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PROFESSOR : George R. Widmeyer

STUDENT : Sandy Murti

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ONLINE COMMUNITIES FOR SOFTWARE DEVELOPERS: THE MICROSOFT DEVELOPER NETWORK MODEL

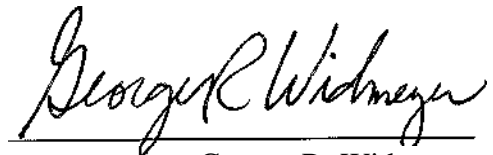
By

SANDY MURTI

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Faculty Comments

Electronic commerce initiatives can be viewed in terms of three dimensions - content, community and commerce. Building communities on the web supports commerce activities at different stages of the customer life cycle. This report looks at the creation and maintenance of communities for software developers. It does this by comparing two different approaches to communities; either the community is independent from or else affiliated with a particular vendor. This paper argues that a vendor-affiliated community provides the most benefit to both the software developers that are part of the community and to the vendor that creates and supports it. This research is based on a single case study and the results may not generalize to other special interest communities, but it does provide a useful methodology for considering this issue. The conclusions in this case do seem valid.



George R. Widmeyer

Adjunct Associate Professor
Computer and Information Systems

INTRODUCTION

This paper examines two very different models that have been used to build communities on the web. For the sake of illustration and argument, online software developer communities are used as specific examples to analyze the pros and cons of these different models but the conclusions drawn in this report could potentially apply to online communities in general.

Two types of online developer communities are examined in this report. The first type are those that have been created by individuals with common interests who have found each other on the web, and have used the web as a common meeting place to discuss issues important to them. These communities tend to be self-sustaining and self-managing in the sense that aside from some basic infrastructure and tools that have been provided by a neutral third party or even created by a group of members within the community, it is the members alone who have kept the community alive. These communities are not exploited for commercial value or at least commercial value is not the main reason for their existence.

The second type of developer community examined in this report is the kind where a commercial enterprise creates and fosters a community on the web with some overriding commercial intent. This intent can range from using the community as simply a tool to obtain feedback from customers about the company's products to using the community to sell products or services to community members.

Communities that fit into each of these two categories abound on the internet, but for the sake of this paper, some specific examples are examined. An example of the first type of community can be found at sites like www.slashdot.org and Usenet newsgroups that have been around long before the internet gained widespread acceptance. An example of the second type of community created primarily for commercial purposes is the Microsoft developer community located at www.msdn.microsoft.com, also referred to as MSDN (for Microsoft Developer Network).

What this paper attempts to do is to compare both models of communities mentioned above along a number of dimensions and resolve whether communities like MSDN should abandon the development of branded, commercially motivated online communities and instead become active participants in independent member-sustained communities.

Overview of MSDN

MSDN was launched as an online community and is billed as an essential resource for developers who use Microsoft development tools (such as Visual C++, Visual Basic etc.) or develop applications for the Windows platform. Microsoft's goals for MSDN are for it to be the first place that developers go to if they need resources to help them do their job and consequently use MSDN as a platform to evangelize and promote its brand, its tools and maintain a loyal customer base. MSDN by itself does not have any explicit

revenue goals and measures its success purely based on membership, traffic at the site and customer satisfaction with the site.

The site includes resources such as the latest technical documentation about Microsoft products, information on training seminars offered, a place to buy the latest books on developing for the Windows platform and a place for developers from around the world to seek out and interact with their counterparts who have similar interests. By building this premier developer resource, Microsoft's intent is to promote loyalty for its developer products, and both sustain and grow its existing customer base of developers.

Membership in the MSDN community is free and open to anyone. However, as an aside, developers can also pay a fee to become members of a program whereby they receive on a regular basis updated software, beta releases, and documentation on Microsoft products via a CD-ROM mailing. However, most of the information on the site is freely accessible to members who simply have to register online with MSDN to gain access to all areas of the site. More details about the site will be discussed in later sections of this report.

Finally, with MSDN the goal is implicitly commercial. Although, no attempt is made on the site to specifically sell products or services to developers, the branding, messaging and content are definitely oriented toward building/sustaining a loyal community of *Microsoft* developers and not simply a loyal community of developers. Microsoft

realizes the importance of developers' continuing support of the Windows platform and MSDN is one component of the overall customer experience that the company tries to provide for its developers. MSDN complements the products, technical support and marketing support that developers receive from Microsoft by providing a forum to learn more about new products and interact with other like-minded developers. In turn, MSDN is a valuable channel for the company to communicate with its customer base and gain a deeper understanding of their needs.

