

Interview with Thiru Jeevanandam, Chief Technology Officer, Global Business Headquarters, Yokogawa Electric Corporation

# Could Japanese & Indian Software Services Promote Connectivity in Asia's Manufacturing Industries?

By Japan SPOTLIGHT

For Japan, software service is by nature a domestic sector. But in light of globalization as well as the need to strengthen the connectivity of supply chains in Asia, it must become more internationalized and work along with global standards. Today, India and Japan, two important software service providers in Asia, are committed to promoting industrial collaboration to achieve Asia-wide prosperity. We interviewed one of the best people to talk about this topic: Dr. Thiru Jeevanandam, chief technology officer of Yokogawa Electric Corporation in Tokyo. He discusses his observations on the differences between the Japanese and Indian software business and the potential for further collaboration between the two in the interests of Asia based on his 30 years of experience in the Japanese software business, having previously worked for an Indian IT consulting company.

(Interviewed on April 3, 2017)

## Introduction

**JS:** As an ICT expert, please explain a little of your background.

**Jeevanandam:** I was born in southern India. I studied in Delhi where my specialization was in electronics and gained a Ph.D in Computer Control. I did it all without a break. Then I worked in Delhi for an engineering consulting company for seven years. At that time Yokogawa Electric, which was based in Tokyo, visited us with some automation products and systems for refineries. I was the key person in the engineering company to handle this. So Yokogawa and I got to know each other and I was offered a position. It took almost nine months to get a work visa. It was very difficult in those days to get a work visa. So I joined this company in April 1987. Since then it's been 30 long years in Japan. My family is also here. I've travelled to more than 70 countries on almost all continents, mainly for technology presentations and educating local engineers. Sometimes we bring them here to Tokyo for a seminar. We have been successful in many countries. Shortly after I joined Yokogawa we started the Indian company affiliated with Yokogawa in September 1987.



*Thiru Jeevanandam, Chief Technology Officer, Global Business Headquarters, Yokogawa Electric Corporation*

**JS:** Why do you think there is such good chemistry between you?

**Jeevanandam:** I had visited Japan in 1983, four years before I joined the company, as a customer. At that time nobody knew to how operate a computer, how to make a spreadsheet, all those things. I had a lot of skills that my colleagues didn't have, so I was given very special treatment and that gave me a lot of confidence. Plus, I was impressed by the dedication with which people worked in the company. When I requested a change, or made some comment in a meeting, it was promptly corrected and laid out for the next day's morning meeting! I adored this dedication.

## Japanese ICT Sector Evolution

**JS:** So you've seen a lot about the Japanese ICT sector evolution. How do you feel about it?

**Jeevanandam:** It's enormous. When I first used JNR (Japan National Railways) in 1983, the ticket was just paper; nothing magnetic. The fare adjustment was manual. That's the starting point of a revolution:

they made the ticket magnetic, then they introduced the Orange Card, and now the Suica/Pasmo and then ApplePay etc. When the revolution can happen in a simple transportation system it can happen anywhere. It's amazing.

**JS: And you personally have contributed a lot to that.**

**Jeevanandam:** In my company, there are a lot of ideas, innovations. Customers request something so we must find whether it is possible within the budget to implement. So nowadays, I work on solutions to meet customer demands. My position in the company is simple and unique.

**JS: So, you are working in the service sector rather than in hardware?**

**Jeevanandam:** Solutions, yes.

**JS: I guess it's quite like what METI (Ministry of Economy Trade & Industry) people are now speaking about. They are advocating for the concept of what they call connected industries. Maybe 30 years ago when you first started working here, those connected industries were very unusual.**

**Jeevanandam:** Nobody knew about them in those days.

**JS: But now it's growing. Do you think that is contributing to gaining a competitive edge for those manufacturing companies?**

**Jeevanandam:** Definitely. Especially communication and information have to work together to produce what people want. For example, these days you may be hearing about IoT (Internet of Things) and NSD (Name Server Daemon), an authoritative open source name server. These two will be playing a major role in the next maybe 10 years to make things work and how to use the Internet more effectively to reduce costs. For that we need to set some standards, like Industry 4.0 in Europe; that's the key to success over next 10 years.

## Comparison of Indian & Japanese software

**JS: You've said you have no direct connection anymore with India, but I wonder if you can compare Indian and Japanese software.**

**Jeevanandam:** Well, I used to go there almost every month because our biggest center for the whole world is in Bangalore. Our team has about 1,500 engineers of whom 200 can speak, write and converse in Japanese. It's called the J-Team. When we get a big project in Japan,

they send J-Team personnel here; maybe two or three guys. They talk to the customer, collect all the information and go back to Bangalore and develop the application, come back and test it. In that process we use many Indian high-tech companies to support us.

