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## PROJECT ASSISTANCE COMPLETION REPORT

### BACKGROUND DATA

- A. Project Number and Title: 936-5600.00, Establishment of an INTERNET Backbone within Costa Rica.
- B. Implementing Agency: University of Costa Rica (UCR)
- C. PACD: Original May 31, 1994  
Revised August 31, 1994
- D. Amount obligated: \$ 98,431
- E. Total expenditures: \$ 98,431

**PROJECT ASSISTANCE COMPLETION REPORT**  
**Establishment of an INTERNET Backbone within Costa Rica**

Grant Agreement 936-5600.00 with the University of Costa Rica (UCR)  
May 14, 1992 - August 31, 1994

**I. Summary**

On May 14, 1992, the Mission signed a grant agreement with the University of Costa Rica (UCR) for a total amount of \$149,945 to carry out a Program in Science and Technology Cooperation (PSTC), Research and Development (R&D), centrally funded project to establish an INTERNET Backbone within Costa Rica, in order to provide high speed interconnectivity and state of the art communication between scientists at universities, research laboratories, industries having a technological component, and corporations in Costa Rica and other countries in Central America with their counterparts worldwide. As a PSTC project, its design included the University of Wisconsin -Madison (UW) as the US-based collaborating institution.

In accordance with Implementation Letter No. 2 under subject Grant Agreement, all dollar expenses under the Project, with the exception of international travel for UCR employees, which would be handled directly by USAID, would be managed through a separate agreement signed between the UCR and the UW, the UCR itself handling only the local currency budget of the Grant. Therefore, the Project had three elements, budgeted as follows:

Element No. 1, AID administered costs	\$ 4,935
Element No. 2, UCR administered costs	\$ 45,353
Element No. 3, UW administered costs	<u>\$ 99,657</u>
TOTAL	\$149,945

The first twelve institutions, including the Legislative Assembly, directly connected to INTERNET under this Project, created the National Research Network (acronym CRNet), which is the institution responsible for the administration of the INTERNET services in the country in both the academic and research sectors.

The original termination date for this Project was May 31, 1994. However, the UCR investigators requested a no cost extension through August 31, 1994, due to several issues beyond their control which caused delays regarding use of funds. The Mission approved the extension.

## 2. Project Status and Planned Outputs:

- a. *A computerized satellite INTERNET linkage between Costa Rica and the United States will be established and operational.*

A 64 Kbps satellite INTERNET link has been in operation since January 1993. The capacity is three fold the originally planned (19.2 Kbps) and was doubled to 128 Kbps during the first months of 1995.

- b. *Five hundred users trained in the operation of the system.*

Seven hundred and fifty computer nodes were directly interconnected to the INTERNET at the CRNet participating institutions (1,500 at present including all sectors), the estimated number of users being between 3,750 and 5,250 (present number of users has grown to some 15,000 in all sectors). Particular efforts were made to work closely with the computer center heads at the CRNet member institutions on the INTERNET technologies and its use, so that additional users at those institutions would be trained in turn. The organization model, established at the beginning of the project, is highly decentralized and distributed in the physical and logical design, as well as in the administrative and information aspects.

- c. *Three Costa Rican institutions (UCR, CATIE and ITCR) will partially finance the system operation cost.*

Since its design, this project was expected to be self-sustainable. In 1993, 62% of the total communication costs was funded by external sources (AID and the Organization of American States, OAS). During the first semester of 1994, contribution from external sources was only 25% (OAS) and by the PACD, those costs were completely covered by local participating institutions.

## 3. Planned vs. actual inputs:

Inputs were provided as planned.

## 4. End of Project Status:

By the PACD, for some targets the project had accomplished more than was expected at the time the proposal was presented.

Under the sponsorship of the Ministry of Science and Technology, the UCR and the National Academy of Sciences of Costa Rica, CRNet was created by the first twelve participating institutions, its main role being to promote collaboration and exchange of information between those participating institutions, allowing unrestricted access to advanced information and communication at the national, regional and international levels, by interconnecting existing networks with the leading worldwide research networks.

Regarding regional expansion, Nicaragua was connected to the INTERNET in February 1994, through CRNet, using a terrestrial microwave analog link between both countries. A few months later, Panama was also linked to CRNet connecting its major universities to the INTERNET.

For some unexpected reasons, the visit of the UW experts was delayed on various occasions. Meanwhile, the local project technicians, urged to solve the different problems that normally arise in this kind of projects, used the same INTERNET as a powerful instrument to receive advice from the UW counterparts. As a result, the local technicians turned themselves into real experts in a matter of weeks, and the visit of the UW experts never took place. Thus, \$41,930 of the \$ 99,657 of Project funds originally assigned to the UW was not used. Due to an efficient use of the funds assigned to the other two budget elements and a final audit which was not considered to be cost effective in view of the costs spent by the UCR over the three years, the Project also reported unused funds under these two elements. By memoranda dated July 7, 1995, and September 28, 1995, the Controller's Offices was requested to de-commit/de-earmark the unused funds. The final obligated amount is broken down as follows:

Element No. 1, AID administered costs	\$ 4,506
Element No. 2, UCR administered costs	\$ 36,198
Element No. 3, UW administered costs	<u>\$ 57,727</u>
TOTAL	\$ 98,431

5. Progress Towards Planned Purposes:

The EOPS and the *Project Status and Planned Outputs* sections above indicate that the Project accomplished its main targets and in some cases, the expected goals were surpassed.

6. Post-Project Monitoring Requirements:

None.

**7. Lessons learned:**

**This Project is of major importance for the technological development of the country. It has represented a great opportunity to learn and develop advanced communication instruments with enormous potential for the country's education system and economy. Large scale, state of the art internet work technologies have been introduced for the first time in Costa Rica and neighboring countries, and have spread to universities, research centers, corporations and government. This is crucial for the competitiveness of both this country and the Central American region. Lack of access to worldwide information would keep these countries at a disadvantage in an era of increasing globalization.**