Needless to say Microsoft is not alone in this field. Competitors such as Oracle and Sun also have similar online resources for their own developer communities but an analysis of these sites by the author revealed that the breadth and depth of resources offered by MSDN is unmatched by the Oracle and Sun websites. In addition, this kind of comparison is beyond the scope of this paper and it is more interesting to compare MSDN with non-traditional rivals such as those mentioned above, namely Slashdot and the multitude of Usenet groups that cater to the needs of the developer community. These types of communities are the ones that MSDN often finds itself competing with for members and these are the ones that will be analyzed throughout this paper.

Overview of Usenet

Usenet is the name given to a network that was created by two graduate students from Duke University to enable information sharing between Unix-based computers over phone lines. Initially, the network was created to quickly distribute information about

Unix by posting messages to this network of machines, which in turn could be accessed by local users. These users could then respond by posting replies to the newsgroups or simply subscribe to these "conversation threads".¹

Over time the network of machines continued to grow and with it the number of topics that were posted to these machines. Today, there are thousands of newsgroups covering a wide variety of subject areas. The large majority of these newsgroups are un-moderated² and users are free to post their thoughts, comments and opinions in the appropriate topic areas. As soon as a user posts an article to his or her local machine, the Usenet network replicates this article onto every other newsgroup server that it is connected to thus disseminating the information very quickly. Users who are interested in a specific topic area can subscribe to the appropriate newsgroups and using a wide variety of software tools available today can read or be notified when new information is posted to a newsgroup of their choice. For those groups that are moderated, the moderator is responsible for monitoring and approving the postings to her newsgroups and making sure that the newsgroup is not being bombarded with spam messages.

Given its technical roots, developers were among the earliest groups to become heavy users of Usenet and today there are hundreds of newsgroups devoted to developer issues.

¹ Mary Brandel, "Usenet Uses," Computer World. 2 August 1999.

² Maria Seminerio, "What Usenet is and is not," ZDNet News. 20 February 1998.

Many developers continue to use Usenet to interact with a community of like-minded programmers on specific topics.

The simplicity of Usenet and its origins (as described above) point to one clear objective of this forum, which is to provide users with a way to share their thoughts and opinions with others who have similar interests. The non-regulated, non-commercial nature of Usenet ensures that everyone has an equal voice and can have a forum in which to discuss a topic of their choosing. Recently however, many Usenet groups have had to deal with increasing amounts of junk mail, or spam, that businesses have begun using to target various products and services to the subscribers of Usenet topics. It is important to note that these tend to be businesses of a somewhat dubious nature and larger, well-known concerns have not been abusing the Usenet network in this way. In response, many Usenet groups have become sophisticated enough to incorporate spam-filtering techniques to combat this problem.

Overview of [slashdot.org](#)

Slashdot was started in 1997 by a group of computer enthusiasts and was created for the sole purpose of providing useful information to the Linux community and the open source movement in general. Eventually, the site evolved into a general community of developers that Slashdot refers collectively to as "nerds". In fact, their tagline reads "Slashdot: News for Nerds". The site was recently acquired by [Andover.net](#), and at the

time of this report, although theoretically it is no longer owned by an independent group of developers, the style, mission and content of the site has not changed.

Slashdot has created a very unique way of collecting information from all over the web and sorting through all the clutter to provide the most useful information to its developers. The way their community model works is that members can submit stories that they have seen on other sites on the web and from these hundreds of submissions, 8-10 stories are picked daily by the site administrators. These stories are then posted to the Slashdot site and members can add their individual comments to these stories. And here lies the beauty of the Slashdot model. While the editors pick the stories to post and even post their own stories about developments in the computer world, a main reason why the site sees heavy traffic is the ability for members to participate in a discussion about a timely and relevant topic. In addition, the site also provides unique functionality that allows members to act as moderators and rate the quality of comments that are posted to the site. This allows readers to screen which articles and comments they see based on moderator ratings, helps to effectively filter out spam, and forces participants to make informative and insightful contributions to ongoing discussions if they want their comments to be viewed by others.

In keeping with this egalitarian, participation oriented model, the source code for the site is openly available and members can submit suggestions for improvement. Members can

also submit questions that they have about technical issues they are struggling with and receive responses to their queries from the Slashdot community.

For Slashdot, the goal seems to be to provide the developer community with a quick and easy view of the information that is most useful and essential for members to do their jobs. In addition, Slashdot also gives developers a forum through which they can interact with other like-minded individuals. Developers tend to be a group with unique intellectual needs and Slashdot aims to satisfy this need in an easy, democratic and entertaining way.