**JS: My personal impression is that India's software industry is very well developed and is a very big industry. In particular, Bangalore is an Asian software center. So how do you feel about the difference between Indian software and Japanese software?**

**Jeevanandam:** A frank opinion? Let me tell you very simply. When we want to develop something in Japan, we get complete details from the customer. The customer says: we want this. So we put all the codes as a set point, then develop the application, logic and produce reports and so on. That application is made for that customer. If I go to another customer in the same industry, this will not work, because another customer's requirements may be different. He may be located somewhere else and his inputs — for example, the crude to produce petroleum — may come from Bahrain, may come from Saudi Arabia, may come from Russia. So the crude composition is different, so which refinery uses that crude can use that application. Whereas, if I go to an Indian company and tell them the same problem, what they do is, first they say what is the general requirement? Not the particular customer; the whole industry, what parameters they put. Then they start raiding the software: this one, you pick from here and develop the application; this customer, you pick up from here and develop that. So they pick globally. Of course, it may be a little expensive but it can be adapted to many applications with just small changes. Not big changes. Whereas in Japan it is customer-centric. So that kind of thinking is not helping software development. Hardware, yes. Like Sony makes very good televisions, Hitachi makes good refrigerators. When you go to many customers we don't generalize the requirement. For example, customer Y: we write the software for customer Y. If I take the software to Showa Shell, it won't work. It will work but there are many things to change. So, if I take 100-man months to develop this one, I need to spend 50-man months to modify. Whereas if I use Indian software, which is maybe two 50-man months, if I go to Showa Shell, I need to put five-man months, something like that. So that's the different situation.

**JS: So Japanese companies are more exclusionary?**

**Jeevanandam:** No. But even if you develop a big system you can still have a lot of security systems specific to the customer. In recent years, since many Indian companies have come here, foreign companies have come here, and Japanese IT is also trying to change. But if Japanese software companies want to go to India, or Singapore, Europe or America, it will be very difficult because those countries already look at the big picture. Not customer-oriented. But nowadays they are changing.

**JS: So Japanese software companies should be more open?**

**Jeevanandam:** Exactly. And more global.

**JS: You said ICT services in India are very efficient. So would that make a contribution to Asian economic development overall? In particular, we have “global value chains” and we need software connecting these chains. Perhaps Indian software could play a key role.**

**Jeevanandam:** Right now Indian software is looking at the United States and Europe. They don't look at Asian countries, unfortunately. Some companies have offices but in general they do not have that kind of open Asian counterpart. But I believe in the next few years those guys will move to Asia where many developments are going to happen.

**JS: Why are Indian software companies not so interested in Asia?**

**Jeevanandam:** The main thing is language. It is difficult for them to speak many languages. In Europe they work with countries that can speak English: for example, the Netherlands or Belgium.

### **Software Service Sector's Contribution to Job Creation**

**JS: Software service is playing a key role in enhancing productivity. But at the same time it's providing jobs. Which effect do you believe is bigger?**

**Jeevanandam:** Let's take the airline industry. Before 2000 it was very difficult to make a reservation unless you went through a travel agent and he issued a ticket. If you wanted to change the date, again you had to go to him. That's very time-consuming in my opinion because I travel a lot. So whenever I wanted to change I had to call my travel agent in Tokyo and he had to send another ticket. So my productivity was down. After this electronic ticketing, using e-tickets, I don't need to order from anybody. If I want to visit some country I can do everything on that system, including the pick-up service, hotel reservation, travel, so my efficiency increases. And at the same time, a lot of people lose their jobs in the travel industry. That's a negative thing. But those people transform themselves into arranging the tours and providing everything online, updating the software, updating the web page. So it's not actually losing the job.

**JS: But, in order to keep consistency between job creation and enhanced productivity, we need education. How do you assess such education for**

**software engineers?**

**Jeevanandam:** In Japan education for software is very low. Japan basically has a mindset. It is hardware oriented: I want to manufacture the best care in the world. So hardware innovation is given more importance than software knowledge. Some people are there to learn more programming and developing new things, but the percentage is very low compared to other countries. In India, for example, basic engineering — electrical, mechanical, civil, chemical — this is required. Whatever you do in ICT, the engineering is required. Then people acquire information technology either by themselves or in university with some special class. Then the communication, whatever they are interested in. So when the student comes out of the university he is very good in basic engineering with some knowledge of IT, which they can apply in their industry, and this is lacking in Japan in my opinion.

