



***On the Record: Civil Society in Kosovo - the Crisis Years***

**Issue 10: Online at Last! November 11, 1999**

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**From the AP Editorial Desk: Technology, Peace, and Ownership by Iain Guest**

This issue tells the story of how a group of information specialists wired up Kosovo to the Internet. They include our colleague, Teresa Crawford, from the Advocacy Project.

Teresa has taken time off from our Project to work under the umbrella of the International Rescue Committee (IRC) on establishing a new Internet service provider (ISP) in Prishtina. Known as the Internet Project Kosova (IPKO) it sent out its first email message from Prishtina by satellite on September 20. Already, the IPKO is serving a score of international relief agencies and Kosovar civic organizations.

This is one of the first times that this kind of information technology has been integrated into a major peace-building mission. There are important lessons to be learned.

The project had to overcome many obstacles before it could establish that first exciting connection. Not surprisingly, many were technical. Telephone lines, electricity, computers, technicians -- all these are the lifeblood of information technology. None of which was readily available in a country that had been bombed and pillaged for months on end.

But these technical difficulties were easy compared to some of the other challenges. For some weeks Kosovo was a dangerous free-for-all. Laws were made up along the way, by trial and error. Unmarked landmines lay strewn about the country. Minorities were intimidated and driven out. It was unsafe to be out on the streets at night. (A foreign aid worker was murdered in

downtown Prishtina as recently as October 11.)

The project had to sell itself to officials from the UN Mission in Kosovo (UNMIK), which was charged with governing Kosovo; that proved difficult. Even harder, it had to justify its existence to the Kosovars running telecommunications. They were understandably determined to consolidate their own authority, and suspicious of foreign initiatives.

Is the IPKO a "foreign initiative?" This is indeed a key question. Far too many aid projects are conceived by international nongovernmental organizations (NGOs) seeking to take advantage of a donor's largesse (or guilty conscience), instead of responding to a local need and drawing from local talent. Too many projects are run for and by foreigners, without enough regard for the time when they will have to be handed over to those who are supposed to benefit.

The IPKO was conceived by two young Americans who have a deep commitment to Kosovo, a fascination for the web, and a conviction that the new information technology can help to rebuild Kosovo.

Paul Meyer, from the IRC, has provided the entrepreneurial spark and manages the project. Paul persuaded a company to donate a huge satellite dish and \$900,000 worth of satellite time to the project. He also arranged for the IRC to lend the project \$175,000 to carry it through its first six months, and lined up paying clients among the international relief agencies.

Teresa Crawford, our colleague, has identified Kosovar civil society groups that will receive the service for free. The third member of the team, Akan Ismaili, is a Kosovar Albanian and technical expert, who has managed all the technical aspects of the project.

In this issue, Teresa, Paul, and Akan tell the story of how they secured the Internet link. We make no apologies for going into detail. Not only does their story provide an unusual insight into the workings of a major peace building mission, it also holds plenty of lessons for the future.

But the IPKO team knows that this is only the beginning. It is one thing to establish a technical connection for Kosovo. It is quite another to ensure that it benefits Kosovars instead of foreign aid agencies, and that it plays a constructive role in the rebuilding of this damaged country after the emergency has passed. For this to happen, the IPKO has to be handed over in the right way, at the right time, and in a form that can be sustained. That will be the subject of the next issue in this series.

Certainly, if it is not done, the hard work and inspiration that went into the IPKO will go to waste -- like so many other well-meaning aid projects.

## **Wiring Up Kosovo**

Teresa returned to Kosovo on July 2, for the first time since her arrest and deportation by the Serbians the previous year. In addition to editing this series of *On the Record*, she also planned to discuss an Internet connection for professors at Prishtina University. Her first call was to the family she had stayed with on her previous visit.

## **Returning to Kosovo**

From Teresa's diary:

I went straight to the house where I had stayed the previous year. Hugs all round. Knowing what they had been through, I had brought a backpack of presents and several loaves of bread from Macedonia. We sat and exchanged news. The family had made it through the bombing and expulsions without any real incident. But their luck ran out the night the Russians arrived at Prishtina airport (June 9).