The only commercial aspect of the site is that it sells advertising to businesses interested in targeting their community. More details about Slashdot will be discussed in the ensuing sections.

THE 3 C's OF THE INTERNET

In analyzing whether MSDN should continue to use its current model for building an online developer community or go the way of Usenet or Slashdot, I examine each of these three communities along three main dimensions, namely content, community and commerce. This framework for analyzing online offerings is not new and has been referenced by a number of experts in their own analyses of online services, and is

sometimes referred to as the 3 C's of electronic commerce.³ Content is defined as the information that is provided by an online service, community is defined as the availability of a forum for consumers to congregate and interact with each other, and commerce is defined as the exchange of goods/services via the internet. Although the main subject examined in this paper is how to build a successful online community, the 3 C's framework can help frame the key issues and help analyze what makes a successful community.

I begin with a brief overview of how MSDN provides various elements of content, community and commerce to its customers and then use subsequent sections to discuss the benefits of this model to the two primary stakeholders involved in the MSDN community, namely developers and Microsoft.

Content

Member-generated content

Member-generated content is defined as that content which has been developed by members of MSDN. MSDN actively solicits and publishes this content for consumption by other members and distributes it via email messages on a regular basis. This content covers a wide variety of topics and can range from articles about specific applications of Microsoft products to a unique solution that a developer created for a specific type of problem. This type of content is considered very valuable by members, as they know that

³ John Hagel and Arthur G. Armstrong, Net Gain: Expanding Markets through Virtual Communities

it has been created by peers who are dealing with the same kinds of issues they are.

Consequently this content is also perceived as being more credible than a similar article written by a Microsoft employee. In other words, a member-submitted article proclaiming that Microsoft's web-server platform is fast and highly reliable receives more attention and respect than if an MSDN editor published a similar statement.

Another aspect of member-generated content is the publishing of code samples that have been submitted by members. In this case MSDN provides a platform that developers can use to showcase their expertise (which developers love to do) and for other developers to learn from more experienced peers.

Case studies

Case studies are posted online for members to study and learn from. The most recent example of such a case study that was very well received by MSDN members was a series of articles about building an online bookstore using Microsoft tools, from the early stages of simply providing information about books to customers, to the final stages of building a full-scale Amazon.com-like e-commerce site. The entire case study was posted to the site in a sequence of articles and code samples and essentially provided a road map for developers to build an e-commerce application using Microsoft tools.

(Cambridge: Harvard Business School Press, March 1997).

Product support and documentation

The site provides links to the publicly available knowledge base of articles related to troubleshooting Microsoft products as well as an MSDN-only feature where all the documentation related to Microsoft development tools is available online. This lets members search for a specific product's documentation or a specific topic area within a product manual. In addition, through agreements with booksellers like Fatbrain.com, MSDN also allows members to purchase recommended reading on topics related to Microsoft products.

Community

MSDN in its current form also provides tools and resources that enable its members to participate in a community of their peers by sharing and soliciting information that would help them in their roles as developers. Some of these are described below.

Newsgroup reader

An interesting feature available on MSDN is the ability for a member to subscribe to specific newsgroups within the Usenet hierarchy from the MSDN site using the web browser itself. This feature has several advantages. It eliminates some of the inconvenience involved with using specialized software to access newsgroups and it also categorizes the relevant newsgroups for developers so they do not have to go looking for newsgroups among the thousands out there. This feature also helps developers bypass firewall issues that often prevent access to newsgroups from within corporate intranets.

However, the somewhat hidden placement of the feature reflects the conflict within Microsoft of dealing with the issues of newsgroups on MSDN and the lack of control over the quality of content available in this forum. Although newsgroups can be useful to the developer community, the feature is somewhat buried deep within the site and is hard to find.

Peer support and communication

Specific features on the site have been designed to allow members to interact with each other by finding others within the large developer community who share similar interests. This is accomplished by giving members the opportunity to register themselves as experts in specific subject areas and volunteer to answer questions about their chosen area of expertise. This database of members is then available to be searched by any other member on the network. Thus, if a developer has a specific question he or she can simply search this online database of member experts and contact them via email with their question.

Commerce

Although commerce is not explicitly one of the reasons for the existence for MSDN, there are clearly aspects of the site that are oriented towards providing value-added product and services.

