

Meet the Mentors by SQABD - Podcast(MP3) Series

Episode-1: Khandakar Asif Hasan on Meet the Mentors by SQABD (Transcript)

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Announcer: This Program is sponsor by Enosis Solutions.

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This is Meet the Mentors by SQABD. Episode-1. Recorded on January 26th, 2007.

Tauhidul Islam: Welcome to Meet the Mentors by SQABD. This is our first program. And today, as our guest we have Mr. Khandakar Asif Hasan, director of Spectrum Engineering Consortium Ltd with us. And I am Tauhidul Islam on behalf of SQABD.

A big introduction of our today's guest has already been given to you, which is his official or professional introduction. He has a vast career in Bangladesh software industry since 1995/1994 to 2007. In this long journey he has closely experienced many ups and downs of the software industry. We'll try to jot down those experiences and continue our discussion. And we'll also try to find out how our next steps should be because if we look back we can find out where our mistakes lie from our experiences. And we expect to hit upon a positive result from today's discussion. So let's get straight to our guest without prolonging my speech.

From my background study I have come to know that during the past 13 years of your professional life you have worked with Oracle for a long time. You are still working with process centric software development. You have implemented MP2 and EAM from data stream. You have worked with BTTB billing system as the technical head and you are still working there as a consultant. You have also worked on the online banking system of Islamic Bank and still you are a consultant there. That signifies that you are related to so many things. And in the beginning I have mentioned that you are working in Spectrum Engineering Consortium Ltd as a director.

My first question would be about your long spanned professional career. We want to hear about your initial experiences. 13 or 14 years back, did you predict that you'd be part of so many things?

Asif Hasan: Thank you and no. When I started, I never thought anything about it. In fact I have thought nothing! This was something like jumping blindly into something. 14/15 years or maybe 10/11 years back, I don't think graduates were so thoughtful about what they would do next. But nowadays, graduates do think about it more seriously.

However, I was involved in commercial software development before I even graduated. After I graduated, with some of my friends, we had launched Spectrum Engineering Consortium Ltd. And no, this wasn't out of any plan. We were IT graduates, so this must be utilized. We thought how? Should we go for job or can we go for business? Then we thought, okay....let's get into business. That's how it all started.

Meanwhile we became experts, not formally but from many incidents that include job searching and working with many different things. But the learning process was very informal. Maybe someone called us in to work in Oracle. And at that time we didn't know about Oracle and we'd

never seen anyone working on that either. At that time there was no WINDOWS NT. To use Oracle we'd have to use a Unix system and so back then there was Novell. We first got a personal Oracle, Oracle 7. And we couldn't do anything with that as all the documents were in PDF format, and we didn't know what PDF was!! We gave a number of tries to open this PDF, which included an attempt to open it as a normal text file, but we didn't understand what it is! Later we came to know that there is a thing named Acrobat Reader Version 2.1, which needs to be installed to open this document. Then we first did it in Novell. Actually we didn't do anything preceded by any training or such thing. We learnt everything on the fly. This is true for Oracle and also for UNIX. But as I have proceeded along the line then it became formalized. Then it wasn't limited only to my own learning but I also had to train others around me. So in one word we weren't thoughtful about it in the beginning. It was more of that we were bound to do it.

Tauhidul Islam: If I remain in that stream I would want to know that what you mean by Process Centric Software development. Or if I be specific then are we developing software in Bangladesh using that concept or how far we are along that line so far?

Asif Hasan: As I have mentioned earlier that my career has less influence of formal training. Most of the things were informal, you can say need driven. If I go back a little I can give a very relevant example which will be of use to many of us. Since 1996 to 2000, I am related to Oracle somehow and mainly I am related to the BTTB billing project, which wasn't our project though. We were in collaboration with another party. At that time we worked more on data management, database architecture, and data administration than on development. As data is the life of a billing system. So we had to deal with Oracle and Linux System extensively. Honestly speaking when I worked on that project I didn't understand many inner issues of software development. Because when I worked on that project I had the whole data architecture in my head, and I had documented that architecture.

After we were done with that project we came back to our organization again and started working on different software development. The first plan was to develop an ERP system for garment companies as we thought that garment companies will soon be IT oriented organizations. This yet is not true. But that's what we thought and many other companies thought so as well. Now, it is possible to make the data architecture of a billing system alone but it is exactly on the contrary for an entire software development. It's not possible to do it alone. In an ERP system maybe data architecture can be done alone but developing alone is not possible. At that time I felt that in software development there are places where you can't work alone no matter who he is. We were 5/6 people then and I found it very difficult to manage all our work. It turned out to be something like fire-fighting. Then like layman we tried to standardize few things on our own.

At first we put emphasis on how the communication structure should be among these 5/6 people. I mean what, when and about which topic they will talk about among themselves. How these discussions should be recorded. Till today what I understand about Process Centric Architecture is making the communication standardized. No matter however that can be done. It could be in oral, it could be in a written form or it could be in recorded form. I mean software development is highly communication driven and collaborative effort. As days are passing by I see the technical part is getting less important but information is very important. So when I was back to development from then Process Centric Development is in my mind. Because whatever we worked on were larger projects. So it wasn't possible to do them alone. Maybe 10 people. They were in different roles and it got to be a problem since the roles were not defined. Maybe one worked with one role in the morning, two people working in the same meeting, one person taking the load of two.