The Serbian paramilitaries were out in force that night. They dragged one of the neighbors over, and held a gun to him while they asked Ibrahim for money. Before they left, one asked what computers Ibrahim had. He answered 486s. "What kind of computer is that for a computer expert?" replied the paramilitary. Ibrahim survived, but his neighbor was killed.

I explained to Ibrahim that I was exploring the possibility of linking up the universities of Tetova and Prishtina by email. Ibrahim is a professor at the university and arranged for me to visit the technical faculty building. It is a huge building -- eight floors in all -- and is situated in the Sunny Hill neighborhood, which looked largely intact had survived.... Before the bombing, it housed two separate faculties -- one for computers, and the other for mechanics (engines and motors etc).

We walked around gingerly. Many of the rooms had been used by Serbs as sleeping quarters. Every lock was destroyed and the rooms were littered with beer bottles, blankets, and porn magazines. But it also looked like a promising spot for a satellite dish, with its height and southern exposure.

On the way back, we passed some of the buildings I had seen the previous year, when we were arrested. The UN refugee agency (UNHCR) is in the police station -- or what is left of it. The building where I was imprisoned last year is still standing. Damn.

July 2, 1999

Editor's note: Names have been altered in this diary extract.

## **Post-War Vacuum**

Serbian forces withdrew on June 12, and NATO's Kosovo Force (KFOR) moved quickly into Prishtina. There was much work to do. NATO's strategy during the war had been to break Kosovo's links to Serbia. This left almost no intercity telephone links between Kosovo and Serbia, although a small number of telephone numbers (those that began with #5) were linked to a newer system that had escaped the bombing. With these numbers one could call outside the country, but not to other cities in Kosovo.

Into the vacuum poured a small army of international relief agencies desperate to coordinate with

each other and keep in touch with home base. Within days, mobile phones were everywhere and satellite dishes had sprouted in the parking lot of the UN Mission in Kosovo (UNMIK) and on rooftops. One international agency spent over \$15,000 in the first month on satellite phone bills alone.

But the mobile phone system was hopelessly overloaded. There was only one small antenna in Prishtina, and the Yugoslav company MOBTEL, which provided the service, had sold far more connections than the system could carry. This meant it was always busy or crashing. (Some felt this was deliberately intended, so as to disrupt the relief effort).

Some pre-war subscribers could log on via one of the Internet providers in Serbia (EUNET or the Post and Telecom [PTT]). But this required a functioning phone line -- and a number that began with the number 5. As noted above, the pre-war telephone system was overwhelmed with users and in need of basic maintenance. Most international organizations were reduced to checking their email via a satellite phone, which cost up to \$2.50 a minute.

There was one other Internet connection in Kosovo at the time. The Grand Hotel in Prishtina allowed clients to log on through a small satellite dish on the roof for a charge of one D-mark (45 Cents) a minute. This was well beyond the means of Kosovars.

The legal basis for telecommunications, like everything else, was completely unclear. In theory, Serbia was still sovereign over Kosovo. But UN Security Council Resolution 1244 (June 10, 1999) also instructed the UN Mission in Kosovo (UNMIK) to ignore Serbian laws that were deemed obstructive to Kosovo's autonomy. This was tantamount to starting with a clean slate.

With the mood lurching between fear and exhilaration Kosovo provided the perfect environment for new ideas -- but also for total anarchy.

### **The Internet Project Takes Shape**

By July, Kosovo needed access to the Internet -- there was simply no other way to communicate. Either it would have to be supplied as part of the international aid effort or as a commercial venture, in which case international relief agencies would spare no cost to communicate with their home base, while Kosovar organizations would compete to raise funds for their own expensive connection. This would favor those with the best links to the international community, like the Mother Teresa Society or Koha Ditore (the Albanian language newspaper).