Training and education

The site contains a vast array of resources that are aimed towards developer education. This includes information on seminars that are held in the local geography of the user, online training courses provided by Microsoft as well as information on obtaining various Microsoft certifications through third-party providers.

Software and books

MSDN gives members the option to purchase software titles as well as books directly from Microsoft or in the case of books not published by Microsoft Press, through a partnership with an online retailer of computer-related books.

BENEFITS TO DEVELOPERS

Content

Naturally, one of the key advantages that the site possesses over models such as Slashdot and Usenet in offering rich content to its members is that Microsoft has developed and owns a lot of the content that would be of interest to the developer community.

Furthermore, if a developer wants some information on a Microsoft technology, naturally the first place to get that information would be from the company itself.

In contrast, if Microsoft used a Slashdot or Usenet model to build a developer community, this would severely limit their ability to provide deep content to their members. In the case of Slashdot, the content available on the site consists mainly of articles submitted by members. The site administrators determine which of the submissions they would like to post on the site and after that a discussion about the articles ensues. Thus, the content available is neither as deep nor as broad as that available on MSDN. This can also be attributed to the fact that Slashdot's focus is not on the content alone, but rather the sharing of opinions regarding the content. In the case of the Usenet model, although it could be argued that posts to a newsgroup constitute the content that this medium provides, the accuracy, relevance and source of the posts is always in question. In contrast, the information posted on a branded-site such as MSDN is likely to be perceived at the very least as more accurate and useful since Microsoft is itself lending its credibility to the information posted on the site. This leads me to believe that of the three models for online communities described in this report, members looking for good content are far more likely to look for this information at a site such as MSDN.

Community

Community building features although important to MSDN, do not seem to be perceived as being as valuable to MSDN members as some of the other features available on the site. The primary reason that members want to use the community features at MSDN is to help them solve some immediate problem that they are having on the job. This need is met largely through the large volumes of content provided on the site and to a certain

extent by the ability to seek out peers who are experts in relevant topic areas and ask them questions. On the other hand, the interaction features provided using models such as Usenet and Slashdot give developers the opportunity to share opinions with a community of developers in what is neutral ground relative to MSDN. Unlike MSDN, where community is only one aspect of the service, with Usenet and Slashdot community, or the ability to interact with others to obtain information, is the main reason for the existence of these models. In the case of Usenet the original goal was to bring together individuals looking for solutions to Unix-related problems and in the case of Slashdot to do the same for Linux users. Although, the argument could be made that the comments that participants posted on Usenet or Slashdot are in effect the content that these sites provide, I am making the distinction between content that is provided by unverified, potentially unreliable sources (as is sometimes the case with Usenet or Slashdot) and the content that is provided by a recognized third party (i.e. Microsoft in the case of MSDN).

Also, the absence of any kind of commercial brand (e.g. Microsoft, Sun, Oracle etc.) seems to lend an air of openness to the environments on these sites, where members know that their exchanges are largely unregulated and not monitored by a higher authority. The absence of this regulation or monitoring of activity on the site is an important prerequisite for facilitating a free exchange of information and ideas. Thus, while MSDN does provide opportunities for community interaction, the commercial nature of the service prevents a true community like atmosphere from developing since

members may perceive Microsoft as having a bigger voice on MSDN. In a true community, all stakeholders should have an equal role to play and this might explain the popularity of the Usenet and Slashdot models when it comes to pure community interaction.

Commerce

Although, Microsoft does not make an attempt to push services and products onto its developers, the ability to make these purchases is a valuable feature for developers who come to the site looking for information on Microsoft products. Developers are often short on time and having one location where they can search for good information, and buy any good information or service that they come across, is a valuable resource for them. If Microsoft were to abandon the current MSDN community model in favor of participating in a forum such as Usenet or Slashdot, it would not have the ability to bundle these potentially useful services for developers.

BENEFITS TO MICROSOFT

Microsoft has its own reasons for creating and maintaining MSDN as a premier online resource for the developer community and this section explores what the organization gets out of developing this online resource.

Content

Microsoft gains a twofold benefit from the content that is available or created for MSDN. One benefit is being able to draw on the entire member community for the content itself by soliciting member contributions that can be published on the site. Another benefit to Microsoft, that is a natural consequence of the site being owned and operated by Microsoft is that the organization retains control over the content that is published on the website. This is in contrast to the lack of power possessed by the owner-operators of Usenet and Slashdot. This control over the content enables Microsoft to determine the nature of the messaging that is communicated via the site and prevent the publishing of content that may be deemed to be detrimental to its image and brand. While this is a benefit to Microsoft, this could also be a reason that developers do not see MSDN as a true community site where all participants have an equal stake, but more of a source of accurate information regarding Microsoft products.

