

My time at SOSHGIC

Report and Analysis

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Abstract

I have spent the second half of the year 2006 at the SOS Hermann Gmeiner International College in Tema, Ghana. My task was, roughly speaking, the introduction of Linux and Free Software to the school. In this document I will describe how I got the job, what happened during the job, and why eventually I gave up and quit early. I will also try to analyze, from my point of view, what went wrong and what conclusions the various involved parties could draw from this.

The targeted audience is first of all the principals of the school who started the project in the first place. Furthermore I want to give my friends and family in Germany and in the Free Software Community a deeper insight in my life in Ghana. The third kind of readers I have in mind are those who plan to undertake a similar adventure, be it as a volunteer or the inviting institution, and anyone who could gain from my experience in some way or the other

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1 Plans prior to SOSHGIC

After having finished my German “Abitur”, a degree comparable with the IB, in 2004 I was planning to take a break before going to university and work as a volunteer to fight the digital divide¹. I tried to get in touch with the Jhai Foundation², but got no reply, and I was in contact with a headmaster in The Gambia, but the conversation was too slow and eventually I started my studies. I had not given up on the idea though, and let other people know about it, including Ralph Amissah at the Debian³ Conference 2005 in Helsinki.

2 The offer

In February 2006 Ralph sent a surprising e-mail and asked if I were interested in a volunteer job at the SOSHGIC:

They are interested in having a volunteer or employee who is prepared to take a year’s contract [...] to help them in setting up, testing as a parallel to the existing system and transferring knowledge related too Debian administration. They would also be interested in teaching possibilities – (the language of study though is Java). I assume that installation would be first in the server room, for administrative use, but subsequently as an alternative system for students to study.

I was interested, so I started exchanging e-mails with Mr. Ofei, the vice-principal. Without much ado and in the second e-mail already an contract was presented to me:

I write to offer you a position at the SOS-Hermann Gmeiner International College (SOS-HGIC) as a volunteer in the Information Technology Department and. This tenure is for one year in the first instance, starting August 1st 2006 to July 30th 2007.

You will be assigned some teaching duties in the Information Technology Department and you will work with IT technical support team to provide network and other technical support for the school. More details of your duties will be made available by your Head of Department during your orientation here in August 2006.

Mr. Ofei also answered some of the questions I posed and I pursued my preparations: Visa, immunizations, university etc.

He also referred me to Mr. Attoh, the head of the IT department, for any questions regarding the IT system. Mr. Attoh asked me to describe my skills in both Linux and Windows, which I did in a detailed e-mail at the beginning of May. I received no reply,

¹Digital divide: The gab in information technology between developed and developing countries.

²<http://www.jhai.org/>

³<http://www.debian.org/>

so I inquired at the beginning of June and again at the beginning of July, when I finally learned that my first e-mail did not make it or was overlooked. This was the last I heard from him until one week after I actually arrived in Ghana.

In the meantime I was told to contact to Mr. Osei, the school administrator, for more details with regard to visa, contract and travel issues. I was also provided with a letter of invitation for my university, to be excused for the time of my stay.

Because I wanted to find out more about the school I searched the Internet for information. The website was in a very bad shape, but I found a student's e-mail address somewhere on the net and started to ask him for details on the school and the life at SOSHGIC. The very elaborate responses provided me with a little insight, although most was related to the student's life and not directly relevant to me.

It was just after I have booked my flight when Mr. Ofei made it clear that, against my initial impression, the mentioned teaching duties do not mean that I will work as a teacher, but that I would provide training to teachers. This was a strong disappointment to me and Mr. Ofei called me on the phone to clarify the issue. He made it clear that it is not possible to give me real teaching duties because for some classes, formal certification is necessary, and there are no openings anyways. He agreed though that I can run some kind of extracurricular activity with the students, which I found to be an acceptable compromise.

With little knowledge on what awaits me, and not even a definite confirmation that I will be picked up at the airport I said bid farewell to my family and friends (who organized a very nice departure party), and boarded the plane to Ghana.