So this wasn't book knowledge. This was a gut feeling that we won't be able to go further like this. So we needed to do something. I am hiring all good people, no one has any problem. But the resultant force wasn't working. This is not something like I hire 10 people with 10 different

abilities and I get 100 outputs. Sometimes I even found that I wasn't getting 10 outputs from 10 different able people. This thing wasn't linear. There was one reason. Cause human is one thing, and how they are working is a total different thing.

Tauhidul Islam: So I would imagine you tried to relate Process Centric to Team Building.

Asif Hasan: Yes...from the software development point of view, for the development part. If we extent that to deployment or to customer support then this definition might get distorted. But in case of software development what I understood by process centric development is how a group of people will work, how to formalize that. So that the output is a productive or effective one and so that I know that how much is the resultant force in the team. Putting 10 people together if I don't get 100 outputs at least I must ensure that I will get 80 that is the main thing.

Tauhidul Islam: So from the discussion what I have understood is that, SDLC has different phases, such as requirement analysis, design architecture and development part, then comes the testing and after that comes the release. So in case of team building within one or two slots you have few people working. So how easily the requirement phase people can render the information they have collected to the design architecture people, that ...I want this...so please prepare this type of architecture for me. And when one developer is coding on top of that architecture then he tries to stay within that defined architecture. And then testing or QA process monitors that the SDLC phases are being executed correctly. And if not then they try to find out the bugs and then get it fixed. Maybe that's why you are emphasizing on team building.

Asif Hasan: Yes...Here I want to mention that software development is pretty similar to relay race. It's all about passing the baton. This is not like a 100 meter sprint. Or it's not something like marathon. Actually the most appropriate allegory would be boat race. This example I often give my fellow workers, that in a software development team I can perform the best when everyone works in a synchronized way. It doesn't matter if one of the members is weak. In case of boat race one weak racer would fit in perfectly. All he has to do is to maintain the rhythm. How fast he can row is not the main factor. He has 5 other person in each side. Now if the rest 10 rows with full strength but without any rhythm among themselves then they will loose. Whereas if I train 5 kids and instruct them to synchronize the time they will surely win. This is just one side in case of team building. And there is one side which includes the leader, who is sitting in the front of the boat, what should be his role. This thing is not that clear in case of boat race but this is clearly understood in musical show.

In an orchestra the conductor does nothing but move a wand from one direction to other. During my childhood...in fact still now...I don't understand what his role is. To tap is the job of the audience. But later I came to know that this person represents the harmony visually. This is true for orchestras, where hundreds of people are playing. There this is very important. Actually he works as the focal point. Everyone else plays focusing on him. If he wasn't there, maybe there would be no synchronization. Because hundreds of them can't observe each others moves.

In a band where there are 4 or 5 people. They would run fine without a music director. As we are talking about scale, then what would be the focal point in a band consisting of hundred people? The focal point is the man standing in front and patting his wand. So this is all about team building. If the person, who read the whole requirement can't pass the baton to the next team...can't synchronize...then no matter how good the requirement analysis, there would be no artifact produced from that. That would remain as a well written requirement document. Many projects in Bangladesh experienced this problem like some of the other countries in the world.

Tauhidul Islam: So you mean writing skills, communication skills are becoming a significant part of software development.

Asif Hasan: Yes. Very significant part.

Tauhidul Islam: Then do you think software companies in Bangladesh, no matter offshore or local market, are emphasizing on these skills? Are they thinking how the technical people can be trained in these skills?

Asif Hasan: Yes. In my experience of ten/eleven years tells me that companies and people of Bangladesh are gradually emphasizing on these issues. It's not that the situation is the same as it was ten years back. I would say the developers, CEOs, owners of the companies and the managers recognize these issues with priority and emphasize on them as well. Issues include communication, writing, documentation and interpersonal skills.

Tauhidul Islam: How can we further develop the present infrastructure of the software development industry? Can you please give us some specific points? To me we are still in the beginner level. If we compare us with the neighboring country India, we'll see within last ten years they went ahead in the race and we are lagging behind. So according to you, what are the flaws or on which points we should put emphasis on for further learning. What should be the strategy?

Asif Hasan: This is a very old issue. Sometimes I feel it's the result of reaction. Sometimes we compare in between two students. Why one is better than the other? Issues like that.

While talking about how another country is improving I have a very personal thought about it. This is a very personal opinion. You can be big in two ways. You can be big in size or you can be big in essence. I don't mean that India has become big in size not in essence. No. I wouldn't say that. All I am saying is there are some industries, say there's one service industry which need plenty of people. Call center for example needs huge number of people. So there is a matter of number in case of call center. On the other hand there are some countries in the world, say Israel. I don't know much about Israel, but they have moderate number of inhabitants. But the people they have are highly intellectual and focused as they choose their technologies. Scandinavian countries are also like this. There are some specific technologies in the world, specific niche areas. They have adapted their inhabitants with their area. So first we should think about it, which way we should go.

I don't think it is as easy as taking a quick decision that as we have higher number of inhabitants, so we'll go for number. On the other hand we can't choose a certain niche area all of a sudden and start working there. This is not feasible either. To me if we compare with the neighboring country, it is easy to measure where we are if we have someone else in the race. This way we can compete. In one hand they definitely have some advantages unlike us. On the other had we may have some advantage that they lack.

I don't think I am at all authoritative regarding this matter, but what I think is Bangladesh has come to the point where we all need to think together. We need to find out where competitive advantage lies in case of IT. For example in some industries we have proven our competitive advantage. Women in Bangladesh make quality embroideries, which maybe possible. So we need to find if we have something like that in case of IT too. I believe that if a country doesn't have competitive advantage then we can't utilize the idea of globalization.