Community

Microsoft does encourage the creation of a community at MSDN by providing tools (as described above) for members to participate in an exchange of information. Here again, the benefit to Microsoft is to be able to promote its site as a meeting place for the developer community. A high number of active participants at MSDN lends legitimacy to the site in the world of developers and allows MSDN to attract even more members to the service due to the network benefits of the large community. However, here once again the issue of control and credibility become relevant. Due to the nature of MSDN,

specifically its Microsoft-driven commercial nature, developers may call into question how open and unregulated an environment MSDN really is. Consequently, this is a key area where the neutral and democratic models of Usenet and Slashdot have an edge over commercially branded communities such as MSDN.

Commerce

As far as the benefits to Microsoft of commerce on MSDN go, naturally it is the perfect place to promote value-added services mentioned above such as training, books and software products. However, Microsoft does not consider MSDN to be a revenue generating business. In the event that the emphasis on products and services increases in the future, MSDN would be better positioned to provide these than would community models such as Usenet and Slashdot.

The tables below summarize the discussions presented in the previous sections. They reflect the tradeoffs in benefits that both Microsoft and the developer community have to make in trying to assess what type of community model (MSDN vs. Slashdot vs. Usenet) best meets their needs. Note that the check marks in each of the boxes should be interpreted as relative measures of how successful a model is at providing content, community or commerce.

Table 1: Benefits to developers from each of the following online communities:

	Content	Community	Commerce
MSDN	✓✓✓	✓	✓
Slashdot	✓	✓✓✓	
Usenet	✓	✓✓✓	

Table 2: Benefits to Microsoft from using one of the following models to build an online community:

	Content	Community	Commerce
MSDN	✓✓✓	✓✓	✓✓
Slashdot		✓✓✓	
Usenet		✓✓✓	

MSDN strives to create value for its members in a number of different ways. Each of these tactics drives towards the goal of providing developers with all the information they need to help them do their job well. By doing this effectively, they provide developers with a compelling reason to become members of the network, thus driving membership and site traffic higher, which ultimately are the metrics by which MSDN measures success.

From the discussion in previous sections, it is clear that Microsoft wants to provide the broadest and deepest content to its members. And when evaluated against this objective, they have succeeded for the most part in accomplishing this goal. This is confirmed by

the fact that developers continually rate the MSDN site as one of the top destinations for developers.

However, a large part of the reason for the success of MSDN can be attributed to the size of the existing Microsoft customer base and a lack of viable alternatives to MSDN. In other words, if I were a developer using a Microsoft tool, there would be no reason for me to go anywhere but MSDN to find out more about the products I am using. Why go to a non-Microsoft site when I could go directly to the source? Microsoft owns the products and therefore owns a lot of the proprietary content it provides on the site. The company has used this as a lever to bring customers to its site and then overlay tools to facilitate community-like interactions between its members.

In the case of Usenet or Slashdot, success is really determined by the members themselves. With Usenet, a newsgroup is only as valuable as the comments posted by its participants. If users stop postings to a topic area, that effectively spells the end of the newsgroup until it is resurrected at some future time by another group of users. Thus, in the case of Usenet, participants literally make or break the community since the network by itself does not provide any value.

This is also true to some extent in the case of Slashdot since the core value-added service it is providing is a discussion (or conversation) about a particular topic that is being moderated by the collective community of members. Although, unlike Usenet, Slashdot

also provides additional features such as a customizable portal for developers, opinion pieces from the editorial staff, and free email, the main reason that it boasts high levels of popularity in the developer community is the quality and quantity of interaction that visitors can get. Without this participation the site would just be one among several information portals on the web.

Which brings us to the question of which online community model provides maximum value to its members and whether MSDN needs to make any changes to its model.

Judged purely by the degree of unregulated peer interaction, Usenet and Slashdot by far provide a richer community experience. Both these models are great examples of what a true community is like. It's about people with shared interests coming together to discuss their ideas in a forum unencumbered by rules, oversight or regulation. However, MSDN wins out over Usenet or Slashdot by not only facilitating community interactions between its members, but also supplying valuable content that makes developers lives easier by providing one location that meets both needs. This would be more difficult to do with a model like Usenet and Slashdot where content and community are somewhat fragmented. The community that MSDN seeks to build is one that helps developers solve problems and they come to MSDN because the combination of content *and* community gives them the best shot of finding useful solutions to these problems.

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