

BUSINESS

Crunch time for New Jersey lab

A global merger will put the long-suffering Bell Labs through the wringer yet again. But could joint ownership benefit the world-famous facility in the long run? Kurt Kleiner investigates.

Bell Labs has suffered a few setbacks in recent years, as its owner, telecoms company Lucent, has cut back on basic research. Now, the 1,100 scientists and engineers at the lab in Murray Hill, New Jersey, face another upheaval: they've been bought out by a French telecoms company.

Alcatel's €10-billion (US\$12-billion) take-over of Lucent will create the world's biggest maker of telecommunications equipment. It could also create even more pressure to cut back basic research at Bell Labs. But despite company statements that 10% of the combined 88,000 workforce are likely to lose their jobs, some observers say the merger could strengthen Bell Labs in the long run.

"The concern I always had with Lucent and Bell Labs was that the company couldn't afford the research that Bell Labs was doing," says John Slack, an analyst with investment-research company Morningstar in Chicago. "The merged companies can throw in a lot more research dollars."

Both Paris-based Alcatel and Lucent, based in New Jersey, supply wireless and land-based telecommunications equipment and services. If, as expected, they obtain approval from their shareholders and governments, they will join forces in six to twelve months, to form a Paris-based company that has yet to be named.

The two companies say that they expect to save €1.4 billion annually, mainly by laying off staff. Although billed as a merger of equals, Alcatel, with sales of €13.1 billion and 58,000 employees, is almost twice as big as Lucent, with 30,500 employees and €7.7 billion in sales (see graphic). And the French company's shareholders will own 60% of the new company.

Scientists at Bell Labs invented the transistor, discovered the cosmic microwave background radiation left over from the Big Bang, and won six Nobel Prizes, but have, more recently, weathered years of cutbacks. Since it was spun off from its former parent, AT&T, to become part of Lucent in 1996, it has lost two-thirds of its staff, and focused more on product development than on basic scientific research



Best of pals: Serge Tchuruk, chair of Alcatel, left, and Lucent's chief executive Patricia Russo expect their merger to yield the world's top telecoms supplier.

(see *Nature* 440, 146–147; 2006).

"It has lost a lot of its lustre and size from its heyday," says Jay Pultz, an analyst at Gartner Research in Stamford, Connecticut, and a former Bell Labs systems engineer. "It still does very good research, but the number of people involved in that, and the number of research areas that that covers, is much more limited." He estimates that only about 5% of Bell Labs' total research and development budget now goes on basic research, and that about 200 researchers are involved in it.

The merger could put even more pressure on that basic-research component, says Narain Gehani, a computer scientist at the New Jersey Institute of Technology, former Bell Labs researcher and author of *Bell Labs: Life in the Crown Jewel*. "A company that makes telecom-

munications equipment without leading-edge research doesn't have much of an edge. So Bell Labs is critical. But it cannot do unfettered research," says Gehani. "In my view what will happen is that it will be oriented more and more towards the business."

The merged company might also hesitate to cut Bell Labs for political reasons, says Niel Ransom, former chief technology officer of Alcatel and a former Bell Labs researcher. "Bell Labs brings a lot of political value. They want to be able to show that as they become a more international company, it will not have a negative effect on research," he says.

Bill Price, a Lucent spokesman, said that although no specifics have been announced, layoffs will be spread across all parts of the company. On a *pro rata* basis, that could mean up to 2,600 scientists and engineers losing

their jobs worldwide. Ransom thinks that product-development teams doing duplicate work will absorb the steepest job cuts. For instance, engineers working on computer networking devices could lose their jobs, as both companies make this equipment. But

Lucent engineers working on advanced wireless communication technologies such as CDMA (Code Division Multiple Access) don't have any counterparts at Alcatel, and should, Pultz says, be able to breathe more easily.

Government approval for the merger could be held up because the companies do classified work for their respective governments. But Alcatel has announced plans to spin off some of its defence-related work. And Lucent says it would set up a US-controlled subsidiary to handle classified work.

It will take a year or two to see how things shape up. But Pultz hopes the new company sees the importance of supporting research and development. "At some point, if you don't make these long-term investments, it will come back to haunt you," he says. "Even in this era of having to get more profitable and prove themselves to Wall Street, you can't be that short-sighted."