### **Cooperation Key to Progress in Software Service Sector**

**JS: Japanese are very much group-oriented people; they don't like working individually. Information technology is the sort of work which needs people who work individually, rather than in a group.**

**Jeevanandam:** Not really. Of course, individual thinking is important. But when it comes to the product — for example, Internet Explorer — the team working for Google, the team working for Explorer, the team working for Safari, have many things in common, many codes in common; they use the same open source code sometimes. You develop something but you have to share it with others. Maybe they don't have group discussions but the sharing of information makes them successful. For example, 20 years ago it was not like that: they didn't talk to each other.

**JS: Such kind of cooperation is not necessarily limited to domestic fields. It could be expanded internationally, and this could be a key to expanding business. For example, the chemistry between you and your company. How do you assess that? Is it working out well or not between Indian and Japanese companies?**

**Jeevanandam:** It depends on the case. It varies according to who approaches what. If a Japanese company wants to set up something in Bangalore there are many rules. If an Indian company wants to come here, there are many rules. So how do the governments work together to make this common in order to be successful? I think your kind of forums and seminars can be helpful to make that happen.

**JS: I'm curious about your thoughts on the factors**

**that result in success or failure between Indian and Japanese companies. My sense is there are not many cases of success.**

**Jeevanandam:** The key point, as I always tell my team, is passion. If I want to do something in Japan, I should respect what is happening here. Forget about my Indian culture or Indian thinking. So when I enter a meeting room maybe 10 people are there. In the Japanese case we sit together and after two or three hours they say, OK, let's go in this route. Then everybody goes in that route. That's the biggest success point. Whereas in India or other countries, 10 people are there and they all have different opinions. The leaders say, let's take this way. Some people follow that. Some people say no it's wrong. Then there can be disintegration. So in my case, from the first day I went to the company as a customer it was a totally different situation. I didn't understand Japanese. Few people spoke English. But still I felt dedication, commitment and passion. These three things are very strong in Japan and they attracted me most. I think Japan fit me in that respect.

### **Future of Japanese, Indian & Asian Software Service**

**JS: How do you predict the future of Japanese, Indian and Asian software?**

**Jeevanandam:** The future situation depends on IoT. In the 1990s many Japanese companies introduced fuzzy logic in refrigerators and in washing machines. But it never worked. IoT is still in the early stages. There are not that many Internet-enabled devices. Of course, there are a lot of developments going on, but it has to be affordable.

**JS: How about driverless cars?**

**Jeevanandam:** In my opinion, it will not succeed. It is a technology innovation. But as a human being, I want to drive. I want to make my own decisions. Navigation is also a support to me.

**JS: On the question of policies, what is needed in order to promote IT software in connected industries? More regulatory reform?**

**Jeevanandam:** Mainly international standard requirements. That's the key role. But it's a very difficult thing to achieve. For example, the environment and COP (Conference of Parties). Now the US is pulling out of that one. Such kind of things would not happen when we talk about connected industries. It's a very productive environment to improve efficiency and lower the cost of production.

**JS: Maybe the OECD or WTO would be the relevant venue to achieve this.**

**Jeevanandam:** It will take a long time to achieve. There are some standards like Industry 4.0.

**JS: Do you think US industries as well should be a part of global value chains? It would change their attitude towards international trade and investment.**

**Jeevanandam:** I agree with you. American companies are basically domestic companies. They think only about themselves. If you ask any American where Maehama beach in Okinawa is located, I don't think they know that. Whereas if you ask somebody in Asia or Europe, they have a wider perspective. So American companies need to change. Now they are only selling; they are not getting anything from outside.

**JS: Would it be necessary to strengthen the rules for services in trade in order to attract Americans to join?**

**Jeevanandam:** Of course, because basically it's a service-oriented country.

### **Overall Potential of India-Japan Collaboration**

**JS: Do you have any thoughts about the potential for India-Japan collaboration, not only in software but overall?**

**Jeevanandam:** In 2016 many changes happened, not only in the IT sector but in manufacturing. Many Japanese companies went to India for manufacturing automobiles, but not for many other industries. The main problem with the volume of business is not very good support from the Indian side. The current prime minister is very aggressive in promoting, but he is only one person. The system has to change. The government is only two years old. If they are there for the next five or six years I think we can expect a lot of changes.

**JS: Perhaps by achieving better teamwork between Japanese and Indian companies, Japanese companies can be more global.**

**Jeevanandam:** Japanese companies also should change their mindset. If you go out as a manufacturer you should adapt. For example, Suzuki in India. They have almost 80% of the market. I know when they came in the first time there was all kind of trouble, especially with the managers. That can change but it takes time. But if you are resilient and concentrated you can achieve success. **JS**

Written with the cooperation of Ian de Stains OBE who is a writer and consultant.