Codelco Seminar:
The latest fashion technology in Calama

Thursday, June 19th, 2008.

Chuquicamata refinery aims to become 100% automated by the year 2011. They have already achieved 71% of the transformation process, reports Carlos Caballero, Manager of Codelco's Smelter and Refinery. Now, it is a more efficient place, more productive and, above all, safer.

From an optical router that can transmit data at a very fast speed to the automation of Chuquicamata´s refinery, these were some of the topics covered at the main technological seminar in Chile. Andrés Navarro, and Sergio Melnick were the main speakers

ALEXIS JÉLDREZ (Journalist)

Even though Sergio Melnick did his best to entertain the audience at the 4th. Digital Seminar organized by Codelco, who really got all the attention was Andrés Navarro, Sonda's President.

His recurring topic was innovation. " Political alliances loose their innovation quality" "Chile needs a crisis to recover its capacity to innovate". "What we see today in the banking sector are more mergers than innovations"

Navarro thinks that unfortunately, "due to the failure of a big innovation initiative such as the Transantiago (public transport system) the Government has lost its capacity to take risks. It is not wiling to take innovative risks.

With the National Soccer Team

The audience, which was skeptical at the beginning, valued the fact that Navarro was brave enough to mention the word "Transantiago". His company, Sonda, has been criticized because the control system he promised has not worked, as it should have.

Last week, Codelco hosted a seminar at the Park Hotel where the most important representatives of national technologies were invited. The National Soccer Team was also staying at the Park Hotel while preparing for the game with Bolivia. During the two-day sessions several speakers highlighted the fact that the Information Technology Seminar (IT, but at Codelco it is referred to as TICA, which stands for Information, Communication, and Automatization Technologies) has become the most important national seminar.

Sergio Melnick, who can foresee the future, believes the next version of the seminar could be called TICAR (with R for Robotics) and that it will deal with topics such as biotechnology, nanotechnology and web 3.0 (Ticarbionaweb ?)

This time, the event was sponsored by ACTI (which stands for Chilean Association of Information Technology Companies. Its President Miguel Pérez stated this was the right path: to organize "focused" seminars and that future seminars could be held focusing on banking or retail

Andrés Navarro felt compelled to influence the decision on how to spend the money for innovation. " I am not used to making suggestions to authorities, but I am getting a little bit desperate" he pointed out. "(Nicolás) Eyzaguirre, who was the man in power (at the Innovation Council) left and never gave me an appointment, and Bitran doesn't listen"

In a humoristic way, he repeated: " (Eduardo) Bitran does not listen to me, he only speaks to me".

The skeptical audience broke out into laughter
Later on, Sergio Melnick added:" Bitran doesn't listen to me nor does he speak to me"

Navarro, who does not believe in the Innovation Council's "clusters" said: "We have talented people and the demand

for innovation is falling. What must we do to increase the demand for innovation? How can we make more people understand what Codelco believes, that technology increases productivity?

Francisco Brieva, Dean of the Physical and Mathematical Sciences Faculty at the University of Chile, mentioned the millions of dollars the Government is allocating to scholarships in foreign countries. "We are granting lots of scholarships so that people can navigate the world. **But how many brain leaks will there be?** Chile is not an attractive country in many disciplines so as to encourage talented people to develop their work here".

His colleague Hernán de Solminihac, from Engineering at the UC, commented on the benefits of obtaining a double degree:" I am in favor of scholarships abroad, but provided there are also scholarships in Chile. I wish they were of a mixed type, in which people could spend time both in Chile and abroad, and obtain a double degree". With this system, the student earns a degree from a foreign university and another one at a national university.

Codelco has created several related companies, such as MIRS and Micomo, which are developing leading edge technologies.

MIRS is a consortium headed by the national company High Services in association with Codelco, the Japanese company Nippon Mining and Metals, and the German robotics expert Kuka. Their precise dancing robots, capable of pouring a glass of wine were the rage at the latest Expomin at Espacio Riesco.

At Micomo, where the Japanese telephone company NTT participates, they have developed an "optical router" that particularly struck Andrés Navarro.

Micomo is transferring, directly from NTT laboratories, the most advanced networks in the world to Codelco´s mining operations. At Andina Division an operator can manipulate a mechanical hammer from a distance of several kilometers by using this technology.

Daniel Barría, vice-president of Shared Services at Codelco, pointed out that they have a robotic arm working at the Smelter, which "replaced the work some operators used to do in an area of high temperatures where many accidents occurred. A different application of the robotic arm is the handling of cathodes at Radomiro Tomic. And the most important integrated robotic application is the refinery. It's very difficult to explain. You must see it.

We visited Chuquicamata´s refinery, which is now highly automated. Most important is how this has improved safety conditions for workers. In the cathode loading area (the heavy copper) where 55 people used to work, we now have 5 workers managing a huge automatic platform

Light; pure light

In order to establish a comparison. Telefónica and VTR have recently improved their broadband offer to households to 2 megabits per second (Mbps). Micomo´s photonic networks provide up to 320 thousand Mbps (320 Gbps). In these networks the information flows through light. The networks use 32 colors of light in a single thread of optic fiber that is why they can achieve such high speed.

The core of this technology is a minute optic router (AWG Star), that doesn't use electric connections but that uses light instead.

There are routers that transform the light coming from the optic fiber into an electrical signal; there they do the routing and then transform it again into a light signal, explains Sergio Burdiles from Micomo, who distributes this technology. The optical router only receives and emits light signals. This is why there are no delays.

This is a unique development by NTT. "If anybody in the world wants to buy this kind of technology, they do it through our company, said Burdiles.

Navarro accuses

At the most dramatic moment of his intervention, Andrés Navarro said: "I know who sold the Registry Office contract. And nothing will happen to him. He is a very well known person

The registry office opened a bid for the modernization of its technological platform, which was initially awarded, to Tata. The other competitors were Quintec and Sonda, Navarro´s company.

Later on ChileCompra declared the process void and the Government asked Guillermo Arenas, Director of the Registry Office to hand in his resignation.

Guillermo Arenas.

"This is the kind of focused seminars that we must organize in order to promote the topic among specific sectors”

Miguel Pérez

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