Tauhidul Islam: We'll never be able to go beyond a certain level.

Asif Hasan: We can't. Maybe after four to five years we'll earn few billion dollars but I don't know if that'll be any significant achievement for us by that time.

Tauhidul Islam: Continuing the previous issue, I have found in one case study that in Bangladesh we are attracted to offshore outsourcing because the output is very rich. And we haven't yet grasped the local market as most software that the local market needs are bought

from abroad. Maybe the significant reason for this is, the software India is producing, for example medical software or financial software... They have already developed this software and maybe they have shipped it to USA once, but when Bangladesh bids for it then maybe 50% of the requirements match. So they can customize that software accordingly and sell it to Bangladesh in a lesser price. But we have less number of these types of scopes. We don't ship software in many places. So if we want to develop that same software using our own resource then we end up paying three times the price. So maybe we are not getting enough support in the local market and thus we are not getting work.

So in these cases we are talking about building up, a sustainable development community, whether the infrastructure is or isn't there in our software industry. This is a large factor. So from this point of view do you think government should take some initiatives? For example they can make some rules.

Here I would like to pick one sentence from you that if we don't have the capability to go beyond a certain level then no matter how frequently we talk about globalization we won't be able to welcome that. We'll always loose to other parties in that case. So within these 13/14 years of your experience, do you think we didn't do it yet, or government should adopt some policy like this so that we can come out of these types of traditional case studies? I am actually expecting comments from you on this issue.

Asif Hasan: Of course. Government can contribute. I mean, according to the information that I have no country could ship something to the outer world without working inside. Today we say that in India there are four billion dollar companies whose quarterly revenue goes beyond billion dollars. They didn't come out of the blue. The process of Government Process Automation has started long before in India. What I'm focusing on is computerization of the public sector. In West Bengal, tickets can be bought online from four to five years back from now, whereas we used to know that West Bengal is weak in IT sector. By the word 'online', I don't mean web. I mean it can be bought electronically. And there wasn't any case of ticket fraud or so. And this work wasn't done by anyone from outside. In most cases they utilized people from their own country.

I would imagine everyone has already heard of this story about Indira Gandhi. Once she banned importing razor blades. Her reason was why a simple thing like razor blades should be imported. She thought what if it isn't imported anymore. Why can't it be manufactured in India Many detested this idea in her council of ministers. To teach her a lesson they started to attend the meetings without shaving. Indira Gandhi was clean and decent in nature. Well this is a story and I don't know if it's true or not. She asked them why they didn't shave. They replied that if they use local blade it cuts through their skin. Then she replied, "Well then gentlemen... Let your skin get cuts as long as the local blades are not as good as the imported ones". So this was one of her determinations regarding this issue. This can't be considered as a vision but rather was a determination that her country must reach that point. And they achieved it!

So in our country we should also have that determination in our mind. We can't dump it with the word government, as government is sum of few people. These people should have the determination in them. That doesn't mean that we should do everything altogether.

Couple of days ago I have read that if we import paper it costs less. Yes...it could be that Bangladesh doesn't have the competitive advantage. And if we don't have that advantage then we shouldn't put effort on this. But the issue of IT or the issue of Government Process Automation (e-governance) is a matter which includes cultural issues too. Inhabitants of that country would do it better. You can hire expertise from abroad. You can take consultants. But the working force should be from that country. Many cultural issues are there related to this issue. Maybe I won't be able to give example but it relates cultural issue extensively.

Now if we say that we need to make voter ID cards within three months, this is not a political statement but this is technically an unrealistic statement. This can't be. This is a matter of long time. We'll need to follow steps one by one. Pilot projects should be deployed there. We did those earlier too. Does anyone remember? If they were well documented then we can find where the mistakes were, what would be the best practices and what were the flaws. So in one hand if we don't learn from our experiences, then we shouldn't go for new projects. On the other hand if government doesn't promote IT sector we'll never be able to compete in the scale of economics with others. Because they are already few blocks ahead of us.

Europe and America are paying subsidy in agricultural fields. They are paying this subsidy in a field like agriculture which is known as the oldest industry in the world. If we talk about subsidy then most of the funds should be out of America. If they can pay subsidy for the sake of their farmers, even though they talk about globalization, then why not our government. How big is the IT industry of in Bangladesh. How much will they need to spend per year...maybe 5 or 6 or 7 billion? I don't see any reason why the local organizations shouldn't get the subsidies. And to me, Bangladesh won't have to face political pressure for that either. There will be no WTO to attack Bangladesh. No, I don't think so. This is a very minor issue. Only the concern is needed for this.

Tauhidul Islam: Ok...In continuation of what you have said, I felt maybe the thing government can do is, we can impose tax on the imported software. We can continue like this till the market is captured by our local companies. I imagine the word 'capture' sounds awful, but where my own existence is at stake then I can't think of any other possible long term solution. It just popped up as a suggestion. We can apply a high rate of tax in case of foreign software. Maybe then the price of local software and foreign software will get equivalent.

We have figured out some of the problems of the software development process. I would like to know your comments on these problems. No matter how hard we say we want to capture the market, but in order to do that we must improve the quality of our product. We must prove that our product is of good quality. For example in case of software process we hardly apply automation. We use fewer tools. The software hardly passes through the quality assurance process. Probably we never do risk analysis. For example we never analyze our previous projects and analyze risk based on that. And we always have deadline pressure.

