



The Open and Closed Styles of Talent Acquisition and Management: *Which takes an edge where*

Rahul Kala

rahulkalaiitm@yahoo.co.in

Students' Forum for Free/Open Source Software,
Indian Institute of Information Technology and Management, Gwalior, MP, INDIA

Abstract

The phenomenal success of Free/Open Source Software during the recent years has led researchers in all related fields to re-think and re-evaluate the studies and concepts, especially those which the open source violates. Talent management and talent acquisition is no exception to this. The sudden rise in open source projects and their success is a cause of motivation for all of us to evaluate their philosophy and implement the same. Proper talent management and acquisition of talent can play a key role in strengthening the industry. Traditional closed management with their classic way of functioning may still look at the open source model as a big mystery. Open source has violated many of the theories of Software Engineering like limited team size, decentralized project management, etc. The concepts of self-motivated individuals, adaptive division of labor, informal or indirect leadership, etc. are the contributions of the open source to the world.

In this paper we discuss these concepts and state their differences with the way of working of closed talent management. Even though open source has various benefits in working, but requirement of a good coordination process, redundancy of development, versioning problems, etc. pose a limitation. We present an analogy of the talent management in the two concepts with that of the natural ecosystem. Talent in open source works in a manner similar to the ant colonies. Here the process is more community oriented and there is no single dictator power. The proprietary, on the other hand, works on talent as the lions ruling the den. There is a hierarchy and that needs to be respected. Only the leader has the right to make final decision, and that is binding. We also take a look into the present conditions of meltdown and show how the open source way is better suited for this scenario. Even though the present firms may be seeing a setback at this time of recession, the impact on firms with an open source way of working is much lighter or none

at all. We also discuss the interactions between the two styles of talent management and present a model that can be adopted by the proprietary companies to benefit from open model. Our arguments of the paper not only deal with software, but also on content that comes under the domain of Creative Commons. We have taken the examples of Wikipedia, Sourceforge.net, Linux etc. for the various issues we discuss.

Keywords: Human Resource, Talent Management, Recruiting, FLOSS, FOSS, Open Source, knowledge

1 Introduction

With the increase in competition and rising growths of companies, talent acquisition and management of talent has become one of the prime concerns of any company. Companies are spending huge amounts of money to ensure that they get the best people to work for them. The growth, development and proper management of talent is another factor for which the firms are spending heavily. The world had been dominated by proprietary software for a long time. The IT revolution and the explosion of knowledge in the late 1990s made the IT jargons the center of attraction for the whole world. This phase even saw the coming up of new companies. The proper talent acquisition and talent management techniques were inevitable to be built up. It was this period where we find a lot of emphasis being given on the humans or employee base. Training sessions, Knowledge sharing practices, continuous performance evaluation etc. are all credited to the period.

It was then in the late 1990s that the revolution of open source began to propagate. Despite quality software like Linux, Apache, Firefox, etc [5, 55, 58] that were built, the business model of this movement shook the foundations of the software industry. Talent management and talent acquisition under this movement was also very different. The techniques of talent management and talent acquisition of this style



was highly debated. But the success of the movement drove the attention of the researchers towards this domain. It was natural that the traditional practices of management had been shook and questioned.

The Linux operating system is the most common example. It represents a \$25 billion ecosystem in 2008 [31]. Since its inception in 1991, it has grown to become a force in computing, powering everything from the New York Stock Exchange to mobile phones to supercomputers to consumer devices [45].

Open source has entered deep into the software industry. It has reached almost every domain and casted its presence there. Besides software, the presence of open source can even be seen in multimedia content, books, websites, etc [74]. It clearly shows that it is entering into newer industries and will soon change the face of the world. The SourceForge.net [72] Web site reports 750,000+ users with 700 new ones joining every day and a total of 75,000+ projects with 70 new ones added each day. The inflow of members in FOSS community is given in figure 1.

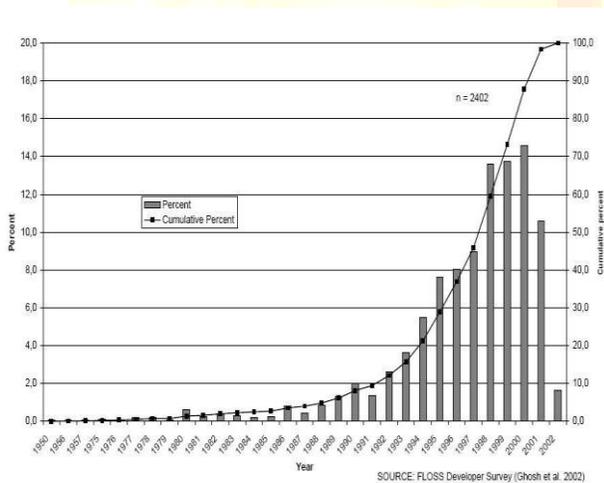


Figure 1: The inflow of members in FOSS community

Along with the developments in software, the developments at community and their initiatives especially at the level of students are commendable [76, 77, 78].

In this paper we discuss and compare these two styles of management of talent. One is the traditional style which we have been following. This style has a definite organizational structure and team structure. Power is distributed according to the laws of the firms. People have to do the job they are given. Constant efforts are applied from the part of the company to ensure that the workers perform well and

are able to perform under any circumstances and especially when new problems arise. In this paper we call this as the rule of the lions, where everything is controlled by a central coordinator and the management is as per his approvals.

The second style of working is a very informal community based style. Here the employees are self-motivated. There may not be a central leader. People are very participative and they happily contribute. The people decide things themselves and are happy doing it. They look at the product. If there is something unpleasant, they report it or even change it. The users also become employees and the employees also become users. Such is the degree of participation. We call this as the style of ant colonies. The whole community grows together and participates together. Linus Torvalds, the initiator of the Linux project, says “free software is made by craftsmen who are passionate about their art”.

There is a huge difference in the two working styles. This difference arises in terms of division of labor, leadership, motivation, coordination, team size, dynamics, working philosophy, licensing, knowledge sharing and development. The former style of working is under a common control with profit being the sole motive of work for the employees. The latter on the other hand is a style of working where people enjoy what they work. The decisions may be central, but do not force someone.

The current economic situation of the world is a challenge for the entire HR industry because of the meltdown. In such a case we analyze the two working styles and present the implications of the factors of meltdown to the two models. We find that the Open Source style of working is very stable towards such effects. Completely participative nature may not be possible for the existing corporate of the modern world because of the ‘closed’ style of working that they have been following since ages. We hence present some guidelines for these firms to benefit from the success of the open style of working.

