REP TALK

Rep to Rep
Rep to Business - Business to Rep

July, 2012

IEEE-CNSV (Consultants Network of Silicon Valley)

By now, you may have heard about IEEE-CNSV. We were privileged to attend a recent special dinner meeting as a guest of the group. It is important for us to know what is going on in our industry so we are sending this along as a special report. We are told that IEEE has such groups all over the country.

The purpose of this meeting (to paraphrase their announcement) was to gather a panel of former Bell Labs employees who would share interesting stories about their experiences (1) as working members of this unique historical operation, and (2) who could compare ***innovation*** in *that* environment to how it is done today. We didn't speak to everyone, of course, but we observed a high level of interest by those present in what was going on from the very beginning of the meeting to the very end.

"Ma Bell," as it was lovingly known to the world in those days, was started in 1925; reached a high of some 25,000 employees, headquartered in Murray Hills, New Jersey, before it was legally broken up in 1984, valued at the time at roughly $4.7 Billion.

The key to this meeting's topic was Bell Lab's relationship with AT&T. AT&T was at that time a monopoly. They shared ownership of Bell Labs with Western Electric, the manufacturing arm, and had exclusive contracts with the operating companies, i.e. Pacific Bell, North-Western Bell, etc. Their contract with the government was rock solid at the time of its inception, in that Bell Labs designed the equipment; Western Electric built it; the Operating companies installed it all. The cost? Apparently no one considered it worthy of consideration.

(Just by circumstances, from all appearances) Ma Bell was featured on a special edition of *Sunday Morning*, one of CBS's stable of choice news-related programs, June 24, 2012. We have to believe that this may have been something of a celebration of the Ma Bell institution but we can't be certain.

For those who wish to explore the Ma Bell history in greater detail, we suggest you go to Wikipedia and open Bell Labs. Their history goes all the way back to the 1920's detailing how they started getting into basic science. Early on, for instance, they proved the effectiveness of the Fax system (not their invention). In the 30's they introduced electron diffraction which was the foundation for studies leading to solid-state electronics. By the 40's their first transistor was produced and their world grew proportionately.

As you read the review in Wikipedia, you will find where "in 1984 a divestiture agreement signed in 1982 with the American Federal government forced the break-up of AT&T: Bellcore (now Telcordia Technologies) was split off from Bell Laboratories to provide the same R&D functions for the newly created local exchange carriers. AT&T also was limited to using the Bell trademark only in association with Bell Laboratories. **Bell Telephone Laboratories, Inc.** became a wholly owned company of the new AT&T Technologies unit, the former Western Electric."

Here the panel is being introduced by Dr. T. Kim Parnell (standing); while sitting from left to right are Dr. R. (Bob) Strain; Dr. Charlie Neuhauser; Joel R. Williams; and Dr. Harry Bims. Each of the speakers was very involved in the technological growth of his period of service. We heard many mentions of their personal involvement, activities that led to new changes in the organization. The talks became more up-beat and we started hearing mentions of *The Idea Factory*, a book written by Jon Gertner, and we intend to get a copy soon.

Most spoke enthusiastically about their time at Bell Labs. No complaints at all. We heard one say, "They paid for my masters." This attitude certainly verified the general opinion that Bell Labs took good care of them.

We conclude that Bell's engineers were a very large group of very smart people. They were afforded marvelous libraries and were encouraged to use them, during working hours or not. Their stockrooms were loaded with just about anything they needed.

As for the meeting, here are some indicators that everything came off quite well. The speakers brought sample items that they had managed to keep as souvenirs. This group above on the left is typical of the kind of interest-sharing where they compared memories and thoughts. You can clearly see Drs. Bims and Neuhauser to the left, along with some familiar backs. We've included another shot of these two in order to improve the view. Those who know them would already have noticed their reversed position from that in the other picture. Bims right (center?) Neuhauser left. We think that is Dr. Strain's back view at the right.

The kickoff speaker was Joel Williams, who worked from 1970-1978 in Holmdel, NJ and Columbus, OH. He was in the Switching Systems Div. He started with relay and tone circuits, then quickly moved into the minicomputer era and software by helping to create the very first computerized network management system.

He was located in such a way that he experienced the pre-amble to the Bell System break up. At this stage, the Bell System was nation-wide but the environment in which they worked was controlled by the various Public Utility Commissions from each state where events were to take place. The turning point came when Bell was refused the right to install a newly developed system. They were set up in that state so they built

the system to the extent that it was a complete, testable system – using their furniture budget! It worked so well that the Public Utility folks gave them the go-ahead to build it. It was a turning point where the breakup was not the total destruction of the company.