Teresa went to the Balkans with the idea of supporting a non-profit project to wire up Prishtina University. She got the idea in March 1998, after testifying at the asylum hearing of a Kosovar woman in San Francisco. The woman put Teresa in touch with her cousin, a professor at the university, and the two began to talk by email. He encouraged her to explore ways of providing Kosovo with an effective and neutral Internet service provider. It was not until after the war that she was able to pursue the idea.

Teresa's first idea was to connect Prishtina with the Albanian-language University in Tetova, Macedonia, which had attracted many of Kosovo's Albanian intellectuals during the refugee

crisis. She met with Marko and Borja, two Slovene techies who worked in a media lab in Slovenia, and the three developed an idea for an Internet service provider (to be called the Independent Balkans Internet Service -- IBIS).

But the cost proved too high, and Teresa was forced to focus solely on Prishtina. She broached the idea with several Albanian professors on her first visit, and they talked about creating a new ISP at the Technical Faculty building. This would have allowed the university to service its own network of faculties, libraries, schools, and independent media -- and so eventually reach a large sector of Kosovo's civil society.

It helped that the Technical Faculty Building was structurally sound. The problem was that it was also dependent on the PTT and telephone lines -- like the rest of Kosovo. This raised all kinds of technical and administrative problems. The PTT was still Serbian-owned, and in complete disarray. The best solution would be to use a satellite. But this would be very expensive -- and it would still need to go through the PTT.

Around this time, Teresa met Paul Meyer, from the IRC, a prominent international refugee relief agency. Paul was looking for ways to develop the Internet in Kosovo, after his success in using the Internet to help reunite families in the refugee camps (See #9 of this series).

Paul had grown disillusioned with the misuse of technology during the refugee crisis and was interested in finding shared technological solutions for the international humanitarian community. He was keen to develop a project that forced agencies to share technology, resources, and information.

While he was in Albania, Paul had also spent time with the founders of the Soros foundation's wireless academic Internet. While that project was successful, the foundation had grown tired of covering the costs year after year. Paul wanted to develop an ISP in Kosovo that financed itself with revenue rather than relying on donor money. He saw an opportunity to sell service to the humanitarian agencies and create a self-sustaining non-profit ISP in the process.

Paul knew from working with the refugees that there was one very large satellite dish sitting unused in the former camp at Stenkovac, and a year's supply of satellite time that had been promised to the refugees -- all of whom had now returned to Kosovo. He suggested asking the owner of the satellite dish, the company Interpacket, whether this valuable package could be shifted from Stenkovac to Prishtina, and used to set up this non-profit ISP.

This made sense to Teresa, who was finding less and less enthusiasm among donors for a traditional Internet project. Officials from USAID's Office of Transitional Initiatives (OTI) said they were more interested in supporting the local media. They also advised wiring up international NGOs before the Prishtina University if the aim was to attract donors.

Paul and Teresa decided that if they were successful in getting the use of the Stenkovac dish, they would offer Internet access to international NGOs for a charge, and free to Kosovar groups. The income from the first could pay for the second, and also give the project a fighting chance of staying afloat after initial funding stopped. They decided on a six-month fee of \$6,000 for a 64-

kilobyte connection and more for extra bandwidth.

Paul unveiled the idea at a meeting, and 14 NGOs signed up on the spot. He then sounded out the IRC and was promised a loan of \$175,000, to be repaid by the end of the year. Teresa then started to identify the non-paying customers, such as the University, hospital, National Library, and independent media.

The project was coming together. But it depended squarely on use of the satellite dish and satellite. Paul went to work on Interpacket, the owner. The only other proposal on the table came from the International Organisation of Migration (IOM), which had taken over use of the dish and satellite in the refugee camp at the request of the US Information Agency (USIA). The IOM proposed to use its (\$1.5 million) grant from the US to set up seven dishes around Kosovo, all linked to the satellite. These in turn would service seven information centers.