This paper is organized as follows. In section 1.1 we discuss the literature survey. In section 2 we discuss the topic talent management and acquisition of talent. The concepts and philosophy of Free/Open Source Software (FOSS) are given in section 3. To better understand the two working models we present the analogy of the two working models with that of the lions and the ants in section 4. Section 5 discusses all the various issues of talent acquisition and management of talent. Section 6 talks about the current meltdown and its effects on the two working



styles. We present a model of coexistence of the two working styles in Section 7. The conclusion remarks are given in Section 8.

1.1 Motivation

Since the sudden growth of the open source, a lot of work has been done to understand its impact and philosophy. Even though the emergence is relatively new, there is a considerable amount of work explaining the philosophy [9, 16, 23, 55] of the open source movement. Here people have presented the basic ethics of community contribution and freedom of software. The work of Raymond [55] in this field is still the most cited. Here he presented the two styles of software development as the cathedrals and the bazaars.

The self motivated nature [2, 8, 10, 13, 20, 25, 29, 36, 37, 40, 55, 56, 66, 71] of the developers also has been highly discussed. Researchers have found the effects of intrinsic and extrinsic motivation on the results. It is seen that in open source style of working, intrinsic motivation is the prime guider [37]. They have also studied the foundations of the self motivated nature of the developers where they conclude the effect of community as a major driving factor. The leadership issues [14, 16, 55] are another dimension of study. The study of open source projects reveals that they either do not have leaders or as they case of Debian [14, 75], they have leaders from the senior developers/contributors. The studies show that this form of leadership is enough to drive the project and ensure its mannerly development.

It has also been found by studies that coordination and communication [4, 14, 15, 30, 32, 33, 35, 41, 49, 54, 62, 67, 69] in the open source style of working is of extreme importance and plays a key role in the development. Any project would badly fail in the absence of these factors. Also a good work has been done to present and understand the dynamics of the open source model or working. It has been shown that the teams are very dynamic and remain till various degrees till the project. The constant change of teams can be found. It has also been seen that the majority of development is by few key personals in the team.

Knowledge sharing and development [3, 7, 22, 27, 44, 51, 53, 58, 59, 63, 64] of workers has been found to be very high in this model. Study shows that people keep learning and teaching others in the process of development. The effect of this learning is very high. Division of labor, huge team size and proper management techniques also reveal various

interesting findings of open style of management. Studies also show that this way of working may result in many modules of work may not be picked up by anyone at all, lack of quality etc.

Other similar areas of research include the licensing [1, 28, 52], history [5, 55, 58], philosophy [9, 16, 23], business models [11] and open source projects.

2 Talent Acquisition and Management of Talent

Talent acquisition refers to the process of recruiting and selecting employees in an organization. Every firm wants to get the best possible people within its organization. This involves various processes to ensure the quality of the employees that are selected. Firms usually get involved in job fairs, advertisements, campus selection and other such processes to get people. It may do the hiring itself or may select any other organization to do it on their behalf. Companies stress a lot on this process as the success and the future of the company depends on the quality of manpower it has. Good people will result in better prospects for the company.

Management of talent refers to the proper development, training, compensations and incentives to the employees. The management of talent is especially important to ensure that the people are always in a position to give their best to the organization. Proper talent management is just like judicious use of resources. The talent management looks after the development of the individuals and develops them to the current as well as future needs. It ensures their proper growth and promotion within the organization. The talent management ensures that the turnover rate is as low as possible and the available workforce is suited for all needs.

The concepts of talent acquisition and management of talent are especially important in terms of the current scenario. This is because of the ever growing competitions within firms, lack of able manpower, growing costs of manpower, rising needs, etc. The rising rate of dropouts in an organization is also a matter of deep concern for the organizations. As a result we see that all companies are taking good measures to get the best people within the organizations. The offers and the incentives are especially designed to attract the people. Also we see a good work being done to improve the management structure, increase motivation, training sessions, knowledge sharing practices, etc. All this ensures the



retaining and development of the employees of the firm.

The rise of new companies also poses a threat to the employee retention. It is natural for any employee to be attracted towards these due to better profile, package, etc. This would essentially mean that the training, knowledge and the experience the employee attained in the firm be nullified. A new person would take time to settle and start producing. Thus increase a competition is a major threat to the practices of talent management.

The condition in the present day market is even worse which has been hit by the meltdown. The firms are being forced to stop hiring and reduce its workforce. This is all due to loss of projects, economic breakdown, lack of customers, pressure to reduce expenses, etc.

3 The Free/Open Source Software

Free/Open Source Software (FOSS) [1, 5, 9, 11, 16, 23, 28, 52, 55, 58] is the culmination of two separate movements of Free Software and Open Source Software. FOSS stands for full freedom of the software. Under this methodology a person is free to use the software, modify it and redistribute it. The person is given the source code of the software and not just the executable binary. It does not mean that the user would be given the source code without any money (monetary free), rather the Free in FOSS stands for complete freedom. It is sometimes also known as FLOSS (Free/Libre Open Source Software). In this paper whenever we mention Open Source we are actually referring to FOSS.

FOSS is the result of community based development which emphasizes on taking from the community and giving away to the community. It emphasizes on the principles of sharing. FOSS developers don't essentially start from scratch. Rather they find the solution from the available open source solutions and build over it. On developing they give the software back into the community so that others may also use it and modify it. One of the best sources of FOSS projects are SourceForge [72] and FreshMeat [73]. These are open source repositories available over the net.

FOSS is fully run by the community. The people are constant in search of new solutions to download and run. This results in a good feedback and testing of the software by the users themselves. The users have the freedom to run the software as they desire, without the fear that it would stop due to license or other

issues. If the users are not satisfied, they may build new features, suggest new features or hire someone to implement new features to suit their needs. This is again distributed under the open source domain. It offers a great support by the mailing lists, forums and other forms.

This movement has contributed some great projects to the world. These include GNU, Linux, Apache, PHP, JAVA, MySQL, Firefox, Wikipedia, etc. Open Source has now entered almost every domain of the industry. With the constant rise of open source, it is clear that it is future of computing. The localization of software, language support and social developments are also best possible by open source.