So do you think there are more problems in the software process besides the ones we have found out? Do you have any feedback about this? Whether these are at all problems for us and if so then how do we actually resolve them?

Asif Hasan: Ok...None of these are technical issues. All of them are cultural issues. People in Bangladesh are usually raised in a non process oriented environment. Whereas a European is very process oriented. For example they have plenty of instructions written inside their car about the dos and don'ts. They even have instruction for how to open the toilet door and how to flush. I wanted to highlight how far they have taken the process in different phases of their lives. Even if we take a small toy, that too would contain a caution instruction. They supply manual or usage with that. Even if it's of one page only, they provide that. But here in Bangladesh we don't have that practice in huge things even. So a European kid gets raised in a process centric environment. This is not only true in case of IT. The whole society runs like that. And they learn to respect that process.

But here we start respecting this idea of process when we begin our career, not before that. Maybe our mentors or seniors ask us to follow the process. So this initial barrier makes some people dissatisfied. And this is not true only for IT but also it's true for Banking and manufacturing.

The productivity level in Bangladesh is not the same as the others in case of manufacturing industry. I know a company which is a multinational company, who has their operation in many countries other than Bangladesh. From one of the statistics that I have seen, the cost of what they have to pay to produce one product here costs them 25% less if they produce the same product in India.

So altogether I tag them under cultural issues. These are the problems we already have. And these wouldn't be solved technically solely as it also has a cultural issue embedded.

Tauhidul Islam: Since I've started my career I have felt there is always a mismatch with the management and technical people. The way they want to run the company makes it difficult for them to manage the technical people. Technical people feel that their duty is to code throughout the day and then leave at night. They feel that they don't have any responsibility regarding other issues. But from today's discussion it seems that in case of team building these managerial issues are very important. I imagine you'd be able to give the best feedback as you have started your career in the technical path and gradually you have come to a managerial position now. And during this long span of time you have also managed many teams too. I am sure your feedback will help freshers like us to keep the issues in our mind from the beginning of our career. Please highlight some issues. Please give some feedback.

Asif Hasan: This is also a problem in the root. This becomes a problem. This is a communication problem. There are many organizations in Bangladesh who are not performing well and that is too because of only one reason. The people inside the organization don't collaborate with each other. Management doesn't know what the technical team is thinking. No one is enemy of each other. It's just that they don't communicate. In every organization everyone knows what the problems are. They even know how those can be solved. They need to increase internal communications. They know the problem and they know the solutions as well but yet the company is falling. Probably I heard it from GM (General Motors). All the employees of General Motors know where the flaws are. They all are educated and knowledgeable. They know how to solve the problems but yet they can't solve it. Because they don't sit together and they don't collaborate. Maybe they don't have the platform of collaboration. Or it could be that they have the platform but it's outdated and needs to be modified.

None of the software companies in Bangladesh are that huge that the management wants to run the company in one way and technical people want it other way. In most of the cases this can be solved in one session. Well there can be extreme cases too, but to me in most of the cases it can be solved that way. In our company too I have experienced it, even though we are technical management. It can be solved in one sitting.

One more thing is that in the IT industry, started from America, that from the beginning technical people are leading this industry. This is true for most of the companies. The person who made the first car or the first telephone, wasn't he an engineer? They ran the business. They had started the business. Later banks and other financial stations came. Maybe we are in that initial stage when technical people are starting the business and someday they'll grow big and then maybe non-tech people will move toward the management. Now few of them are appearing.

As there was hype for IT so some people who are non-tech have started this IT business. They have started it with a good omen. But maybe they failed to manage properly. As they failed out of frustration they probably commented that there is no hope for IT in Bangladesh. But to me it seems to be a very superficial opinion. There is hope and we'll be able to do it. When management team, finance team, administration team and technical team will sit together and discuss then there is no reason behind why the problem wouldn't be solved. This is something like a trade union. If we want to survive we need to sit together and talk.

Tauhidul Islam: Okay...So you mean to say that according to your personal experience, software industry or software companies in Bangladesh are not so big yet that they would have any sort of problems in between the management and technical team. So if they come together and communicate, the problems will be found and they'll get solved.

Asif Hasan: Most of the cases...yes.

Tauhidul Islam: So at this point I would imagine that for any industry, for example garment industry, they have collaboration among themselves. They share knowledge. For the software companies, as there are small companies as well as bigger companies, there are some companies who are following processes quite effectively. They are not sharing their tools or processes with any other companies. I am not sure if you have ever shared anything like that from Spectrum or not, or if you have worked collaboratively with anyone or not. So don't you think that it is time to work together, as none of us may survive otherwise? And we'll never be able to make a unique or good process otherwise? So regarding this knowledge of tool sharing, how much do you think it would be effective and what initiative would you plan to take in future so that many software companies can work together?

Asif Hasan: This is a very good question. There are two reasons behind the grouped synthesis in a company. One is they are not affecting each others interest if they can ensure this. And the second issue is they have enough money with them. Money is the glue. Believe it or not this is true. To be specific, I would say if there has to be an association then there has to be money. I mean finance here. I mean flow of funds or expectation of fund or fluidity of liquid. This makes an association big. Unfortunately IT is not a moneyed industry, so its associations will never be that powerful.