3 My expectations

Judging from the offer I expected to find the school – especially the IT department – to be eager to learn more about Linux. I assumed that interest and motivation to learn was already present and I “only” had to guide this momentum to allow the school to make most out of it. I was looking forward to find open minds who will embrace both the technical nature of Linux, with all it's benefit for larger maintenance, education and security, as well as it's ideological implications. I was prepared to assist, to inspire and to work with people. I was not prepared to push and to work against people.

4 The time at SOSHGIC

I was ordered to arrive one week before the start of the term. In this week I got to know Mr. Nelson, the school's technical support person, who showed some interest in Linux, and was looking forward to learning more about it. I was given a desk in his room, which is where I would spend most of my time from then on. Although I was already employed full-time at the school, there was not much to do, so I pursued personal tasks.

When school started I finally met Mr. Attoh and I was told that we would discuss Linux during a departmental meeting on Tuesday, which did not take place. I helped

Mr. Nelson with handing out hardware to students and improving the current network a little bit. I also started to create posters for my computer club.

On my request I was given an unused workstation computer to set up a Linux server on, which I used to host a wiki and a blog for the students (primarily of the club) and a remote access to use command-line programs from any Windows computer, also primarily for the club.

Besides aiding Mr. Nelson in tedious tasks like manually installing software in the new lab, I mostly worked on my own, trying to guess what might be useful for the school. I put Linux on the departmental agenda, but it was at the bottom and I had to wait five weeks until we could discuss what should be done. By that time I have created a server for automatic installations and had tested it in the staff workroom, where a handful of adventurous teachers started using it.

Interaction with the teaching department was very low during that time. Daily morning briefings with the head of the department and the technical staff were tried a few times, but not kept up. In one instance, Mr. Attoh asked me to help him convert nearly 100 pictures from one format to another, which I could do in less than ten minutes on Linux. I offered to show him how I did that, but he was not interested to know. In other instances I was asked to do maintenance on the windows system, such as setting up the library computers.

I was assigned the duty of monitoring the TechnoCAS group, where I gave a crash course in the creation of web pages using HTML.

I started to set up things even without explicit consent from the department. I explored the automatic installation of software on Windows as well, and deployed OpenOffice as well as Firefox this way.

In mid September the department finally got around to discussing Linux. I invited the vice principal to it, but he could not make it to the meeting. I was cleared to install Linux on the hostel lab as well as on the library computers, but not in the classroom labs, and it was agreed that I should give tutorial sessions to the department, for which Mr. Attoh would fix a date, which never happened.

This did not really change my daily work: I set up the Linux machine otherwise I spent most of my time improving the setup, documenting it, and from time to time helping Mr. Nelson.

My first meeting with the principal took place in October. We discussed the slow progress, and she said that a meeting with the IT department and the principals should take place, which never happened. To get the students more interested I brought up the idea of an gaming event on Linux, which was misunderstood but approved (see below).

Noticing a lack of proper network monitoring, I set up a solution on the Linux server given to me which displays the current status and can send out notifications. This was well received in the department, but to my knowledge never used by anyone besides Mr. Nelson and me, and there was no deeper interest in the setup.

At this time, my frustration was at a very high level, and I started to consider quitting. I described my situation to the school counsellor and set myself a deadline when I would draw the consequences.

At my request Mrs. Nkrumah gave me a 5 minute time slot during the Friday morning

assembly to hold a speech on the non-technical aspects of Free Software. Unfortunately there was no feedback from either students or staff.

During the mid term break I installed Linux in the computer lab 2, without proper permission from the department, fixed both Windows and Linux installations in the hostel lab and helped Mr. Nelson with general maintenance, such as physically installing the new network server.

In the following week I finished the work on the network switch which enables the teachers to turn internet connectivity off for their class room during classes.

5 The resignation and last weeks

I also asked Mr. Ofei for 10 days leave to travel the country. Before I went on that trip I went to Mr. Nkrumah and explained to her that I can not spend my time any longer like this, and resigned with effect from the end of the year. She understood my issues and accepted my resignation. The IT department, with the exception of Mr. Nelson, received this news with indifference, at least towards me.