4 Analogy to the Natural Ecosystem

We find a very strong correlation between the talent acquisition and management of talent techniques with that of the natural ecosystem. The similarity between the acquisition, growth and existence of talent is similar in nature to that of a natural ecosystem. We represent an open style by the ants and the closed style by the lions. Both these are analyzed in the next sections. This would enable us better understand the issues we would be presenting in section 5.

4.1 The Open Style

The open style of talent acquisition and management of talent may be seen quite analogues to the way of working of the ants in ants colonies. There is a communal involvement and the whole community grows and develops together. It is well known that the coordination and the communication are one of the best among the ants and a source of inspiration and mystery for the researchers. Similar may be seen as a case of open style of management. It may be emphasized here that the human had always been a social animal. Ever since start, we stood by the principles of cooperation, sharing, helping and developing the society. It is only until the rise of the profit motive firms that the principles of the social sharing were violated. Open source is nothing but getting back to these principles. The similar can be seen in case of ants which all live in a community and remain in a community. The work division, leadership, motivation, etc. are all inbuilt in such types of management. Decisions are taken by the community whenever and wherever needed. The society itself develops the society.



4.2 The Closed Style

The closed style of talent acquisition and management of talent is similar to the rule by the lions. There is a single source that makes all decisions and a single force of governance. Everything is controlled and coordinated by a single force. This means that the employees have to follow the orders. There is no say for them. Even though there may be models for proper employee upkeep, motivation, performance evaluation, incentives etc, but the final verdict would only be of the head. Also the various schemes are controlled by the same head. This may be satisfying for the employees, but this system makes it necessary for a constant motivation be provided from time to time to the employees. There is a large possibility that the employees are not given the work they like, but one that they do not like. An employee may be forced to work without any self will. The motive of any section here is to get greater profit. This is exactly the case of jungles where a lion rules and dictates its terms. There is a fight for might and the mighty is empowered to dictate its terms and to control almost anything. He is the ruling power and by no means can he be changed. Even though a constant lookout and concern is seen from the top management into all the issues, yet your existence and say can never be assured in this style of management.

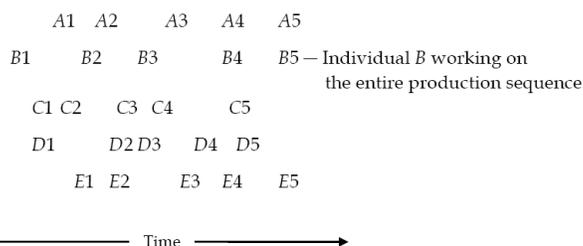
5 Issues in Talent Acquisition and Talent Management

Here we discuss all the various issues of talent acquisition and talent management. We compare the two styles based on the past findings. We do all this by our analogy of the ants and the lions

5.1 Division of Labor

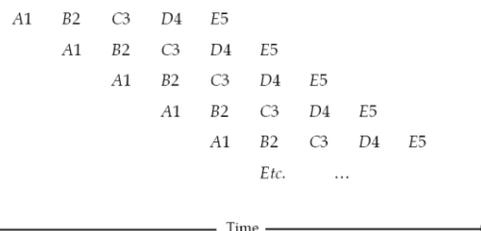
The division of labor refers to the process of allotment of tasks at the various levels. It has been shown that the level of members' skills (average experience in all skills) have a positive and significant effect on project survival and performance [19]. There are 2 styles of labor division [39] horizontal and vertical. In vertical division of labor, each individual performs each task. This is shown in figure 2. Here all individuals work from the first process to the last. The horizontal style of working is shown in figure 3. In this each individual performs a specific task. This is more suited for larger markets [61].

Closed Style: The closed style of talent management and acquisition tries to find as many people as needed, who specialize in different domains, such that the requirements of all the domains are met. There is a pre-determined analysis of the requirements of human labor. All the hiring of labor is done strictly as per this requirement.



Source: Leijonhufvud (1986, p. 208).

Figure 2: The vertical division of labor



Source: Leijonhufvud (1986, p. 209).

Figure 3: The horizontal division of labor

Open Style: The open style of talent management and acquisition is quite different. It believes that one cannot predetermine all the requirements. There are spontaneous decisions made as and when needed. There is a pool of people with a diverse skill set. Whenever anything needs to be done, there is a common call and the people are ready to cater to the requirements. The community is always prepared to take decisions spontaneously [38]. It represents a spontaneous and adaptive system between the two divisions of labor approaches. The community needs to be highly flexible. OSS projects benefit from an internal division of labor between 'specialists' and 'generalists' and between "high-skilled" and "low-skilled" members [21]. The open style of division of labor is a very abstract way of working where the rules are applied to an unknown number of people [26] and make the people more participative in nature.

Edge: The open style of working is better than the closed style because multiple contributions, at the time they are required, help in catering to the needs



of the users much better. The closed style of working is driven by a single power and the innovation is hence much less. The open style is highly parallel in working (horizontal division of labor) as many people work on different modules [55]. This is unlike the closed style where a strict predetermined schedule is to be followed. This however causes a lot of redundancy in work that is usually referred as redundant economies [18]. The idle time in the open style of working (also called “sauntering”) for the different sections of users is very low. It also requires a very high degree of modularity in project. Many people may find it very difficult to design a project with such a high degree of modularity. Linux, for example, had a highly modular nature which enabled its growth across various people.

In the recent years, we see a very positive trend in the industry where the organizational structure is getting flatter and the responsibility is increasing. All this is in the closed style of development. It has even been shown that subdivision of tasks with market growth leads to further growth [61] as with the case of both the styles of talent management.

The Apache HTTP Server Project is a large project with over 15 core developers. However, the division of labor among these developers is blurred. All of them contribute code to various modules. Moreover, the role of release manager (a quite time-consuming and critical task) is rotated among them [50]

5.2 Leadership

Closed Style: The closed style of working has a leader who is liable for the development and activities of the team. He does the work of motivating, coordinating, and controlling the team. His word is regarded as final and binding. This essentially has an advantage that there is no quarrel or confusion between the members of the team. Each member works under the directions of the leader.

Open Style: The open style of working is very different. It does not have a leader at all [14, 16, 46, 55]. There are core developers who look after the entire projects. The voluntary contributors coordinate with them. All issues are resolved by a piece of dialogue between these people. Studies show that these conflicts are easily resolved by the use of modern communication channels that they follow. In some cases however this style of talent management uses a leader to coordinate the activities. This is chosen among the developers and is the person who contributes the most. In Debian [14, 75] there is a

central committee that elects the leader from the most active contributors.