Garments or others are more powerful than this. The next thing is, for a long time IT companies in Bangladesh were rivals or competitors of each other. They were in fight with each other. Maybe in a year there were twenty tenders including government and non-government tenders. There were 200 companies, so they fought. At that point it was not expected from the business perspective that they wouldn't compete within themselves. It wasn't expected that they would share things. But now the situation is different. It's changed at least in case of software development. Now there are many companies whose main income source is outsourcing, and that market is large. It is no more a well; rather it has become a sea.

Now the sharing environment is much more congenial. Maybe that's why collaboration is happening there. Now proposals are coming from BASIS asking if we can start a mentorship program or if we can share our processes. Even three or four years back, it would have been unthinkable to walk into a (BASIS) meeting and say that I have seen the user requirement specification document of a company and I liked that very much, and if they would share that format with us. Document alone doesn't do, it has someone's work or intellect behind it. But now, in any meeting I can say that someone's document is very strong and if they would like to share it with us. And there is a great chance that the answer would be, "yes! Why not?". Which was impossible three or four years back. Even we have discussed it in the SQABD meeting the other day that we should observe how they are organizing their unit. How they are designing it and how they are organizing the team. This thing wasn't shared at some point. Now I can see as days are passing by, people are eager to share. This is a good sign.

In my case, I have always been more of a technical person than a manager. So I had this sharing tendency in me. One of my major activity is I am a consultant. In this business the main vow is I must pass away something. I must say that if you want better then please come again. So I have tried my best to share everything from my organization. And my organization also helped me a lot. And sharing doesn't only mean idea; it also includes sharing of documentation and even artifacts. Many times it happened that I let others view one part of my source code so that they can use it as a utility. Many of us did that in Bangladesh. So I know many of them have

and are taking these excellent initiatives and I think this congenial environment will increase. And the more it will increase the better it will be. But yet I don't find six or seven companies working together in collaboration. We are heading towards that. The trust level is gradually increasing. We are working with two three companies together. And as I work I feel it's less difficult than I thought it would be. But communication is very important here. If the environment is good then fewer problems arise.

Tauhidul Islam: In this case I would imagine if those three or four companies, who are sharing knowledge among themselves, if they can show a productive output then they can prove that they are getting benefited from sharing processes among themselves. It would be good if one example can be set.

Asif Hasan: We need just one or two good cases. That two or three companies could make a win-win situation by collaborating, both technically and financially. Then these things will have a good effect.

Tauhidul Islam: I have found few communities; from India and worldwide, that they can post a message if they face some problems, and within very short time they get the response or solution too. They don't even bother from which part of the world this message is coming. So we should also start some culture like this. And the resources that are working in the software companies should adopt this process of getting solution from outside when they face problems they are stuck on for a long time without any solution from within the company and by this the company gets benefited as well. This trend or habit needs to be developed among us too.

Asif Hasan: I am hopeful regarding this issue as there are less aged people working here in this industry we have in Bangladesh. This is driven by very young people. And what happens in such industries is they do all possible mistakes. And there is vitality in this. I mean agility is one thing and competitive is something else. But vitality is needed for a company more than these two to become something great. Like I am alive, I want to thrive.

As it is a young people's industry they share a lot. They share things that they shouldn't have. Yes from some perspective this is wrong but from some perspective this is the vitality. For this there is no reason for this industry to fail. This sharing tendency didn't come from the company management. In most of the cases technical heads of the company are leading this group. And after sometime company management appreciates it as they are benefited. They realize the improvement of the workforce. So maintaining the vitality is important. And regarding this there is one more thing, which is communication. You may ask what the vitality of our life is. I would say each group is communicating with one another. Same in this case people needs to be mixed up. It is happening and it's happening in a good way.

Tauhidul Islam: One more thing I want to put light on is you said when you were in seventh or eighth semester then you've got an opportunity and which was a good example for you. This made you think that you'll be able to make your profession in this field in a better way as you became confident. We have many companies now and I want to talk about Internship as I have started my career recently. During my third or fourth semester it seemed that I didn't know about the professional world that much. So I think the curriculum that universities follow or the courses they instruct, most of them are not realistic or not anything close to professional path. As you are in a significant position now, how do you see internship program in your company? Did you ever give it a thought that if the students who will join the world of IT or software development can be trained in the earlier stages or if any guideline can be provided for them. I mean to start the internship culture completely in case of IT.

For example, BBA has already captured this market. Various companies are proposing BBA students internship program. But in case of IT especially the CSC graduates are not getting this opportunity yet. Maybe this wasn't even thought for them. So don't you think that the training of

resource is starting a bit late? You start training after someone joins in the company based on your needs. But if we could show him the path one year earlier then wouldn't the whole software industry be benefited with this process?

Asif Hasan: Let's light on internship first. There is no subject in Engineering, or maybe I can mention Sociology as well, where they teach their pupil and they start working immediately after they graduate. This is impossible. University creates a background, a culture. We should expect that much from them. Each organization must give some time to build up its employees. This time can span for three, six or nine months.

Let me tell you about Spectrum, the one I am in. I have more than 30 employees currently. Except me all the other 28/29 people have done internship in Spectrum and then they have joined in Spectrum. We spent three to nine months on them to build them up. I would name it as a homegrown football team. The greatest football teams caches a pool of players who are homegrown. They pick them from the early years and train them accordingly. And sometimes they buy superstars from outside. Those are successful who can combine both perfectly. On the other hand only homegrown team may have problem. I'm picking examples to make it easy to understand. For example a big team, say AJAX Amsterdam. They are not signing people from outside currently. They are continuing with homegrown people. So they are not doing well in the current time. Whereas say Manchester United, they make players and if needed they buy players from outside too. But they buy less. They buy according to their need. So what I want to tell is internship program in software industry is very much co-related and ongoing demand.