We found Bob Strain to be quite interesting. He went to Standard Telecommunication Labs in England for a time after getting his Doctorate, and then returned to the U.S. He ended up at Bell Labs in Murray Hill from 1965-1973 working on magnetics. He remembered his boss as giving the best New Year's Eve parties he ever attended.

He gave quite a story about the facilities at Murray Hill. Bldg. 1 was ***research,*** funded from AT&T long lines and patent royalties. Bldg. 2 was ***development,*** funded by royalties from Western Electric. The only corridor connecting the two buildings (end-to-end) was on the second floor and was roughly a half mile walk, overall. Bob's office was at the extreme east end of the building, while the library was far west. Everybody met there. It was a great building but did nothing to encourage collaboration. We later determined that the hall got a mention in the previously noted book, ***The Idea Factory,*** by Jon Gertner. Bob has 10 patents earned in 8 years at Bell, along with 18 publications.

Dr. Charlie Neuhauser worked at Indian Hill, IL on a germanium-based data switching system and a silicon-based telephone switching system, each of which was so large that one could walk around inside of them. His response was a complete set of Power Points, all so technical that we elected to pick just a few for view.

Here are the Bell Labs locations, as Charlie remembers them: Murray Hill, NJ – Research; Holmdel, NJ – Applied Research and Development; Whippany, NJ – Military; Naperville, IL – Switching System Development; Columbus, OH – Telephone Handsets; Denver, CO – PBX; Allentown, PA – Cable and transmission (and Nothing in Silicon Valley!

The Big Plusses of BTL:
Paid for my Master's Degree! Many, many very smart people! Open Stockroom!! Really cared about the employees; Great Library; Almost unlimited resources.

The negatives:
Isolated from the wider technology world; everything came from Western Electric; Slow to adapt the very new technologies; Managers rose up based on technological prowess not management skills; Sometimes very wasteful of resources; and after 1984 breakup of AT&T began to struggle to stay afloat.

During the summers of 1981-1986, Dr. Harry Bims worked at four locations (Indian Hill, IL, and Holmdel, Whippany and Murray Hill, NJ). He was awarded both undergraduate and Ph.D. scholarships for Rensselaer Polytechnic Institute and Stanford Univ., respectively, from 1981-92. We were anxious to review his short speech during the meeting – He shared the challenge of them all and was given little time to talk under the circumstances. We tried to reach him but were unable to do so.

What is obvious is that he is one of the younger members present. We suspect that he could fill us in on how things worked during the turnover from monopoly to just another corporation fighting the battle from day to day. We'll continue to ty to reach him and bring you up to date on the blog, later.

In closing, we must add for the benefit of our local readers, the Turmeric's food was quite good. No dish resembled anything with which I was familiar. But the taste was very distinct and quite pleasant. The restaurant is located on the popular dining "block" on South Murphy Ave in downtown Sunnyvale. (The best place to park? -- Macy's parking lot.)

They can surprise one with occasional dashes of spicy hot stuff. But, what the heck, the food is East Indian by origin and having previously visited there with an East Indian friend, who raved about the place; I was well able to recall his expression of caution. The best indication of the food's appeal was the number of people in this group who returned for "seconds." Many such plates were filled to the brim, with some of, but not ***all*** of the previously chosen items ☺ .

And below that are the views of the entire dining area, from opposite ends of the room.

- A few of you may be wondering why we are introducing a group of consultants in a publication devoted mostly to reps and their business contacts. Very honestly, if you are a consultant, (1) I think you should know more about us, and (2) We can all profit by networking. Your access to our customers as people in need – people who need help; can be quite profitable to know.
- If you are a rep, you recognize immediately that these engineers work on a very high engineering plane. (I recall talking with one of the Ph.D.'s, expressing my awareness of the number of "them" who were in that room.) But one encounter could develop into a very good working relationship. A tip to one of them can lead to business for them and reputation for you. A principal can see a need for such individuals. Your customer knows how they became acquainted.

❖ Questions? **WATCH OUR BLOG**

We can help. Whether you prove us right or wrong, we will be grateful for the opportunity to share ideas with you. We are getting our operation in shape to be more communicative with you. Until next month . . .

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