For example in GNUe, there is no leader. A developer states management as “The number one rule in free software is never do timelines or roadmaps. This is a problem in open source projects. We could use a better roadmap, not having one hinders us. The features we add come about by need during consulting implementations. We may need some kind of roadmap in the future as we expand with more people..” (Derek, face-to-face interview, August 2002).

Edge: The open style of talent management and acquisition is again better as it empowers the people to be free to suggest and make any changes. This essentially makes the contributors self-motivated and enables them to contribute the maximum. However, the lack of leader may make some volunteers or contributors careless especially with some parts of the code. This may reduce the quality or increase the developing time. This will strike more badly if it comes under notice very late.

5.3 Motivation

According to self-determination theory (SDT) [13], there are three main types of motivation: intrinsic, extrinsic and amotivation. Intrinsic motivation is doing an activity just because of the satisfaction derived from it, extrinsic motivation is performing a task as a means to an end or due to an obligation, Amotivation results from the dislike of accomplishing an activity or the feeling of being unable to carry it out. These are given in figure 4.

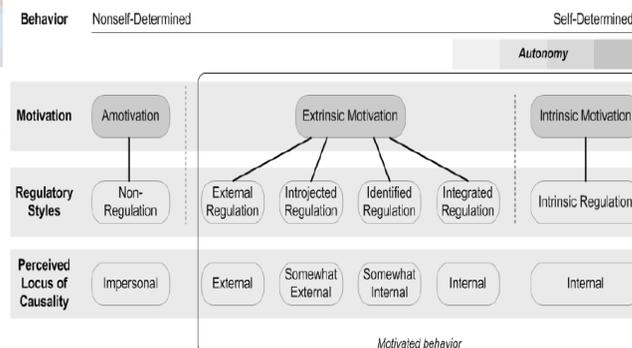


Figure 4: Types of Motivation Depending on Regulatory Style (Source: Ryan & Deci, 2000)

Closed Style: In the closed style of talent management, extrinsic motivation is the major driver. The people are only interested in better profile,



incentives and prospectus. The motivation needs to be infused within the employees from time to time. This is usually done by the leader or through special sessions.

Open Style: In the open style of talent management, enjoyment is the biggest intrinsic motivation [37]. This is the result of deep interest in programming, software etc. This enjoyment, creativity and challenge are also called as “flow state” [10]. The more a person develops a project, the more he gets devoted to the project and plans to further develop and control (“meritocracy”) [56]. Helping each other (“altruism”) may be another internal factor to join a project without any apparent benefit for oneself [25]. The people are motivated by the fact code is openly available [29, 65] and give-and-take attitude of the community (“reciprocity”) [6, 55, 71]. Crowding out has a particularly strong effect [25, 36] and a crucial factor in determining OSS project success [66]. Two thirds of all OSS software is written by individuals in their spare time and only 15 percent is contributed directly from firms [20].

Extrinsic benefits also play a role in this style of talent management [25]. Sharing code and knowledge with the community may also result in others being more easily willing to give something in return [8]. Developers may be driven by gaining reputation through the contribution inside the OSS community or the ability to demonstrate their talent to possible employers, thus using the contribution to boost their future career development (“Signaling incentives”) [25, 40]. Enhancing of skills by feedback from the community [36] is another form of motivation. To avoid wasting effort, extrinsically motivated developers will thus only select to participate in OSS projects that they think will provide any benefit for them either immediately or in the future [2, 40, 66].

Motivation in open style is sometimes even regarded heterogeneous, which means that no single motive alone can explain participation. Complex and changing patterns of motivations are tied to changing objects and personal histories prior to and during participation. [17, 34, 48, 66]. ‘Need-driven participants’ are motivated by the need to use the software in question for work-related purposes, by reciprocity, by future improvements and by career concerns. ‘Hobbyists’, on the other hand, are motivated by fun, enjoyment and feedback from others. While the ‘open source’ community is populated by both hobbyists and need-driven participants, the ‘gated source’ communities mostly comprises need-driven participants [47, 59, 60].

Payment is a factor that is being discussed in both forms of style of management these days. Study reveals that in open style, there is no difference in intrinsic motivation, however total motivation does increase [2]. In both the cases, self-reported interest increases when there is a norm for payment, whereas it decreases when there is a norm for no payment.

Edge: The self motivation in open style of talent management is naturally better as intrinsic motivation is the driver. This is clearly seen in case of Wikipedia where online contributors made in an entire encyclopedia.

5.4 Coordination and communication

Coordination consists of protocols, tasks and decision mechanisms designed to achieve concerted actions between and among interdependent units be they organizations, departments or individual actors [67, 69, 35]. Coordination is one of the most important aspects for a successful project run. A well coordinated team can produce very good results and also timely results. This is all possible by good means of communication among the team members. The proper management framework is an inevitable requirement for the same.

Closed Style: The closed style of talent management has the whole team situated at a common place where the coordination is done by using various formal and informal ways. There are regular meetings, discussions, reviews and reports. These ensure that everything is clear and there is no ambiguity. There is a central leader who looks after the entire coordination process and resolves any kind of ambiguity that arises in the process.

Open Style: The open style of management involves countless people who are all located at different geographical locations. These people are only connected by the means of internet [15, 32, 62]. The whole process of distribution of work, combining work, reviews, bug reports, making of a final version, testing, etc. needs to be done using this interface itself. Also important are the governing rules that drive this system. The modularity is of prime importance for a project to be able to be developed in the open manner. The creation of social groups is a unique characteristic of this type of talent management where people themselves start having different types of bonding with other contributors and start recognizing each other over the internet [14, 41].

There are three main coordination mechanisms in open type. These are standardization, loose coupling



and partisan mutual adjustment [30]. Standardization encompasses uniform and homogeneous procedures developers enact for problem definition or problem solving [33]. Loose coupling stands for coordination mechanism that allows developers to manage the workflow for incorporating new patches into forthcoming releases. In loosely coupled systems each system is a part of the whole, as well as being a whole in its own right [49], one can envisage an ensemble of systems where the coupling between systems is weak or loose because the interactions between systems are less direct and less frequent than those within systems [54, 4]. Mutual adjustment is needed to resolve conflicts, if they arise.

The most frequently used tools for coordination are mailing lists, CVS (concurrent versioning systems), mails, forums, blogs, chats, etc. In the context of Linux these concepts are given by figure 5 and 6.

Edge: The coordination process is a lot more difficult to maintain in open type as compared to the close type. Also it may not be easy to have such a modular system with the concepts of standardization, loosely coupled and mutual adjustment in ever project.