It was left to Interpacket to choose between the two ideas. Paul argued that the IPKO model would benefit far more users in Kosovo than the IOM's, at much less cost. Interpacket agreed. At one fell swoop, Paul had won the IPKO a \$50,000 dish and 12 months of free satellite time, valued at \$912,000. Internet Project Kosovo (IPKO.org) -- a connectivity project supported by the IRC -- was born, with Teresa as a consultant. The pieces were in place. It now remained to put them together. This would involve securing permission from the UN Mission in Kosovo (which was administering Kosovo); finding a site for the project; installing the dish; finding the frequencies; putting in the equipment; finding a network administrator; and securing the money.

### **The Technical Plan**

Most subscribers who are reading this issue of On the Record will have logged onto to the Internet by commanding their computer to dial up a service provider.

The method envisaged by the IPKO in Kosovo was different. It would bypass Prishtina's creaky phone system altogether, allowing subscribers to log onto the Internet through the airwaves.

All of the initial customers would be institutions/agencies. Each would have a microwave dish installed in its building, providing a constant Internet connection to every computer on their network. The microwave dishes would be pointed at an antenna on top of the Rilindja, the tallest building in Prishtina. These dishes would exchange a wireless signal with the antenna, which would be connected to the Interpacket satellite dish. The dish would link to the Pan Am satellite and, from there, to the US Internet backbone.

As part of their donation, Interpacket also gave the IPKO a pipe to the Internet backbone in the United States. This donation of bandwidth is worth over 800,000 US dollars per year. The bigger the bandwidth, the more data that can flow and the more people who can access it concurrently. Data includes email, pictures, voice, audio and video streaming, and multimedia. The connection allows for a total of two megabits of information to be sent out, and four megabits to be received per second. The bandwidth is separated into uplink and downlink. The two megabits for the uplink is more than enough to handle all of the computers, that are currently in use in Kosovo.

The first task would be to move the dish from Macedonia to Kosovo. One of the companies working in Kosovo, Darlington, had installed communications equipment in the US government offices and had experience in setting up satellite dishes in strange places (Including the Pyramid building in Tirana, Albania.)

Darlington seemed a logical partner, and Paul put the Darlington offices in Virginia in direct contact with Interpacket since Interpacket would also pay for the installation of the dish. All Darlington needed was the go-ahead from Paul to go to Macedonia, break down the dish and transport it to Prishtina, where it would be installed and coordinated with the Pan Am Satellite.

The IPKO would need to install a microwave network of antennas, repeaters, and microwave dishes around Prishtina. IOM had planned to use a company in Macedonia to develop their Internet work, and at first the IPKO thought they would use the same company.

On closer inspection, however, the company was found not to possess important software that would prevent each of the microwave stations from receiving the full two megabit bandwidth -- something which would slow down the system and also make it harder to identify problems. More troubling still, the Macedonian company refused to provide the technical specifications of its equipment while constantly insisting they would "provide a good solution." The group grew increasingly suspicious and decided to look elsewhere for the microwave equipment.

On advice from Ilir Zenku, a friend from Soros Albania, Paul decided to approach MicroTik, a company based in Riga, Latvia. MicroTik had all of the necessary equipment, including software that would allow the network administrator to regulate bandwidth, depending on need and usage. This equipment had also been used successfully by the Soros foundation in a number of Eastern European countries.

The MicroTik president, John Tully, was even willing to donate equipment and come to Kosovo at short notice to set it up. His equipment would be easy for an experienced technician to handle, although it would need consistent electricity and a secure location. At the time, neither seemed likely to pose a problem.

With the technical plans more or less clear, the next task was to find a network administrator. The best candidate seemed to be Akan Ismaili, a Kosovar Albanian who had worked for the US Information Service (USIS) before, during and after the refugee crisis. In early discussions at the USIS, Paul had been told jokingly not to "steal" Akan. There was something to it. Akan was coveted by USIS. He was experienced, resourceful, and able to work in adverse conditions. His English was good and he was very committed. He was the perfect candidate for the job of IPKO network administrator.

Several other candidates were considered. Some lacked experience, or had prior commitments to other jobs. Several wanted to work for profit. Many were reluctant to make a commitment to a project that had not yet received the go-ahead from the Kosovar authorities. Akan was clearly the best suited, and Paul approached him. After a week of indecision, Akan signed on, and tendered his resignation to the USIS.

