rendezvoo.net

the "space station" for groove users

Introducing rendezvous services for groove communities

A new generation of peer-to-peer applications is changing the face of the Internet, and will have long-term effects on the ways by which individuals communicate. In these "p2p" environments, one common theme is a sort of user empowerment: the ability for people to create, find and share information at the edge of the Net: on users' PCs and other devices, rather than via centralised servers and central controls; "without asking for either help or permission".[i]

Groove[ii] is the prime example of using peer-to-peer communication for private group activities. Using many forms of communication – voice, instant messaging, text chat, files, documents, databases – and across a wide spread of different connection types including offline activity, the Groove software allows end-users to freely associate in "spaces" shared privately by the members of small groups. These groove "shared spaces" lend themselves well to social activities amongst friends and family, with a richness, immediacy and privacy previously impossible online. Groove is also perfectly suited to business tasks requiring spontaneous, secure collaboration by people inside and across organisations: client service, customer support, negotiation.

The flexibility and immediacy of Groove is attractive to many groups of users in ad-hoc communication. But it also gives business a new dynamism; focused back on the "community", personal relationships and "just getting things done".

Here we describe a new service for Groove communities: *rendezvous*.
The creation of well-known rendezvous venues unlocks and catalyses the value of "networks of associates".

The value of few-to-few networks

There is an enormous range of "peer-to-peer" applications. It's useful to categorise them into three types:

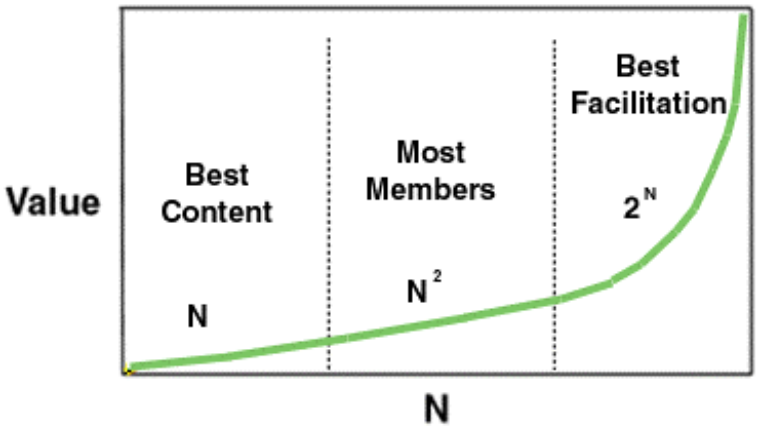
- "one to many" (where distributed nodes contribute to a central point),
- "many to many" (where many nodes contribute to all the others), and
- "few to few" (typified by small-group communities).

The private, closely interactive groups enabled by Groove are defined around "few-to-few" interaction.

Does "few" mean "unimportant"? No: the value of self-organising groups will eclipse the network effects of other types.

"One-to-many" systems, whether used for content distribution or not, behave like broadcast; the network value increases linearly with the number of nodes. "Many-to-many" networks – Napster and Gnutella, for example – have a more powerful dynamic, where the total value of the network follows Metcalfe's Law[iii] increasing by the square of the number of participants. These are also referred to as "power law networks".

"Few-to-Few" networks can also be called "group-forming networks". Where each user can freely associate with any other combination of users to create groups, the value of the network *in toto* can be measured by the number of possible groups. This number increases exponentially by the number of participants. Dr. David Reed was first to describe this[iv], and Reed's Law shows that group-forming networks – such as Groove – can have vastly more powerful network effects than one-to-many or many-to-many environments.



(source[v])

This 2^n exponential effect requires free association, and is enabled by facilitating self-forming group activities.

Rendezvous services provide places in which these groups can be formed and grow.

Rendezvoo.net

Groove spaces are private: secure collaboration amongst a known group of people. Generally the existence of an individual, or of a collaboration space, is not made public. Rather, any individual may create numerous spaces containing tools for a particular sort of interaction – chat, file sharing, project management – and subsequently invite other known individuals to participate in these spaces.

Hence, Groove spaces are "invisible" by design. The world at large has no means to discover their existence, and even if their existence is known, has no way to request access other than by direct contact with the people involved.