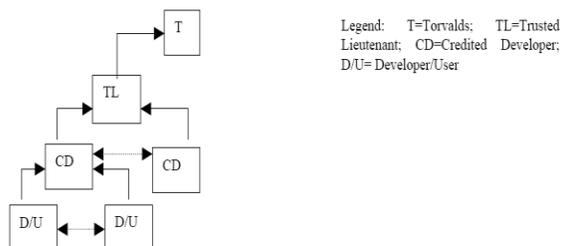


Figure 5: Workflow for incorporating new changes in Linux

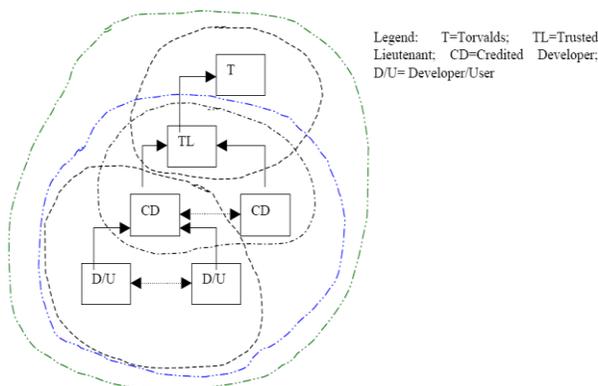


Figure 6: Loosely coupled system in Linux

5.5 Team Size and Costs

Closed Style: The team size in closed style of talent management consists of a well-defined team. The team is very limited in its extent as the concepts of

limited team size are well known to the managers. The team consists of specialized people over various domains and no one except these people participates. The associated costs of the project are measured using various empirical studies. Since things are well-defined and rigid, these empirical studies nicely predict the team size and the associated costs.

Open Style: The open style of talent management is very different. The participation is voluntary and there are countless people contributing throughout the globe. All empirical analysis fails in such systems since the processes are very informal. Although the team size is countless, the major contributors are limited. It has been shown that developers' participation follows Pareto's law: 80% of the code corresponds to the 20% most active developers, while the remaining 80% of developers contribute 20% of the total.

The total development cost of a Linux distribution by empirical studies is \$1.2 billion [12] in 2002. It would take approximately \$10.8 billion to build the Fedora 9 distribution in today's dollars (as on May 13, 2008), with today's software development costs. Additionally, it would take \$1.4 billion to develop the Linux kernel alone. Over 1,000 developers, from at least 100 different companies, contribute to every kernel release. In the past two years alone, over 3,200 developers from 200 companies have contributed to the kernel [24]. It's important to note that the kernel is just one small piece of a Linux distribution. A distribution is actually made up of multiple components including the kernel, the GNOME and KDE desktop environments, the GNU components, the X window system, and many more. The total of individual developers contributing to these projects surely numbers in the thousands [45].

Edge: The open style may be regarded better as it attracts more people and the development time as a result is reduced to a very great extent. This saves a lot of time. The highly parallel way of working of the open style as explained in division of labor is another major benefit that arises out of big team size and voluntary commitments.

5.6 Team Liabilities

Closed Style: The closed style of talent management gives clear tasks to all the individuals. All of them are given responsibilities, tasks and deadlines. A project management system ensures that the work is carried out and is completed within the deadlines. The closed style thus has high liabilities associated with each worker towards the task.



Open Style: The open system is quite different. Here contributions are essentially voluntary in nature. The contributions are more or less decided by the individuals themselves. Hence the volunteers do not have any deadlines or liabilities associated with them. The quality control may be another problem [42, 47]. It is highly possible that some parts of the project are completely overlooked as nobody is interested towards them. Also in case a contributor decides to work on some module and after that becomes inactive, the project would suffer [46]. Various solutions to this have been proposed [43].

Edge: Here it can be seen that the closed style of talent management works better and is an assurance of the time and quality of the developed product. The open style may suffer from the losses of time and sometimes even quality in case of uncommitted contributors and it would be difficult to manage.

In case of Debian [75] inactivity of maintainers can be a huge problem. In order to maintain packages, the maintenance per package lies in the hands of a single person. This means that each package is mapped to a maintainer. This prohibits the redundancy of packages. The inactivity of maintainers can be a huge problem.

5.7 Knowledge sharing and development

Closed Style: The closed style of talent acquisition and management consists of very formal steps taken by the top level management to increase the skills and knowledge of the workers. This consists of on-job training, off-job training, seminars, workshops, special sessions, etc. They are planned by the company from time to time. Along with these, the workers share their experiences with each other and benefit in return.

Open Style: The open style of knowledge sharing believes in community and community learning where the whole community is ready to teach you and in return learn from you. Community is the best driver and reproducer of knowledge [53, 70]. The use of knowledge requires the concentration of the knowledge resources at a certain space and time [53]. Internet is the chief means for the open style to pool in their knowledge, learn and teach. Tacit knowledge [51, 53] sharing still remains a challenge in this style of management. It has been shown by a study that learning a professional skill is based on social interaction and competent use of technologies [58]. Learning does not take place by being taught or

instructed but by becoming a practitioner [7]. Helping others to experience, what oneself has experienced before is fundamental for knowledge creation [44]. This is exactly what the open style follows and naturally implements.

The open style aids in creation of knowledge and knowledge sharing by the help of the community and the group memory which puts up and organizes huge volumes of knowledge at a modular fashion. KDE has 81 active mailing lists which prove the point. This community then helps all new entrants into the community by providing an active support till they specialize. It is showed that mentors and new entrants must have marginally less knowledge for best training in community [22]. Asynchronous communication tools are also primarily used for new knowledge creation. For joint conceptualizations KDE developers use stories and usage scenarios for collective reflection-on-action. They create a ‘virtual’ world, a constructed representation of the future realization of their ideas [27, 59]. This ‘objectification’ of ideas provides the necessary ‘tangibility’ [3] a team needs in order to be able to co-create a common understanding and imagination of their future action [27].

Analysis of the mailing list of the open style gives us considerable information as to how the knowledge is transferred between the different groups and between mailing lists [63, 64]. The mailing lists are themselves huge source of knowledge. This for Debian mailing list is shown in figure 7.