At this point, the project ran into a political roadblock.

### **Rebuilding the Kosovo PTT**

The directors of UNMIK faced some tough decisions over telecommunications.

UNMIK itself needed a quick, reliable, and modestly-priced way of communicating with UN headquarters in New York. It could have set up an independent satellite connection. But that would have cost a huge amount and done nothing to strengthen UNMIK's many partners and dependents. This growing army of aid officials in Kosovo desperately needed email. How to provide it?

A second dilemma facing UNMIK was how to reconstitute the telephone system. The pre-war system had run through Belgrade, and rebuilding it would mean placing Kosovo's telephone system once again under the control of Belgrade. This would very likely be unacceptable to the Kosovars and most of the UN Security Council.

But the other option -- establishing an independent telecommunications system that bypassed Serbia altogether -- would be tantamount to a declaration of independence. It probably could be done: a new system of fiberoptics was being laid from Albania. But that was months, if not years, away.

There was, in addition, an issue of foreign ownership. Kosovo's PTT had been 51% owned by the Serbian government. The other 49% was owned by Greek and Italian companies, but some Kosovars challenged the way that Serbia had sold off this valuable national asset. This hot potato was handed to Rob Van Leeuwen, a veteran UNHCR official who was lured away from Seattle, Washington by the UN to administer the key Kosovo utilities of gas, electricity, and telecommunications.

Van Leeuwen decided that the first priority was to reestablish Kosovo's defunct PTT, and then move from there. At his recommendation, UNMIK took over the 51% Serbian share in the Kosovo PTT on August 2, and renamed it the Post and Telecommunications Kosovo (PTK).

The old PTT building was reopened, and 400 former PTT employees were rehired under the direction of Ismet Hamiti. Hamiti had been director of operations at the Kosovo PTT until he was fired by the Serbs in 1989. After his dismissal, he had left Kosovo to work with the International Telecommunications Union (ITU) in Bangkok, Thailand. His re-entry into the PTT building in the summer of 1999 was seen as a huge victory over Belgrade.

The once and future employees were waiting at the gates. They were allowed in under the watchful eye of KFOR soldiers after being individually identified by Hamiti. Several prominent Kosovars were appointed to a joint coordination team, which was given the task of managing the new PTK.

The PTK had been inaugurated by UNMIK, and Hamiti was its new director. He was now the main legal authority for all matters pertaining to telecommunications. Paul set out to secure his



blessing for the IPKO Internet project.

### **On the Brink of Collapse**

When Paul first met with Ismet Hamiti, Kosovo's new telecommunications czar, he received the cold shoulder. Hamiti was aware of the importance of the Internet, and he wanted any Internet initiatives firmly under his control at the PTK. Otherwise, he implied, there would be a free for all. He told Paul that the project would fit nicely as the Internet division of the PTK.

Hamiti was an influential figure in post-war Kosovo, and few were prepared to openly oppose him. This extended to the university. Teresa and Paul had always assumed that the university would serve as the hub of their network. Its staff and students could provide support for the project. Several professors hoped that an Internet link would also allow the university to undertake its own technology projects, including an oral history project on the web about the refugee exodus.

But housing the IPKO at the university would mean challenging Ismet Hamiti. Ilir Limani, the dean of the electrotechnical faculty, asked his colleagues whether they wanted this, and most said no.

After many days of trying to find a solution around the university, Paul and Teresa concluded that it simply would not work. This was a serious blow to their hopes of engaging Kosovars in the early stages of their project and of ensuring that it did not operate in isolation from the local population. They had also hoped that the university would inherit the project after the initial period of funding. This now seemed impossible.

There seemed to be three possibilities. First, the project could be housed at the PTK building and run by the PTK. This was the solution strongly favored by Van Leeuwen and UNMIK. They had just established PTK and wanted to find ways to strengthen their new creation.