This is in direct contrast to the Web, where Web sites are available to anyone who knows the address (and maybe a username/password to control access). Web pages are very commonly connected together with hyperlinks. Directories and search engines such as Yahoo and Google have created massive and very accessible resources for the discovery of Web sites by the general public.

Rendezvous services, and rendezvoo.net in particular, provide a link between these public and private environments. The function of a rendezvous site is to provide a publicly-visible "request for participation": a well-known place where people can request to join existing private spaces, or can create new private spaces and solicit participation by others.

The rendezvoo.net service creates a decentralised network of many individual rendezvous venues. Each venue is generally organised around a very specific interest group: games, syndicate betting for horse-racing at Cheltenham, sharing of cross-stitch embroidery patterns, discussion of Balinese music, auction of porcelain dolls, sourcing of finished non-iron shirts, or whatever. Individual rendezvous venue can combine by syndication, creating federations of interests according to various hierarchies which can easily be navigated and searched.

Rendezvoo.net venues are distinguished from existing portals in that they list transient spaces soliciting intensive participation (the "group-forming" purpose), whereas Yahoo - for example - lists persistent sites soliciting eyeballs (the "one-to-many" purpose). There are some sites – eBay, or B2B exchanges, for example – already built around rendezvous for specific group activities. Rendezvoo.net provides a spectrum of these sort of rendezvous services to Groove users, both in a very generic form (unstructured) and in formats very closely linked to business processes such as auction and exchange.

Rendezvoo.net will be useful to anyone interested in hosting special-interest-group communities. We anticipate that services from rendezvoo.net will be useful to many existing community groups, portals, Web directories, market makers, exchanges, category hubs and corporate intranets. Besides catalysing the 2^n exponential potential of group-forming networks, rendezvoo.net venues also directly benefit from a Metcalfe-style n^2 network effect through syndication and discovery of shared interests.

Examples of rendezvoo.net in action

A college **alumni association** hosts occasional parties. For each event, they create a Groove space and invite other members to participate, by finding the listing on the association's "rendezvoo venue" in its members-only Web site.

A chain of **nightclubs** has a rendezvoo.net venue for each of its locations; each has a separate Web page, which is part of the nightclub group's website and also accessible from "rendezvoo.net". At each venue page, the club publishes forthcoming attractions. Members of the public can create Groove spaces, invite the venue's rendezvoo agent, and hence ask to meet like-minded people in advance of a night's entertainment. Where a member is accredited using a "ticket number" given to them at the event, the nightclub's DJs can also publish their club music mixes as MP3 files, directly to the venue's customers, through these Groove spaces.

An educational institution hosts **online learning** "classes" in Groove spaces as a complement to face-to-face meetings. Class availability (with a limited number of places for each class, of course) is publicised at various subject-specific "rendezvoo venues". Individuals log in to the institution's website, locate classes of interest, and sign up by clicking the invitation link – and immediately join the Groove space containing course materials, previous discussion, and interactive learning tools.

Mary, John and Bob intend to play bridge, using a **game** tool in Groove. They have created a new space for the game, but still need a fourth player, since Mary's regular partner is ill. They invite the "rendezvoo agent" of their local bridge association into their gamespace, which posts an invitation to the association's Web portal as one of the various "spaces soliciting participation". Carol visits the Web site, sees the request, and clicks a hyperlink; she is brought into the Groove space, and can begin the game. At this point the rendezvous service removes the listing of this space from its Web page.

Mary, John, Bob and Carol also publish their space to the rendezvous service to invite **spectators**. A limited number of spectators can elect to join the space with a "spectator" role, where they find a private chat-room for discussion of the game, and perhaps even some tools for betting on the progress of the game.

MegaCorp has arrangements with a number of independent expert advisors to help its employees with tax and pension planning. Using a private rendezvous venue, MegaCorp employees can create secure Groove spaces containing some of their financial details, and request one-on-one **online consultation** sessions from these experts.

