

PN-ABQ-604

154 85873

SAFIRE TEAM REPORT

December, 1992

TEAM ONE

Jeff Marzilli, Pragma Corp.
Abdul Bassit, Pragma Corp.
Keith Burberry, WFP

TEAM TWO

George Simon, WFP
Laith Grandgaard, USGS
Barbara Keating, Africa
Bureau, USAID

P:\AFRPUB\DOCS\SAFIRE.REV:02/18/93

EXECUTIVE SUMMARY

The Southern Africa Food Information and Resource Exchange (SAFIRE) telecommunications project was jointly conceived and implemented by the United States Agency for International Development (USAID) and The United Nations World Food Program (WFP). SAFIRE's primary objective is to assist the drought stricken countries of southern Africa through the coordination of donor and host country humanitarian assistance efforts and to direct this assistance to those most affected by the worst drought in nearly a century. Most of the financial support for this project has been furnished by USAID.

The project was envisioned after USAID sponsored a Food Aid Needs Assessment of the Southern Africa Drought Emergency (SADE) in April 1992 through the Bureau for Humanitarian Assistance (FHA) and its Office of Foreign Disaster Assistance (OFDA). The OFDA report on the SADE identified telecommunications as an area that could possibly facilitate a wide variety of drought relief activities by providing an enhanced capacity for the flow of information and data in the region. The USAID Southern Africa Drought Task Force subsequently identified telecommunications as a priority area of concern. The Senior Steering Committee for the SADE, which is co-chaired by the Deputy Assistant Administrators (DAAs) of the Bureau for Africa and FHA, authorized a Telecommunications Needs Assessment Team to visit the Southern Africa region in late July. Their report confirmed that improved electronic communications within the southern African region would greatly enhance SADE's overall coordination capacity, particularly concerning food aid activities. Furthermore, the technical means for such an undertaking was available, and so an electronic communications system could be implemented quickly and with relatively low costs.

Thus, the SAFIRE project was born from these reports as an uncomplicated telecommunications system, supported at first by ordinary phone lines and later by personal computers and modems. The SAFIRE system interlinks those organizations involved in the coordination and delivery of humanitarian assistance allowing for the transfer of information on port and railway operations between such organizations as the WFP and USAID with host countries and regional institutions. From November 1 through to November 28, 1992, two three-person teams made up of USAID and WFP personnel were dispatched to the southern Africa region. During this four week period, the teams established twenty SAFIRE stations and trained its operators in those locations identified as having operational roles in drought relief activities. Team One consisted of Jeff Marzilli, the team leader, Abdul Basit and Keith Burberry. Mr. Basit and Mr. Marzilli were hired on short-term contracts through the Pragma

Corporation while Mr. Keith Burberry is assigned permanently to the World Food Program in Rome. Barb Keating, telecommunications specialist, led Team Two which included Layth Grangaard of USGS and George Simon of WFP/Rome. Team composition was arranged to assure optimal division of technical and regional expertise.

The teams discovered that the highly sophisticated coordination mechanisms established in response to the drought in the southern Africa region had generated an impressive flow of information in the form of data, reports and spreadsheets. Prior to the installation of SAFIRE, this information had been disseminated by fax, mail and telex. This enormous workload took up significant amounts of worktime due primarily to the numerous entities involved with the SADE, but also because of the attendant difficulties and delays of using these modes of communication in the region. SAFIRE was the only system which offered the possibility of delivering and accessing the necessary information in both electronic format and on a timely basis. This information is urgently required during these "crunch" periods when such high rates of assistance are delivered. A more swift transit of information has resulted in improved coordination and rationalization of supplies as well as optimizing the transport and delivery of that assistance.

The SAFIRE installation team was impressed by the enthusiasm displayed by most of the recipients in the region. The participants immediately recognized the possibilities of the SAFIRE system, both for enhancing the flow of data and information, as well as the facility of the telecommunications equipment and system to use after only initial training and follow-up support. The volume of traffic (see Appendix A) witnessed during SAFIRE's first two months stands as evidence that it is indeed meeting a regional communication need during the most critical period of the SADE in terms of the peak amounts of food-aid arrivals and the on-set of the hungry season prior to the next harvest.