But in the view of Paul and Teresa, this would be the kiss of death. PTK lacked the technical capacity to carry it off. Hamiti planned to set up an Internet division in the PTK, but his technicians were unfamiliar with the latest technology after their years of limited opportunities. This was not a criticism, so much as a fact: they were hard-pressed even to run what remained of the existing telephone system. Moreover, none of the handful of young Kosovar "techie" were willing to work under the aegis of the PTK. Possessed of the most marketable skills in town, they weren't about to join an old-style bureaucracy.

The second option would be to go it alone, without the support from the Kosovars they had come to help. In addition to being undesirable, it was not even clear whether this was possible.

Third, Paul and Teresa could call it a day and give up. That, too, seemed unthinkable. They had come so far, and made so many promises.

In desperation, Paul met with Hamiti, Van Leeuwen, and a KFOR Colonel for one last try at gaining permission for an independent IPKO. He was supposed to have been joined by two local

friends of the IPKO project. Neither showed up for the meeting. The IPKO was on the brink. Teresa remembers how she and Paul sat in the Amadeus cafŽ in Prishtina, looked at each other, and wondered what they were going to do. They were in far too deep to pull out, but could not see how they could make it work.

### **Rescued by UNMIK**

Help arrived in the form of two IRC board members who were visiting Kosovo to look at IRC projects. Two of the mission members -- lawyers Jeremy Carver and George Hritz -- had been involved with the IPKO from the beginning, and were ready to argue strongly for it.

First Jeremy, George, and Paul went to see Van Leeuwen. Though clearly irritated, he patiently explained the need to boost up the PTK and implored IPKO to come to some kind of agreement.

At Van Leeuwen's suggestion, the three went to visit Agron Dida, the director of the PTK who worked under Hamiti. Dida was cordial, but he evidently shared Hamiti's view that the airspace was the property of Kosovo and only the PTK was legally entitled to exploit it. The project would have to fall under his domain. Otherwise, it would be viewed as a violation of Kosovo's natural rights.

The three IRC officials left the meeting firmly convinced that locating the project at PTK would be a disaster, even if they were assured of independence under a contract. After all, what good was a paper contract in a lawless country, especially when those in the PTK building could just turn off the power to the whole system?

The project received a helping hand from an unexpected source. Around this time, the creaky telephone system collapsed, the mobile network failed, and the phone lines starting with the number 5 stopped working for two days. It was clear that the PTK lacked the capacity to take on a major new Internet project -- another strong argument for allowing IPKO to proceed.

Paul and Teresa decided to approach the UN's office of humanitarian affairs (OCHA), which had set up a unit to coordinate the work of NGOs in Kosovo. The director of the unit, Randolph Kent, understood that helping NGOs to communicate would help the overall peacebuilding and had supported IPKO from the beginning. Kent suggested to Paul and Teresa that they approach Dennis McNamara, head of UNMIK's humanitarian arm. McNamara agreed to support the IPKO. He contacted Jack Covey, the UNMIK deputy special representative, and argued that the IPKO was good for the humanitarian community and would directly benefit the Kosovars.

With momentum for the project now beginning to build again, Paul, Jeremy, and George huddled together and wrote up a short Memorandum of Understanding between IRC and UNMIK. Late on a Saturday afternoon, they camped out in a cafŽ across the street from UNMIK waiting to intercept Van Leeuwen before he left for home. They finally caught up with Van Leeuwen and convinced him to sign the MOU over a few warm cans of Coke. After signing the document, Van Leeuwen told the three that he would certainly catch heat for it.

One of the concerns, clearly, was monopoly. UNMIK's agreement gave IPKO a headstart in

providing Internet access to Kosovo. Was it also handing over a monopoly? Strictly speaking no. One other Internet provider in Kosovo, Fastnet, had opened an Internet cafe. Fastnet had asked UNMIK if they needed a license to operate, and been told no. KFOR gave Fastnet a frequency license for their satellite, and it began advertising microwave links.

So in a formal sense, there was competition for the IPKO. But the case could be made that this was hardly relevant at such an early stage in Kosovo's reconstruction. As noted above, a commercial scramble over the Internet in July would have benefited those with money, and put the Internet beyond the means of the smaller, less affluent civic associations. It would also have greatly reduced its humanitarian usefulness.