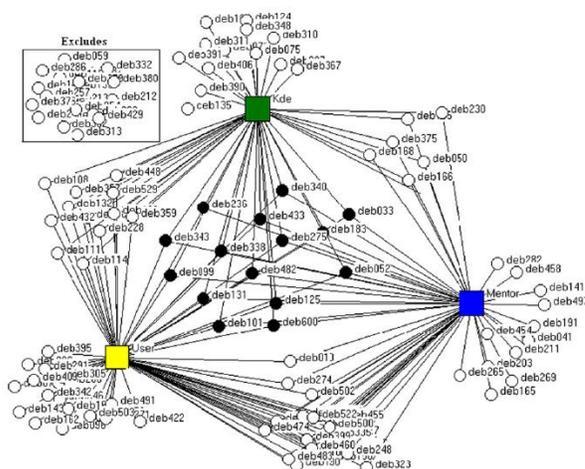


Figure 7: The knowledge transfer between mailing lists

Edge: Looking at the strong correlation of knowledge with society, we can clearly say that the open style of talent management is better as it gives greater possibilities to the individual to explore and



learn. The presence of a community as a backing force is of a great advantage.

6 The Meltdown

So far we have seen all the issues related to talent acquisition and talent management. We have also seen that how the open style of talent management is better than the closed style. Here we discuss one of the new problems that the present day HRs of almost all companies are facing. This is the global recession or meltdown. This has caused companies to slice down their recruiting and even to reduce their workforce. In order to cope up with the loss in revenues or financial losses, the reduction in incentives, cost cutting, reduced promotions etc. are also natural. The global meltdown is one of the major challenges of the companies today.

It has been proved from the time of the great depression that the socialistic nature is the least hit and best suited for such a situation. The similar holds true in the present day context as well. The open style of working is much suited to handle such conditions. If all the companies would have been following this mode of talent management and acquisition, it is possible that the hit of global recession might have been unfelt.

The reasons why the open system is better in such situations is natural. It is mainly due to the intrinsic self-motivated employees and the voluntary participation in nature. The open style of talent management does not employ people with profit motive. Rather people are dedicated towards the job and feel involved once they start some work. The feeling of involvement and community is much bigger.

7 The interaction of the two forms

As our analogy goes between the lions and the ants, it is natural that that both the forms of existence would be found and their interaction is inevitable. Both the forms are highly successful and have casted their presence withstanding various shortcomings and finding solutions to every problems.

The closed style has been existing since ages. It has made its foundation deep into the business world. The open style is relatively new in nature. Even though it slate start and fresh nature, it has influenced companies to find a place into the business world. The rapid rate of development shows a very positive future.

The GNU Public License, a license used by open source, is a major force between the interactions of the two forms. This forbids a software of the open source domain to be used as a non-open source software. Hence its entire derived works have to be open source (not considering the twin licensing). This means that it is very difficult for a proprietary software to enter into the open source domain or an open source project to enter into the proprietary domain. This makes interactions as less as possible. The presence of these two styles have enforced many legal issues which a company needs to understand before making a choice between the two forms.

However this was the case only with software. Talent management and talent acquisition does allow for the interactions to take place. This means that the closed style of talent acquisition and talent management can learn from the open style and vice versa. We believe that it would now be impossible to change the style of management of most of the companies that have been following the practice of closed style since ages. Hence we believe that the best way to learn from the new phenomena of open style of talent management would be to go in for a middle way between the two styles for most of the closed style companies. The following are the guidelines that may be adopted to benefit from the open style management findings.

- Try to involve more and more young people at various stages. University initiatives may be helpful.
- Be open for feedbacks and bugs through website, surveys and any other means, ask for feedbacks regularly
- Providing as much as information as possible in order to get more and more people interested
- Workers must be given the job they like rather than forcing them to do something
- Set some time aside from working hours for the workers to innovate and contribute
- The organizational structure should be as flat as possible so that newer and newer ideas from the workers may be generated and communicated to all.
- Use of mailing lists, blogs, forums, etc. can be of great use
- Workers must find something new to learn at every day. Try to switch workers between tasks and increase their interest by making them explore greater and greater depths of the subject. This would involve making in as much as possible information open.



- Peer to peer knowledge transfer may be encouraged by making senior more knowledgeable workers share their experiences with others.
- Be open to all other organizations to take the maximum inputs from them and to take their inputs as well. A good exposure is always of great help.
- Giving to society and taking from the society should be the basic motive and guiding factor.

The working of Google may be taken as an example of this. Google has made android open source. To increase the participation, the company has taken university initiatives in form of summer of code and code jam. It continues to support Firefox, the open source web browser. Google Labs and their openness is another example.

8 Conclusion

In this paper we analyzed and discussed two very different styles of talent acquisition and talent management. We presented their analogies to the theory of natural ecosystem.

One style was the style of existence of the lions. We called this the close style of talent management. This style consisted of the formal management framework, structure, rules and regulations that drove the company. This was exactly as in the ecosystem, the lions rule the den. In this style the people had to follow whatever was ordered. Although a lot of care from the management is given to ensure that the people are satisfied and comfortable, yet it cannot match the degrees as achieved by the second style.

The second style of talent management was the style of ants in their ant colonies. Everything was based on society and the community. The individuals were self motivated people who wanted to contribute. The satisfaction of contribution was the greatest thing for them. In this there is no necessity of a formal leader or coordinator. Everything is run by the society.

We analyzed various issues that arise in talent acquisition and management. We saw how these two contradictory styles behave to all these issues. We saw the effect of division of labor, motivation, leadership, team size and costs, team liability, knowledge sharing and creation, coordination process, etc. In all we found that the open source style of management proved to be better in most of the issues discussed. Though both the styles of

management had some or the other disadvantage associated with it, we conclude in general that the open style of working is better and more suited for the future [68].

We even analyzed the current problem of global recession and meltdown. We saw here also that the open source style has greater profits in such a situation and this style of talent acquisition and management can be highly beneficial in all such situations whenever they arrive at the future. We also gave in a model for the current closed style of management to follow, in order to gain from the learning of the open style of management.

In this paper we have analyzed various parameters to prove the capabilities of the open style of talent management and talent acquisition. A common empirical analysis over the factors mentioned in the paper may be done in the future. This would enable a better understanding to the extent the various factors contribute to the effectiveness of the open style of management.

