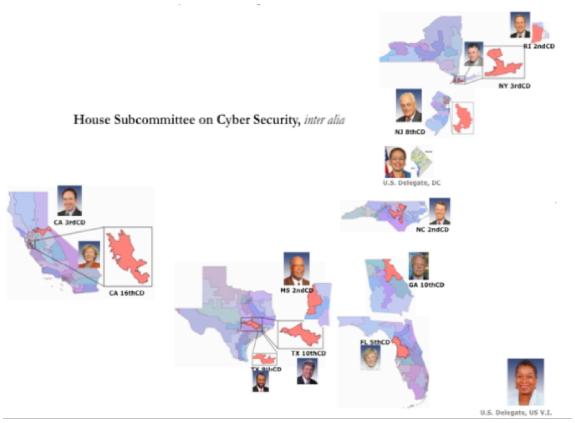

Figure 5. Committee votes affecting digital signatures

6. This starts several mini-campaigns of committee members by identifying the subcommittees with jurisdiction. For Cyber Security, the House subcommittee is the House Committee on Homeland Security, currently with members from thirteen jurisdictions:

Using our "ManageGov.US" domain example, these representatives would be naturally influenced at their respective virtual districts. For example:

1. With the infrastructure in place, interested parties can make their case to the network and use the "participatory surplus" to energize the debate
2. At each of those virtual districts, voters would be encouraged to see the need for digital signatures. They would engage in conversation and online lobbying. With enough people participating and enough support expressed, the representatives would have good motivation to participate.
3. The citizens' aim is not simply to chat about the issue but to show their representatives that there are votes at stake. This would make it harder for the representative to side with lobbyists against the best interests of her or his constituents, not only because the constituents have Right on their side, but because all of this is happening in public. The outcome would not be certain, but the odds of rational, systems-based thinking would be improved.
4. With the subcommittee members engaged, the Digital Signature group members would then reach out to voters in the committee members' districts and then repeat with the subcommittees and full committees of the Senate.
5. Before the legislation comes to a full vote, the Digital Signature movement would work similarly, nationwide, to get out the required votes on the floor of both chambers.

9. If We Build it, Will They Govern?

If we've learned anything from the online ferment inspired by candidates like Howard Dean, Ron Paul, John Edwards and Barack Obama, it's that America's participatory surplus can energize voters more than their day jobs.

The Industrial Revolution discovered the power of the centrifugal ball governor, by which an engine's revolutions regulated its energy without manual interference. Thus was born the notion of automatic regulation of previously unmanageable systems, according to pre-established rules rather than ad hoc vagaries. Web services increasingly empower their members to manage their preferences according to a formula based on their interests, without the inconvenience of constant tending.

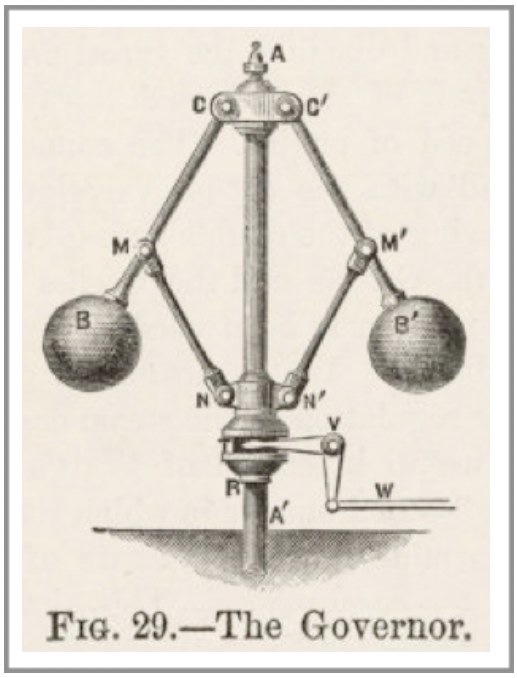

FIG. 29.—The Governor.

Figure 6. Crowd governance can be self-adjusting

Once voters learn to partner with politicians and agencies to govern the engine of government, will they ever stop?

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