On the other hand, UNMIK had now given the IPKO a formidable role in dictating the future use of the Internet in Kosovo after the emergency had passed. The question was whether the IPKO would use this power responsibly. Would it be able to hand over to Kosovars in a way that benefited all of Kosovo -- and prevent this humanitarian initiative turning into a real commercial monopoly?

### **Finding a New Home**

UNMIK authorized the IPKO on two conditions. First, it would have to be "humanitarian" -- in other words, it could not be used for profit. IPKO would be selling its service, but as a contribution to the humanitarian effort.

Second, it would need a "neutral" base. This would rule out the new PTK. Unfortunately, it would also rule out the university, because the PTK made it clear that it would oppose the university being handed such a powerful resource. At this stage, it was very hard to identify a Kosovar home for the Project that did not strike someone as biased.

As a result, it was decided to base the project and the satellite dish in the Boro and Ramizi Sports and Cultural Center, a large squat building in the center of town.

Boro and Ramizi turned out to be ideal for several reasons. The building was inhabited by the Civilian and Military Information Center (CIMIC), which was set up by British KFOR to provide information for local Kosovars, and the KFOR Press Center. This meant that soldiers were all over the Center day and night, which guaranteed security for the equipment.

There were added advantages. Boro and Ramizi were administered by Lt. Colonel Barry Barnwell, who also headed CIMIC. Barnwell was technologically savvy and understood the importance of an Internet connection for CIMIC. He agreed to forego rent (\$1,800 a month) in exchange for the service.

In addition, British aid was paying for the reconstruction of Boro and Ramizi Center. This meant that it was swarming with contractors fixing electrical wiring, broken locks and windows. British soldiers from the 26 Armoured Engineer Squadron were also on hand working on electricity, plumbing, and the back-up generator for the Center. Their expertise would come in useful. In spite of these advantages, the center did carry drawbacks. It was some distance from the

University, especially the Technical Faculty. This meant there was even less incentive for students and faculty to come and work on the project.

The only space available at Boro and Ramizi was in a former branch of the city Library. In exchange, the project had to agree to find money for the librarian to renovate the library and buy new books. There was some initial misunderstanding because the librarian thought he would eventually inherit the project. After this was ironed out, the IPKO and library submitted a plan to British aid for the refurbishing of the library.

Access to the building seemed likely to pose some problems. Providing Internet access is not a nine-to-five job. All employees of IPKO have to have 24-hour-a-day access to the building and office, and this means they interrupt the lives of the soldiers who call the building home and sleep downstairs. The soldiers advised the IPKO staff to let them know when they were planning to work late, if they did not want to be challenged by sleepy, gun-wielding soldiers. It was a reminder that this was still a war zone.

### **Power Play**

With the location now decided, Darlington was given the go-ahead to install the 3.8-meter dish from Interpacket. Over a 3-day period they disassembled the dish in Stenkovac, transported it to Prishtina, stored it overnight, and reappeared in the parking lot of the Boro and Ramizi Center with it hanging from UNMIK crane. The dish looked huge.

Once it was installed, the team made an appointment with the satellite company to test the connection. It was night-time in Prishtina. Akan, Paul, Teresa, and a new international arrival from Chicago, Kay, were waiting in the office in high excitement. A Darlington employee was tuning the satellite equipment on the roof.

The plan was to hook up with the Pan Am satellite. According to the equipment of the Darlington engineers, they could "see" the Pan Am satellite on their equipment. But Pan Am Sat did not receive the signal transmitted from the IPKO dish. In other words, it did not "know" that they were transmitting. The team waited until one o'clock in the morning before going off to sleep, deflated and disappointed.

The following morning, the Darlington technicians went through their checklist and narrowed the problem down to the receiver on the back of the dish. It was receiving but not transmitting. The receiver was sent back to the US, and a replacement arrived within a week. It was fitted to the dish and the team went through the same exercise again -- with exactly the same disappointing result -- the Pan Am satellite still could not see the IPKO signal.