What doesn't a university teach? There is something that they will never teach. They train in programming. They teach the basics of software engineering. But how things go practically it is not possible for a university to teach their students. Because in reality they don't implement these things. They are not doing configuration management, quality assurance and testing. These things vary from organization to organization. It's not possible to teach in university level.

From start we must give a fresher three to six months to learn those. Those companies will succeed which have this culture, which have the process of teaching and the management also emphasizes on this as well as finances. What I mean by succeed is they can scale up themselves. They'll have growth. There are many companies who have 10 to 20 employees and they want to remain in that boundary. They think that they run this smooth for the next five to six years. I am not considering them in this case. But if we talk about India in case of scaling up or growing company then they must have the culture of internal internship or the culture of homegrown resource building. This is not only a program but also a culture. This should be embedded in an organization and should be valued as well. We must invest to build up this culture. Because in the bottom line universities will not teach them everything.

Yes, there is something which is there in the university curriculum and if they are asked they will do teach their students. But then again they are lacking resources too. So to me internship program is a very important program. And BASIS, industries, universities should all together come to a formal contract that everyone should do intern and will promote this culture.

Students must do intern if they wishes to build his career in engineering. If someone wants to be in academician career then that's a different issue. And usually there is less number of people who want that. They will work on project specific topics. And in the industry it is easy to deploy them. We don't only teach the interns.

If I am not being too loud I must agree that in my company I have got commercial projects done by my interns. And I have done that successfully. So what are the benefits of the organization? One is that I could do the work within a comparatively cheap rate. They have build up the resources very well. I could train them as well. What would be the benefit of the intern group? They will get the training two years earlier. Maybe they'd come across new tools and

techniques, that they'd be able to mention in their CV, which in my case took 5 to 10 years. So this would also help the others to avoid the hassle of training. We are all the times talking about mentorship, this is mentorship. This is one way to teach. This way the time can be minimized for them to learn than the time it took for me. This is the procedure, which can be followed by the internship program.

What happening now is very loosely coupled frame. Maybe I know 10 faculties from 10 different universities and I inform them about a commercial or non-commercial project that I want to get done by the interns and request them to send sharp and capable students from their places. This is a very informal and limited way. And not many people are doing this as it takes time too. Most of my times is spent on this. But if this could be formalized, that one organization must have 10% at least or 20%-30% intakes depending on their turn outs and growth plan. They must take intakes. And how do we get intakes, we don't have floating resources. So I must take from fresh graduates. So if I plan that 2007 I would grow up to 60 people. Maybe I have 30 of us, so to be 60 we may have 10 from the turn outs. To get 40 people I will have to invest on 80 people by this year. I won't get 80 people on demand if I don't have the preparation to spend on 80 people and if the universities are not prepared to give me the support. And that 80 too should be capable at least to the baseline. This is a burning problem everywhere.

To me this is one crucial reason that the industry is not growing. How much are our companies growing? It is such a business that we can grow up to 400%-500% and people mind that. But I don't understand what the problem is.....If a manufacture industry grows 100% then the share market would go on uproar. They will spread so many rumors. But if one IT industry doesn't grow 100% then we consider that in the loser's book. Fund is one reason for not having enough growth. Another reason behind this is we are not preparing the fresh graduates within the growth cycle.

Tauhidul Islam: Okay. This was all about fresher or intern program. But the most important thing is we don't need only programmers through out the different stages. We need project managers, business analyst, system analyst, quality assurance people and we need people in the design and architecture level as well. So what I would like to know from your experience is have we improved a bit in these fields? For example are we technically sound or have we made our human resources that they become good project managers, or maybe better design and architecture people gradually. As you are in this field so your feedback is very important in this matter. So do you think we should only guide novice or fresher programmers? Or we should also guide experienced programmers as well so that the high level designs are of good quality.

Asif Hasan: Yes definitely, we must emphasize on both the cases. But I will put more concentration on the fresher as they plays significant role in terms of company's number and growth. In our country things are a bit different, we don't work in niche area, we still work in a labor intensive work environment. We do those works for example- the most important part of SDLC is coding. So if this company needs 8 or 10 programmers, they probably need 1 architect. So the ratio is 10:1 it gets difficult to get 10 programmers instantly.

What you have mentioned is definitely very important issue. I mean what could be done for the ones who are a bit experienced, who are ready to step into the next level. For them I think there is a way out, seniors of the industry should schedule a mentorship program for them then that would work as a kick start. Well we can't say this is a solution. But these two issues are different. One is about excellence and the other one is about entry level. They are both different issues. Both are equally important and needs to be considered very carefully.

Tauhidul Islam: So coming back to your experience, would you like to share with us your experiences? I have already mentioned in the beginning that you have worked with Oracle and you are involved in various things. You are a designer as well as an architect. You are working the software design and architect level. So within this thirteen years cycle in the software

industry you have gained gradually with time. How did you involve yourself with design and architecture? I would like to hear your findings so that if anyone gets interested then they get benefited from this discussion. One of my friends who has started his career for one year, and he is interested in growing his career in design and architecture path. He is a developer now but he wants to shift. So we want your opinions in case of this migration issue. How he can move forward through his career. How will be the learning phases?

Asif Hasan: First thing I need to mention is this is a journey not the destination. So we can't say that I've become a specialist. I mean there is no fine line that if I cross that I can claim to be an architect or a designer. No it's not the right scenario.