References

- [1] Aigrain, Philippe, "The Individual and the Collective in Open Information Communities", *16th BLED Electronic Commerce Conference*, 9-11 June 2003
- [2] Alexy, Oliver and Leitner, Martin, Norms, Rewards and their Impact on the Open Source Software Developers"
- [3] Bechky, B. A. (2003). "Sharing Meaning Across Occupational Communities: The Transformation of Understanding on a Production Floor." *Organization Science* 14(3): 312-330.
- [4] Beekun, R. I. and W. H. Glick (2001). "Organization Structure from a Loose Coupling Perspective: A Multidimensional Approach." *Decision Sciences* 32(2): 227-251.
- [5] Benussi, Lorenzo - The Evolution of free/libre open source software.
- [6] Bitzer, J., Schrettl, W., & Schröder, P. J. H. 2007. Intrinsic Motivation in Open Source Software Development. *Journal of Comparative Economics*, 35(1): 160-169.
- [7] Brown, J. S. and P. Duguid (1991). "Organizational Learning and Communities-of-Practice: Toward a Unified View of Working, Learning, and Innovation." *Organization Science* 2(1): 40-57.
- [8] CED; Open Standards, Open Source, and Open Innovation: Harnessing the Benefits of Openness, *Committee for Economic Development*;



http://www.ced.org/docs/report/report_ecom_openstandards.pdf ; May 12, 2007.

[9] Csikszentmihalyi, M. 1975. Beyond Boredom and Anxiety: The Experience of Play in Work and Games. *San Francisco, CA: Jossey-Bass.*

[10] Csikszentmihalyi, M. 1990. Flow: The Psychology of Optimal Experience. *New York, NY: Harper and Row.*

[11] Daffara, Carlo, "Business models in FLOSS-based companies"

[12] David, Paul A. and Rullani, Francisco, "Micro Dynamics of Free and Open Source Software Development", *Industrial and Corporate Change*

[13] Deci, E. L. & Ryan, R. M. 1985. Intrinsic Motivation and Self-Determination in Human Behaviour. *New York: Plenum.*

[14] Demazière, Didier; Horn, François and Zune, Marc, "The Functioning of a Free Software Community: Entanglement of Three Regulation Modes – Control, Autonomous and Distributed"

[15] Demazière, Didier; Horn, François; Jullien, Nicolas, "How free software developers work: The mobilization of distant communities"

[16] Elliott, Margaret S. and Scacchi, Walt, "Mobilization of Software Developers: The Free Software Movement"

[17] Freeman, Stephanie, "The Material and Social Dynamics of Motivation", *Science Studies 2/2007*

[18] Garud, Raghu, and Arun Kumaraswamy 1995. "Technological and Organizational Designs for Realizing Economies of Substitution," *Strategic Management Journal 16* (Special Issue: *Technological Transformation and the New Competitive Landscape*): 93-109(Summer).

[19] Garzarelli, Giampaolo; Limam, Yasmina Reem and Thomassen, Bjørn. "Open Source Software and Economic Growth: A Classical Division of Labor Perspective", *Information Technology for Development*

[20] Ghosh, R. A.; Study on the Economic Impact of Open Source Software on Innovation and the Competitiveness of the Information and Communication Technologies (ICT), *Sector in the EU*;

<http://ec.europa.eu/enterprise/ict/policy/doc/2006-11-20-flossimpact.pdf> ; May 12, 2007.

[21] Giuri et al. "Skills, Division of Labor and Performance in Collective Inventions. Evidence from the Open Source Software", *Laboratory of Economics and Management, Sant'Anna School of Advanced Studies*

[22] Glott, Rüdiger; Meiszner, Andreas and Sowe, Sulayman K., "Analysis of the Informal Learning Environment of FLOSS Communities", *FLOSSCom*

[23] González-Barahona, Jesús M. and Robles, Gregorio, "Free Software Engineering: A Field to

Explore", *The European Journal for the Informatics Professional*, Vol IV, No 4, August 2003, pp 47-52

[24] Greg Kroah-Hartman, Jonathan Corbet, and Amanda McPherson, "Linux Kernel Development: How Fast it is Going, Who is Doing It, What They are Doing, and Who is Sponsoring It", April 2008, <http://www.linuxfoundation.org/publications/linuxkerneldevelopment.php>

[25] Hars, A. & Ou, S. 2002. Working for Free? Motivations for Participating in Open-Source Projects. *International Journal of Electronic Commerce*, 6(3): 25-39.

[26] Hayek, Friedrich A. von 1982. Law, Legislation and Liberty. Volume 1: Rules and Order (First published in one volume with corrections and revised preface in 1982). *London: Routledge.* Volume 1 first published 1973.

[27] Hemetsberger, Andrea and Reinhardt, Christian, "Sharing and Creating Knowledge in Open-Source Communities - The case of KDE" *The Fifth European Conference on Organizational Knowledge, Learning, and Capabilities in Innsbruck, Austria, 2004*

[28] Henkel, Joachim, "Champions of Revealing – The Role of Open Source Developers in Commercial Firms"

[29] Hertel, G., Niedner, S., & Herrmann, S. 2003. Motivation of software developers in Open Source projects: an internet-based survey of contributors to the Linux kernel. *Research Policy*, 32(7): 1159-1177.

[30] Iannacci, Federico, "Coordination Processes in Open Source Software Development: The Linux Case Study"

[31] IDC "The Role of Linux Commercial Servers and Workloads", 2008

[32] Jullien, Nicolas, "Developing FLOSS, a market driven investment."

[33] Kallinikos, J. (2004). "The Social Foundation of the Bureaucratic Order." *Organization 11(1): 13-36.*

[34] Krishnamurthy, Sandeep (2006) 'On the motivation of Free/Libre/Open Source (FLOSS) developers', *Knowledge, Technology, & Policy 18* (4): Open Source Software.

[35] Kumar, K. and H. G. vanDissel (1996). "Sustainable Collaboration: Managing Conflict in Interorganizational Systems." *MIS Quarterly 20(3): 279-300.*

[36] Lakhani, K. & Wolf, B. 2005. Why Hackers Do What They Do: Understanding Motivation and Effort in Free/Open Source Software Projects., *Perspectives on Free and Open Source Software: MIT Press.*

[37] Lakhani, K. R., Jeppesen, L. B., Lohse, P. A., & Panetta, J. A.; The Value of Openness in Scientific Problem Solving;

<http://www.hbs.edu/research/pdf/07-050.pdf> ; March 20, 2007.



