

## Coming out of the dark

After working for more than four years with unpredictable and tediously slow Internet connections, CGIAR Centers staff in New Delhi are now enjoying the benefits of improved joint connectivity. In the past eight months, productivity at the nine CGIAR Centers offices in the Indian capital has increased and inter-Center collaboration is on the rise.

The origins of this success story can be traced back to 2001 when Dr William Dar, ICRISAT DG, encouraged all the CGIAR Centers offices scattered throughout the city to relocate to a new building on the Indian Council of Agricultural Research (ICAR) campus.

Shiny, new offices, however, couldn't overcome the perennial problem of dial-up connections that were usually slow and often unattainable. So ICRISAT, which has its headquarters in Hyderabad, India, took the lead in coming up with a joint facility that would give everyone improved Internet access.

A small satellite dish was installed on the roof of the ICAR building in 2002, and all was well in the land of unpredictable connections ... but only for a little while. In the 12 months following the installation of the satellite link, the Internet provider expanded its customer base to such an extent that it was unable to provide a reliable service to everyone. CGIAR staff found themselves once again in the Dark Ages of Internet access.

A member of staff summed it up best when he said, "Sometimes, the connection was so slow that you could start downloading your email, take a nap and wake up to find that you were still downloading the same few emails. Not that I ever took a nap, mind you."

### Intervention

In 2004, the CGIAR ICT-KM Second-Level Connectivity Project, which aims to upgrade Internet access at small and mid-sized remote locations, intervened after Project Coordinator Ian Moore visited the Delhi campus to witness firsthand the connection problems.

"With the assistance of Bill Thorpe, ILRI, we held a joint meeting with most of the other Centre representatives to discuss a possible solution to these problems," Ian said about his trip. "Unfortunately, there were no follow-up meetings as we had hoped. No one was happy with the joint connectivity and several offices had set up their own Internet connection.

Moreover, each Centre had arranged its own IT support contract, often with the same company."

After a Project audit was carried out a few weeks later, it was decided to make the Delhi offices a priority and accelerate work on the campus.

Changing the technology necessary for improved Internet connections is often a matter of having the right know-how and adequate finances, but changing a collective mindset can be almost impossible at times. Many of the Centers felt that a second joint-connectivity solution would only result in more of the same problems and wanted to find their own individual solutions.



**"Let's make it taller then"**  
ICRISAT IT Manager Pradyut Modi  
(left) and Network Engineer  
Indrapreet Singh

In July 2004, a few months after the Project audit was carried out, Dr Dar attended a Center Directors' Committee (CDC) meeting, where a proposal that ICRISAT take the lead in organizing cooperation and collaboration on the Delhi campus was endorsed by everyone present. This was a major turning point because it meant that all the small offices in Delhi now had their senior managers committed to finding a solution to the connectivity problem.

### Perseverance ...

Following this decision, Dr Dar and Dr V Balaji (Head of ICRISAT's Knowledge Management and Sharing Office) held a meeting with senior staff from the Delhi offices. Subsequent meetings, however, were difficult to convene due to the conflicting schedules of the various office heads. Undeterred, the two men continued

to promote the advantages of a common arrangement.

Two months later, their perseverance finally paid off when all the offices finally came together and agreed to install a single, larger bandwidth Internet connection and to share IT support.

Things still refused to go smoothly, though. A request to the Indian government for permission to lay fiber optic cables in the campus grounds did not materialize. Then a proposed wireless link was rejected by the company contracted to improve connections. Many people raised their hands in the air and said it just couldn't be done.

However, no one had counted on the tenacity of another man who wouldn't take 'no' for an answer.

### ... and determination

In many organizations, you will come across people who have an almost single-minded determination when it comes to getting the job done. No matter what obstacles they are presented with, they doggedly keep at it.

When ICRISAT IT Manager Pradyut Modi heard that the plans for a wireless connection had been abandoned, he decided to use his experience and technical know-how to try and persuade a telecommunications giant that the 'impossible' might just be possible, after all.

From the tranquility of the sprawling ICRISAT campus outside Hyderabad, he flew to the hustle and bustle that is New Delhi and clambered onto the roof of the ICAR building to investigate the problem firsthand.

According to the Internet Service Provider (ISP) contracted to improve connections, the location of the Delhi offices ruled out the possibility of a wireless connection. Standing on top of the roof of the building, Pradyut saw for himself the cause of the problem.

"The property that houses the CGIAR Centers is located deep within the government campus and is surrounded on all sides by tall buildings," Pradyut explained. "This made it impossible to establish a direct line of sight, which was necessary for a wireless link with the ISP's nearest telecommunication equipment four kilometers away."

After a series of lengthy discussions with the ISP, Pradyut suggested that a line of sight could be achieved by establishing the necessary equipment on the roof of another building belonging to the ISP and erecting a tower on the roof of the ICAR building.

The ISP's response: "Impossible! Such a tower won't be tall enough."

Pradyut's response: "Let's make it taller then."

After many such conversations, agreement was finally reached. The ISP put up a modified tower, and the Second Level Connectivity Project stepped in with the necessary funds for a router and server.

Throughout these trying times, the Project played a pivotal role with Ian Moore giving much-needed advice and moral support from his base in Nairobi.

Then in April 2005, the connectivity equipment was fully commissioned, the Centers' computers were configured and the Delhi offices were able to enjoy the sort of Internet connection that many of us take for granted.



**One satisfied customer**  
*PK Joshi, IFPRI office, New Delhi*

### Just a minor hitch

The enjoyment, however, was short-lived, courtesy of a power supply that is prone to frequent failures and variations. And no power in the Indian capital usually means no Internet access for many people.

Dr Balaji appealed to Ian Moore, who arranged for the Project to provide the additional funds for an inverter, allowing the server to operate for more than four hours without electricity. Since the installation of the inverter, the offices have enjoyed a problem-free Internet connection.

### The benefits of collaboration

Today, a fulltime network engineer is on hand to give assistance to the staff in the nine offices – just another of the many benefits that are possible with a shared Internet solution. Indeed, if you visit the Delhi offices and have a problem trying to reconfigure your notebook to access your email, it will all be taken care of in the time it takes you to drink a cup of India's famous tea.

"If I have any network problems," explained a member of staff, "all I have to do is make a phone call and the engineer will be at my desk within two minutes, sometimes even faster."

Now that there are normal communications between the Delhi offices and their respective headquarters, many people feel they are working more effectively as a team. And as an added bonus, less money is being spent on telephone calls and faxes.

When Ian Moore visited the Delhi offices more than a year ago, he commented that there was limited collaboration among the Centers. The present situation, however, has exceeded anything that even he could possibly have imagined. The offices are now talking about installing a common mail server and taking advantage of joint purchases and shared services.

Ian is quick to acknowledge that improved connectivity in the Delhi offices was the result of a collaborative effort, with everyone's contribution deemed vital to a successful outcome.

As one office head commented, "There is strength in partnership and collective actions."

The objective of Second-Level Connectivity is to upgrade Internet access at up to 50 of our small and mid-sized remote locations, with particular emphasis on Africa. Subsequently, scientists at these sites will be able to connect with partners and access information resources around the globe, leading to a new level of collaboration and information sharing.

To date, the ICT-KM Second-Level Connectivity Project has surveyed 49 offices at 18 different locations where Internet access needs to be improved.