Let me tell you a story. We all know Michelangelo and Raphael. They are both contemporaries. They used to live in the same city. And they were worst enemies. Michelangelo places some conditions while did the fresco in one of the churches. The condition was Raphael mustn't enter in that church as long as he'll work there. He'll be able to enter after he's done. Then the authority asked why is such condition?. Then he replied that he doesn't want Raphael to see his works even for a second. He was scared that if Raphael sees once he'll copy his work. How much enmity and respect would lead him to say such thing. One designer or architect must understand that level on his own. No one else going to point these issues to him. They should be able to give their opinion within one glance at any application. I mean it shouldn't be like he didn't get any clue at all. One programmer or junior can do that, but architect can never do that. As he is claiming himself as an architect so he should be able to render his opinion at once. He must mention whether it's good or bad, where it has flaws. He must understand the skeleton of the whole thing at least.

I would emphasize on two things in my career, two things that influenced my knowledge on design and architecture. One of these is the understanding the architecture of UNIX operating system and another one is the architecture of Oracle database. I have worked with these two things extensively at some point. If someone has the idea of the computing architecture completely, be it software, be it anything, at least once he should see the architecture of UNIX system. They should see how a tree can be formed from the seed. The main goal of a designer is to grow a tree from the seed and then again to produce seed from the tree. This is the process of evolution.

I'm very lucky that I have got enough opportunity to read about and work with architectures. Or maybe the word debug would fit the best here. Maybe if I get that opportunity now once again I wouldn't be able to utilize it properly as I don't have time to read extensively anymore. Probably at that time I had ample capacity to capture things which declined with time. And the second thing is Oracle. The evolution of computing system, database issues from single tier to two tiers to client server issues and how they have designed their database engine, how they have created the relational structure. I have tried to go into deep of these. I don't know how much I could but this helped me a lot in terms of design and architecture.

If you notice then you'd find there is no relation with object orientation and these but I've got the feeling. I wouldn't say I know them deep in detail, but I know the overall feeling. Now if I see any system then I get the intuition or a gut feeling of any problem that may occur later. There is a scalene difference in between design and architecture. One of the major things architect needs to know is he is more related to user requirements. Their main focus is what I am going to develop, the utility of the product. To think about how the users will use the product., to introduce trade off concepts. There are many good quality things. One thing can be made of 10 taka; it can also be made of 100 taka. The motivation of architecture would be to minimize the financial expenditure. He has to stop somewhere. The stop is not science. This comes from a gut feeling. Everyone starts feeling this. He starts thinking and finally decides the way to implement. It's more like the Raphael's story. He would understand by just seeing Michelangelo's fresco. I mean seeing as a whole. Maybe I am seeing little but I'll understand

wholly. I mean to capture the whole thing at one shot. No need to go into the details. One architect might not look into the details.

There is only one way out, we'll have to study a lot and also following the mentors blindly in some cases. We'll have to believe our mentors. One's own opinion will come after a lot later. The superior feeling should not be there at any case. There has to be decency. We always have to be polite. Greats always have this attitude in them. Maybe we feel superior sometime so we miss something.

The developer who's going to switch to architecture should remember that he won't go into the details but the overall picture, one specific focus. In a battle a soldier and a general have different respective roles. He sees everything as a whole like a player sees all the pawn in chess. But to the soldier everything comes as one thing. To the general one pawn mean a division that he moves from one position to the other. No one would promote you to do this in software industry. This will shape up as we see others and work accordingly. With time one will learn to see the detail as well. What I do is I learn things from my experience and from others experience as well. It is very difficult to explain the idea.

Tauhidul Islam: Well....I have got an overall idea. But it would be the best if we get any posting in SQABD on design and architecture related issues. So that if anyone is interested then he can follow this path. I mean any contribution from you, which could be comments, writing or any suggestion would be helpful for the others.

Asif Hasan: I have the habit of writing, but now it's very hard to manage time. But I am very much interested about SQABD programs.

Tauhidul Islam: That's great! So you mean to say that we'll be having your contributions here shortly.

Asif Hasan: Well...yes. It can be expected. If not possible at one shot maybe I would try to do it gradually. The whole thing is interactive. For example someone posted something and I would post a comment on that. I found people are very interactive now a day. No one wants to read a big document. But if it's threaded then they read it with interest. This is the reason why the idea of blog is so popular in current days.

Tauhidul Islam: Ok...So we are almost at the end of our discussion. It would be really great if we could talk to you for some more time. One last thing I would like to ask you that you are working in Spectrum for a long time. This organization has been with you from the launch till now. So if you would like to share any comments or information on Spectrum with us, this may let the audiences and the listeners to picture this organization.

Asif Hasan: Ok....I'm one of the founder members of Spectrum. This is the organization of some of our peers. I still think of it as a small organization. I still feel that I'm in the building stage. It could be that spectrum did some good work and collected fame. Maybe it shares some poor reputation as well. But it still is a little kid to me. In 1995 when we launched Spectrum then we didn't give it much thought as I have told earlier. We decided that we'd stay in Bangladesh and we'd work independently. We were not that much driven by immense moral like we'd serve the country or so and so. Maybe we had that but in our subconscious. But this was never our vision or mission. In fact this wasn't. We tried to inject that later.

In the beginning we couldn't concentrate on software because of the survival problem. It wasn't possible to survive by only doing software jobs. What we used to do is we used to sell IT products. We used to sell computers. But whatever we do we always had a focus that we'd be a solution driven company no matter if it's for networking or for software. We won't be a training company. From then we have added few bricks at a time.