During my absence, the principal requested department members to describe what they had learned about Linux, and what comments they had to an article I had mailed around shortly before that. To my knowledge, there were no replies.

After my return, in an e-mail discussion on administrator rights for lab computers given to students, Mr. Attoh commented an entry on my weblog⁴. He explained that I should have expected these kinds of problems, as the school and the members of the department have spend too much resources into the current windows setup to do a rash switch over, and complained that I should not have taken this to a public site before discussion it further with the department. I replied that this was never my issue, but the fact that I came to share skills and ideas and that especially the teaching department was everything but receptive. This was then, again, unanswered, although I checked the mail server log files to make sure the e-mail arrived.

Being told that there is a need for it, I set up a transparent caching proxy on Linux to speed up the internet access and to allow better monitoring and limiting of what students do online. This was set up on an old workstation machine, the same that runs the mentioned network switch, so I requested for better hardware for this now relatively critical service, but until now this has not happened.

I prepared the Linux gaming tournament and put up posters. Mr. Attoh, who was not aware of my plans with regard to this event, called me and explained that I cannot do that because it is against the school's ban on computer games. I explained that this idea was discussed with the principal, whom he then called. The next day a meeting was called in, for the first time with the head of department and both principals. It turned out that I gave the wrong impression on the kind of gaming I planned to do – the principal thought it be a game that itself teaches the use of Linux – but because students already had signed up for it, it was declared a one time event and could take place. I continued preparations such as laying out a game schedule and designing winner's certificates. The

⁴<http://www.joachim-breitner.de/blog/archives/194-Giving-up-at-SOSHGIC.html>

event started relatively chaotic, but in the end it was pulled through, with two winners and quite a few kids who had fun. The long term effect was low, but present: During the following week two or three students were using the Linux system each evening.

An article on Free Software that I wrote for the school newspaper was accidentally forgotten and will hopefully appear in the next edition.

The next week I was offered to work at the “India-Ghana Kofi Annan Center for Excellence in ICT” in Accra, and Mrs. Nkrumah kindly allowed me to start working there even before my contract here officially ended. Again, the teaching department reacted hardly at all when I announced these news to them.

During the last few days at the school I finished this report as well as the 56-page technical documentation of the various things I set up here. Both reports were made available to the IT department for corrections and, besides a small piece of private information which was removed, no objections were raised.

6 The computer club

Mostly independent of my other work, I ran a computer club with the (hopefully catchy) name “Obroni Computer Club”. “Obroni” is what the kids in the streets called me, so I chose the name to get students interested and to indicate that this is meant to be a bit different than other activities.

My idea was to assemble motivated students and give them the possibility to really explore the depths of computing as well as introducing them to the world of Free Software and hackers⁵.

At the first session, I showed them how to use the internal wiki⁶ and blog⁷, and they were given accounts. Unfortunately, there was no or little use of these tools. Attendance started with a full room, but dropped to twenty until the end of the lesson.

The second lesson explained how software is made and what Free Software is about.

Following a suggestion from a student, I started a programming course during the next eight sessions. I introduced the modern programming language Python. At the last session, we even wrote a very simple web server. Unfortunately, attendance dropped even lower, so it seems that I was going too fast: I assumed that they would try out what they had learned on their own, but it seems that this did not happen. I tried to make it more interesting by, for example, programming a simple text-based maze that the students could have easily extended to a ever more complex game. I assume that they just did not have the time to work on this.

Soon, the club was rarely attended by more than five students. Others wanted to use the computer room as well, and especially during the extended essay time I had a hard time to reject that, and this did not help the club either.

⁵Hacker is here used as a term for a computer literate person who is very interested in the inner workings of things, and who thinks that computing should be use to the benefit of the society. (Hacker culture and hacker ethics.) There is a common mis-use of “hacker” for a computer criminal, correctly called cracker

⁶Collaboratively editable web site

⁷Online publication tool

Because some new people have joined and almost all others have dropped out I stopped the python sessions and introduced the game infon⁸ where they program a bug to run around in a simulated world. This was relatively well received, but due to exams there was only time for one more session before Christmas, and because of the two week break and other activities, nobody attended the last meeting.