- [38] Langlois, Richard N., and Giampaolo Garzarelli 2005. "Of Hackers and Hairdressers: Modularity and the Organizational Economics of Open-source Collaboration."
- [39] Leijonhufvud, Axel 1986. "Capitalism and the Factory System," in Richard N. Langlois, ed., *Economics as a Process: Essays in the New Institutional Economics*. New York: Cambridge University Press: 203-223.
- [40] Lerner, J. & Tirole, J. 2002. Some Simple Economics of Open Source. *Journal of Industrial Economics*, 50(2): 197-234.
- [41] Lin, Yuwei, "Inclusion, diversity and gender equality: Gender Dimensions of the Free/Libre Open Source Software Development"
- [42] Lorenzi, Dario and Rossi, Cristina, "Innovativeness of software solutions: evidence from an alternative methodology- Comparing Free/Open Source and proprietary products"
- [43] Martin Michlmayrand Benjamin Mako Hill. Quality and the reliance on individuals in free software projects. *3rd workshop on Open Source Software Engineering*, pages 105-109, ICSE 2003
- [44] Maturana, H. R. and F. J. Varela (1992). The Tree of Knowledge: The Biological Roots of Human Understanding. *Boston, MA, New Science Press*.
- [45] McPherson, Amanda; Proffitt, Brian and Hale-Evans, Ron, "Estimating the Total Development Cost of a Linux Distribution", *The Linux Foundation*, October 2008
- [46] Michlmayr, Martin, "Managing Volunteer Activity in Free Software Projects"
- [47] Michlmayr, Martin, "Quality Improvement in Volunteer Free and Open Source Software Projects Exploring the Impact of Release Management", *PhD Dissertation, University of Cambridge*
- [48] Mikkonen, Teemu, Tere Vaden & Niklas Vainio (2007) 'The Protestant ethic strikes back: Open source developers and the ethic of capitalism', *First Monday* 12 (2) (February 2007) at (http://firstmonday.org/issues/issue12_2/mikkonen/index.html).
- [49] Mitleton-Kelly, E. (2003). Ten Principles of Complexity and Enabling Infrastructures. Complex systems and evolutionary perspectives of organisations: the application of complexity theory to organisations. E. Mitleton-Kelly. *Oxford, Pergamon, 2003*.
- [50] Mockus, A., R.T. Fielding, J. Herbsleb. (2000), A Case Study of Open Source Software Development: The Apache Server. *Proc. of the Twenty-Second Internat. Conf. on Software Engineering* 263–272.
- [51] Nemiro, J. E. (2002). "The creative process in virtual teams." *Creative Research Journal* 14(1): 69-83.
- [52] Nieuwenhof, Saskia van de, "Licensing Freedom - An Ethical Analysis of Free and Open Source Software Licenses", January 22, 2008
- [53] Nonaka, I. and N. Konno (1998). "The Concept of 'Ba': Building a Foundation for Knowledge Creation." *California Management Review* 40(3): 40-54.
- [54] Orton, J. D. and K. E. Weick (1990). "Loosely Coupled Systems: A Reconceptualization." *Academy of Management Review* 15(2): 203-223.
- [55] Raymond, Eric S. 2001. The Cathedral and the Bazaar. Musings on Linux and Open Source by an Accidental Revolutionary (revised edition). *Sebastopol, CA: O'Reilly & Associates, Inc.*
- [56] Roberts, J. A., Il-Horn, H., & Slaughter, S. A. 2006. Understanding the Motivations, Participation, and Performance of Open Source Software Developers: A Longitudinal Study of the Apache Projects. *Management Science*, 52(7): 984-999.
- [57] Rullani, Francisco, "Dragging developers towards the core", January 2007
- [58] Schön, D. (1999). The Reflective Practitioner - How Professionals Think in Action. *New York, NY, Basic Books*.
- [59] Schroer, Joachim & Hertel, Guido, "Voluntary Engagement in an Open Web-based Encyclopedia: Wikipedians, and Why They Do It", *Virtual Collaboration Network*, <http://www.abo.psychologie.uni-wuerzburg.de/virtualcollaboration/> , and the F/OSS Research Community, <http://opensource.mit.edu/> .
- [60] Shah, Sonali (2006) 'Motivation, governance, and the viability of hybrid forms of open source development', *Management Science* 52 (7), 1000-1014.
- [61] Smith, Adam 1981. An Inquiry into the Nature and Causes of the Wealth of Nations (two volumes). *Indianapolis: Liberty Fund*. First published 1776.
- [62] Sowe, Sulayman K., "Involving Software Engineering Students in Open Source Software Projects: Experiences from a Pilot Study"
- [63] Sowe, Sulayman, Stamelos, Ioannis and Angelis, Lefteris, "Identifying knowledge brokers that yield software engineering knowledge in OSS projects", *Information and Software Technology* 48 (2006) 1025–1033
- [64] Sowe, Sulayman, Stamelos, Ioannis and Angelis, Lefteris, "Understanding knowledge sharing activities in free/open source software projects: An empirical study", *The Journal of Systems and Software* 2007, doi:10.1016/j.jss.2007.03.086
- [65] Stewart, K. J. & Gosain, S. 2006b. The Impact of Ideology on Effectiveness in Open Source Software Teams. *MIS Quarterly*, 30(2): 291-314.
- [66] Stewart, K. J., Ammeter, A. P., & Maruping, L. M. 2006a. Impacts of License Choice and



Organizational Sponsorship on User Interest and Development Activity in Open Source Software Projects. *Information Systems Research*, 17(2): 126-144.

[67] Thompson, J. D. (1967). *Organizations in Action*. New York, Mc Graw-Hill Book Company.

[68] Tuomi, Ilkka, "The Future of Open Source"

[69] VandeVen, A. H., A. L. Delbacq, et al. (1976). "Determinants of Coordination Modes Within Organizations." *American Sociological Review* 41(2): 322-338.

[70] von Krogh, G., K. Ichijo, et al. (2000). *Enabling Knowledge Creation*. New York, Oxford University Press.

[71] Wu, C.-G., Gerlach, J. H., & Young, C. E. 2007. An Empirical Analysis of Open Source Software Developers' Motivations and Continuance Intentions. *Information & Management*, 44(3): 253-262.

[72] <http://sourceforge.net/>

[73] <http://www.freshmeat.org/>

[74] Creative Commons Website

<http://www.creativecommons.org/>

[75] Debian Website <http://www.debian.org/devel/>

[76] Open Source Group MIT website

<http://opensource.mit.edu/>

[77] LUG websites <http://www.lug-iitd.org/>

[78] Open Source Group IITM website <http://sf-foss.iitm.ac.in/>