The "Shirts2You" **business-to-business exchange** manages a portal containing commentary, news and information around the supply market in finished shirts. A major retail chain uses Shirts2You's rendezvoo.net venue to solicit quotations and references from new suppliers as part of its sourcing process. The retail chain's category managers oversee creation of "exchange spaces" in the company, and invite the Shirts2You rendezvous agent into these spaces. The rendezvous agent publishes

summary information on the sourcing requirement to the Shirts2You rendezvoo.net Web page, which is part of their information portal. A supplier in Hanoi regularly visits this portal, sees the new request from the retail chain, and submits some supply service information as part of their request to join that exchange space. The supplier and customer use this sourcing space to discuss terms and negotiate the transaction in private.

The rendezvoo.net service overview

Individual Rendezvoo.net "venues" consist of

- A listing of current Groove spaces requesting participation;
- A Web page containing this listing as HTML;
- Other formats providing this listing in XML;
- A Groove "rendezvous agent" which coordinates the publication (listing, embargo and de-listing) of space invitations, and the acceptance process by which new users can join those spaces;
- A database which manages the current listings, and which maintains a searchable and navigable index of other syndicated rendezvoo.net venues.

The Web (HTML) and XML renditions of the rendezvoo.net site provide a public interface. Users communicate with the rendezvous agent using secure Groove services: instant messages and invitations, space transport, and groove tools.

Individual rendezvoo.net venues may be syndicated to form parts of a large network, which can be searched and navigated as a whole or in part. Syndication of rendezvoo.net venues uses open XML[vi] protocols (RSS[vii]), in order that third-party software suppliers might provide integrated rendezvoo.net services in future. Some rendezvous venues will be maintained initially at the Web site of rendezvoo.net. Many sites will wish to be hosted separately but still a full part of the public rendezvoo network, and thus establish themselves as a community hub for a special interest purpose. The public rendezvoo network enourages use of standard taxonomies, for easy navigation as a hierarchy. Yet other sites will wish to serve only a distinct community, whether inside a corporate environment or as a private exchange.

We will provide both packaged software and hosted services for rendezvoo venues. Our hosted services are subject to some standard terms and conditions, both to protect individuals' and groups' privacy and to prevent the various forms of association with unlawful intent. Software is available for common Web servers, and also with customised extensions for particular purposes such as vertical e-commerce spot markets.

Summary

Over the next two years "group-forming" peer-to-peer networks will rapidly overtake Web services, and portals in particular, in their importance and usage. Groove spaces, which give users a unique combination of immediacy and privacy, will become an important way for people to conduct business and to interact socially.

The reach of these networks will depend on several factors:

- Acceptance of decentralised, client-based software applications such as instant messaging and Groove;
- Provision of both business-led applications, and consumer-facing services;
- Facilities which enable free association.

Realising the exponential potential of "few-to-few" peer-to-peer networks will need a range of group facilitation services. The most generally useful is *rendezvous*.

Rendezvoo.net is the first rendezvous service for Groove users. We provide decentralised, immediately useful venues by which users can find and meet those with interests in common.

Rendezvoo.net's software and services are applicable for public use, for private member-only groups, or for business. By hosting rendezvoo.net venues, organisations can extend and consolidate their roles as community hubs.

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[i] Clay Shirky of The Accelerator Group, keynote speech at the first O'Reilly Peer-To-Peer Summit, San Francisco, February 2001. – quote from webcast video at http://www.technetcast.com/tnc_catalog.html?item_id=1167

[ii] Groove Networks Inc, http://www.groove.net/ and http://www.groovenetworks.com/. "Groove" is the name of the company and of their software product.

[iii] Metcalfe's law is described many places, including http://www.mgt.smsu.edu/mgt487/secopin/newstrat/metcalfe.htm

[iv] Reed,D: "Weapon of Math Destruction", Context Magazine, 1999. http://www.contextmag.com/setFrameRedirect.asp?src=/archives/199903/DigitalStrategy.asp

[v] Reed,D: "That Sneaky Exponential – Beyond Metcalfe's Law to the Power of Community Building", Context Magazine, 1999. http://www.reed.com/Papers/GFN/reedslaw.html

[vi] http://www.w3.org/XML/, also http://www.xml.com/, http://xmlhack.com/ and many other resources

[vii] RSS 1.0 specification, http://purl.org/rss/1.0/