Two members of the club seemed to be inspired by it and started learning the programming language C++ on their own, working on the Linux server provided for the club.

All material from the clubs, projector presentations at first, digital handouts later, are on the club's page⁹ on the wiki, as well as on my homepage.

7 Analysis of the failure

Needless to say, the whole project was a failure, both for the school and for me. The school invested money that could be used otherwise and got a Linux setup which is, in my opinion, quite good, but unmaintained, as well as a few tools (the monitoring software, the network switch, the proxy) which are useful, but also unmaintained. I spent some of my lifetime that could be used otherwise to do work that was frustrating, at times even unbearably frustrating, and soon saw now point in the work. The following analysis is of course my opinion only.

I think the main reasons for the failure are:

- No clear picture of what is to achieve.
- No support from most of the IT department.
- Different expectations beforehand.

The principals, who started this project, should have made sure that there is support in the IT department. If it were clear that there would be resistance, and previous events have indicated that, then this should have been made clear to me right from the start, and before any commitments were made. Proper communication between the department and me should have been insisted upon and observed, and a clearer goal would have to be defined.

After my arrival it would have made a difference if Mrs. Nkrumah or Mr. Ofei had taken the time to welcome me officially and introduce me to the department, the staff and the students (none of this happened in an official setting). Any further progress should have been monitored right from the start, for example by weekly briefings with the head of the department.

Assuming the IT teaching department were supportive of this project (which was not the case), there should have been a more active interest in the guest. The Ubuntu¹⁰ CDs that I had shipped to the school to hand them out to the department could have

⁸<http://infon.dividuum.de/>

⁹<http://occ.soshgic.edu.gh/wiki/ObroniComputerClub>

¹⁰A version of Linux which is easy to get started with

been tried out, and a more lively discussion could have happened. They should have looked over my shoulder, asking what I do, and also why and how I do that. Regular tutorials sessions should be looked forward to, and not half-heartedly be promised. I, somewhat naively, expected gratitude for the fact that I leave my comfortable life to help the school. Basically, I did neither feel welcome nor needed.

Although I do not think it was a wrong decision to accept the offer, I would not have done it if I knew what expected me. I should have noticed the reluctance in the little conversation with Mr. Attoh. I could have understood that his stress on the fact that they have invested a lot in the Windows setup was a hint that they do not want to learn about anything new. I also should have made my mission clearer before I came in the first place.

Things might have worked out if I would have pushed the department more actively, and not wait for them to start working with me. This would have required a different way of working with people, a more aggressive way that I – so far – do not feel comfortable to take. I also realized too late that there is little hope in the project. I should have known after four weeks, when Linux still was not on the agenda and otherwise no interest was shown. Maybe I would have found a different job earlier or could have gone home.

I had little contact with students, but I could have made more out of it. Despite being the youngest staff member at the school, I did not manage to build a real relationship with the students which could have, in turn, supported me and given my work some backing.

Another mistake of mine was to set up the system in a relatively customized and specialized way. While this makes sense from an administrator's point of view, it increased the amount of skill to transfer to those who should maintain it afterwards too much. Not that it made a difference, as there was ultimately no reception of skills.

8 Conclusion

The time at SOSHGIC was an experiment, and experiments fail. I expected something that was not there, and what was there I could not cope with. I do not regret it too much personally, as I got to know Ghana and learned about a different way of life. I also got to know some of the problems one has to face in a corporate-like environment and could prove to myself my computer skills and improve upon them even. Time passes, and in a while I will be able to look back and remember my nicer experiences in Ghana, such as my travels.

For the school the outcome was less beneficial. The gain is low (some improvements to the network infrastructure nobody can maintain, an alternative system no one is using, a few students who know a bit more about computers) while the loss is high (the money and the missed chance to offer students an advantage).

I think both sides have learned from this, and I hope that other schools and volunteers, respectively, can learn from this to have more success.

I am happy to answer any follow-up questions or comments, preferably by e-mail to mail@joachim-breitner.de.

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