By now everyone was tired and frustrated, and the timetable was beginning to slip. The project would not make its first connection on September 1st, as hoped. Clients were becoming edgy. Interpacket was reluctant to send another receiver if it was just going to be blown up.

If the problem was not the receiver, it had to be the power. This surprised no one because the entire province was dependent on two power plants that had been poorly maintained and

damaged in the war. Instead of producing consistent power, they were sending out surges of voltage. Everyone assumed that this was frying the receiver. After consulting with engineers and electricians, IPKO bought a generator with an automatic switch, which was activated by a power outage or change in the voltage. As added protection, the team bought several UPS's (Uninterrupted Power Source's). These are basically big batteries with built in protection against power surges.

As a final precaution, the room with the equipment was wired separately from the rest of the building. This would mean that in the event of a power failure, the project generator would only give power to the project equipment and not to the entire Boro and Ramizi building.

After more problems with the electricity (including shorting out several light fixtures and several sockets) IPKO asked British Royal Engineers from the 26 Armoured Engineer Squadron to wire up the entire set. The Engineers had befriended the project, and jokingly suggested that they wanted to see it work so they could get football scores off the web.

Taffy Gill, one of the engineers, came and tore out all the wiring, which he then redid. But even after that the generator did not give out the right amount of voltage. Akan fashioned two 25-meter power cables to plug directly into the generator and plugged the UPS (Uninterrupted Power Supply) directly into the generator. This seemed to solve the problem. Finally, after so many fits and starts, Darlington was ready to try again.

### **Online at Last!**

From Teresa's diary:

After a month of false starts, September 20, 1999 did not seem all that special. We were huddled in the office, prepared for another sleepless night. Darlington technicians were on the roof, positioning for the satellite. One of them, Chris, was fiddling with the transmitter. All he could say was "they don't see us!" In other words, Pan Am Sat, the satellite company, could not tell if we were transmitting or not. We have been hearing the same thing from them and from Chris for over a month.

Akan was getting fidgety. Like any good technology buff he began fiddling with a computer. He randomly typed "[www.ipko.org](http://www.ipko.org)" (our nascent web site address) into the web browser on the server. For some reason the browser sent him to "[www.register.org](http://www.register.org)." There then appeared the following query: "Do you want to register this domain name?" This should not have happened since our computer was not actually connected to the Internet -- or so the satellite company had been telling us. Perhaps, it had been telling us wrong?

Akan let out a whoop. He then typed in "[www.cnn.com](http://www.cnn.com)" and the page appeared with the date September 20, 1999 at the top. We were transmitting and receiving! Our satellite dish had locked onto the Pan Am satellite, although the Pan Am Sat could not "see" us because of some default on the transmitter. It appeared that the system had been up and running all along: the satellite company had not been looking at the right frequency. Talk about accidental birth.

I was sent out for champagne, while Paul and Kay emailed their mothers. Akan's first email went to his ex-boss, Michael McClellan, former director of USIS Prishtina. The first thing I did was email The Advocacy Project, which has been harassing me for being out of touch for over a week. I then spent two hours on Instant Messenger, with three friends from the US, who were all logged onto the Internet. I felt like a teenager all over again.

We soon sobered down. What exactly were we celebrating -- the fact that the four of us could check our email? The real celebrations could come when the people of Prishtina could connect.

And there was such a long way to go before that could happen. There was no dial-up access for those with telephones. We did not even have a policy for deciding who could surf the web on our two laptops. Hours and hours of work were leading to hours and hours of more work. (September 20, 1999)

### **Correction**

From Mentor Cana, editor of Alb-net.com:

Please note that the following text in "OTR Civil Society in Kosovo, Issue 9" is not correct:

"Certainly, with an acknowledgment like that from the US government, it was easier for Alb-net.com to get a donation from the Kosovar Albanian Government in exile to buy new computer equipment and expand their work."

The fact is that the financial support for the computer came from the Albanian community in America. I will appreciate if you can make this correction in the next issue.

Thanks, Mentor