We have started with empty hands. All of the founder members came from middle class. We lacked any banking or investment from any angel investor at that point. We bought the second computer with the money we got from selling the first computer and then we went on like this. And that's how it all started.

Now we are divided into two divisions. One of them is IT infrastructure. One of its main targets is to work with networking. Not in a small scale rather in a large scale like corporate or enterprise level networking. And one of the main focuses is consulting. I mean infrastructure consulting. For example there will be a large IT system implementation for a financial organization or maybe for a hospital or it could be for a hotel. I mean huge public interfaces. The job will be to manage the entire project. What would be the system there; it's actually an architectural issue when I'm talking about IT infrastructure.

Another division is the software development. I would name it as database design or data management as it is related to data and thus to Oracle. Usually the warehousing or billing software go towards that way. That too had a limited market in Bangladesh. After that we were gradually in the software business.

During 2001 we have reshaped our company. We have considered this as a separate wing. Before that what we did was about database and consulting. During 2001 when we started working for software development sometimes it happened that people asked if we really do software or not when we went for bidding. At that time it irritated me a lot. I was shocked. And I remember I called a board meeting on this issue. I felt that it was a problem of image and we were in a crisis. We were among the top three or four networking companies and after doing so much of coding I had to hear these sorts of questions. But later I found that they have a point. We were only doing data management for one or two specific client. Actually Software Company has the responsibility to create workforce, to support solution and it gets better if they can have a public interface. People then know about the company. From then we've defined it as a different division.

We have suffered a lot for few years after 2001. For that time it was all investments no output. And we were aware of that. At that time we have never even cared about outsourcing. My first challenge was building the team, to create the workforce. And even before that we need to create or define the culture of creating workforce. So what we did is in the process of team building we tried to build the culture as well. So now we are at the initial phase. It is expected that as industry experiences growth there is an inherent capability created we are positive that it'll sustain.

Tauhidul Islam: We are optimistic as well. This is a holiday today. Usually we enjoy our holiday. As far I know you work during the holidays as well. For our software industry this overtime culture is here like the others but the compensation culture is not there yet. As you are in the top level of one company, I would like to know from you that how do you see this?

Asif Hasan: What I want to mention first is, I can't remember of the last Friday I didn't come to office. This is same for my other directors and some senior executives as well.

In software companies this falls into our HR policy that if we need to do any off site work such as we need to visit the client site then there is an amicable compensation. We don't have any financial policy in our organization if we need to come to office and work in holidays but we arrange so that they get enough refreshments during those days. And we never force anyone to work in holidays. I mean if someone feels that he needs to come then he may. And if we need to stay late, as in software business we often need to stay late then we spare him for one day for that week. He gets the day off. It's not something very organized. The whole process is going on very informally. So far we could manage it well as we have smaller team. This is an impudent of

our growth. If we don't make a good structure then it gets very difficult for an organization to be a big one. In the software industry more or less every organization faces this problem.

Tauhidul Islam: Many thanks to Asif bhai as we are almost in the end of the discussion. I would like to inform our audiences and listeners that today we had the first session of Meet the Mentors by SQABD podcast event. And with us we had Mr. Khandakar Asif Hasan, director of Spectrum Engineering Consortium Ltd. At the end I would like to get a feed back on this podcast session as you were the first guest to interview. Would you please feedback us on any issues we should improve or concentrate onwards?

Asif Hasan: I can give one suggestion on the spot. There are two types of people, one who'll listen to the audio and another type who'll read it. If I am given the preference then I would go for reading. I prefer reading as you can say. So if it's not a burden then you can try uploading a transcript besides this audio. I know I am asking for too much, but it's just a suggestion.

One more thing is, to my knowledge there are many senior people in Bangladesh who are senior and more qualified than I am. Each of them has respective specialization areas. It's like each day I learn something new from them. So you can try to bring them in this session. This will help us a lot if someone follows the discussions. I don't know how effective our discussion was as I'm not that experienced but the senior's will be of much help. To tell you the truth I learn new things even if I talk to them for 10 minutes and that I can deploy in my works! So to me fresher are yet to learn many things.

Tauhidul Islam: Thank you Mr. Khandakar Asif Hasan . Now if we summarize this session of Meet the Mentors then we'll find that we have discussed about so many things with Asif bhai. We have discussed about his professional career. We have talked with him about how to educate or train the human resource in different stages of the software development life cycle. We have also discussed about government policy.

We have grouped some phases in SDLC where we need to concentrate or learn more. We have also compared this with the neighboring country India. And we have also tried to find out the fragments in software development process which the other countries are following but we aren't. For example we are not automating, we are not using tools, and even we are not doing risk analysis either. And we have also found out that if we, the software industries want to work together then we'll have to work under collaboration. We'll need to share knowledge and tools with each other. Maybe we've already started doing that with small steps at a time.

Our today's guest Mr. Khandakar Asif Hasan is very optimistic that we'll get positive results as we proceed this way. We have also talked about internship program as he is working on this issue specially. And we are hopeful that the companies will plan something internally and after discussing with the universities they'll start internship program in future. We have talked about which professionals we can train up and who are important for us.

Over all we have shared his work experiences. I hope dear listeners; you'll be with us in our second podcasting session. We'll inform you shortly whom we are recording and whose valuable experiences we will share with you next. Hope you'll be with us till then. Thank you all.
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