The rapid installation of SAFIRE is not without a number of teething problems which need to be addressed quickly. Also needing attention is the long-term operational issue of turning the system over to WFP as set out in the joint MOU. These technical and operational issues are dealt with in the following section.

As was indicated in the USAID Africa Bureau Action Memorandum authorizing this activity, the SAFIRE system has potential uses which will employ it well beyond the end of the drought. This enhanced African telecommunications capacity under the SADE needs to be translated into longer term developmental purposes. Already, there is widespread African interest towards using SAFIRE for longer-term developmental needs as was communicated during the preparation and installation phases. Although operational exigencies of the SADE did not allow us to address these developmental issues during the installation, we are

beginning to outline practical

and realistic "next steps" for the Africa Bureau to consider. The SAFIRE system is based on a technology called FidoNet which has networks all over the world. However, it has had a most significant impact on the developing world due to its unique ability to adapt to poor local telephone line conditions. Because of the high data transmission rates achieved with this type of system, the information lag between the developed and lesser developed worlds has economically collapsed and conceivably offers ready access of information to a wide range of participants in developing countries. Further, the SAFIRE project could launch an international development network, whereby organizations involved in development could enhance their effectiveness through participation in an information exchange network.

SUMMARY OF RECOMMENDATIONS

The SAFIRE Project opens a new frontier of communications for development work in Africa, as well as for developing countries worldwide. To reap the most benefit from the SAFIRE project the teams recommend the following:

1. The training program be continued via informative messages on technical issues from Washington's communication hub to the field stations and on-site field TDY.
2. A survey of the users be conducted immediately to determine what users like/dislike about the system, how much they use the system, and what changes should be made to improve the system.
3. The Washington communication hub is a critical element in the working of the SAFIRE project. WFP Rome has requested that records be kept and shared with WFP on a bi-monthly basis on the following items:
 - a. the volume of calls and from which stations,
 - b. the types of information being carried,
 - c. the calls and messages received from users for technical assistance,
 - d. requests for further SAFIRE site establishments.
4. A "Sweep-Up" mission be conducted 6 to 8 weeks [before the end of the mission] around February of 1993. Another team of people from USAID should go back to all the countries in the SAFIRE project to ensure that the systems are running correctly and that the printers sent out to the field have arrived and are properly connected. The one or two man team at this point will be able to answer any questions that have arisen since the first installation and training.
5. Before the system is turned over to WFP control, an evaluation of the system be conducted during the sixth month of operation, May 1993, regarding its effectiveness in transmitting information to the organizations and its potential for future developmental activities in AID.

6. In June 1993, after six months of operation, a conference or series of symposia be held in the south African region to demonstrate the development potential and undertake additional training for SAFIRE which will engage both existing users, the PVO/NGO community and the private sector. This type of capacity building undertaking would allow the users to share ideas about what they have been doing with the system, demonstrate what avenues could be pursued in the future, and expand the capacities of this or other networks in Africa with the outside world.

INTRODUCTION AND SCOPE OF WORK

Two teams of three persons representative of USAID and WFP organizations, met in Washington between November 2 and November 6 for five days at the beginning of the mission to prepare equipment, configure software, and undergo training on the technical construction and operation of the particular microcomputer networking software. The teams then flew together to South Africa before splitting into two groups and heading for their respective countries.

Over a three week period, between November 1 and November 28, the two teams were in the southern Africa region installing equipment and training operators at twenty sites that had been identified as having operational roles in drought relief activities. The teams were identified as Team One and Team Two, and their members and the countries they visited were as follows:

Team One

USAID, Jeff Marzilli -- Team Leader
USAID, Abdul Basit
WFP, Keith Burberry

Team One visited Mozambique, South Africa, and Zimbabwe. After the official mission was completed, Jeff Marzilli went onto Malawi to complete the installation of the Emergency Management Unit, which was moving offices at the time Team Two was in Malawi. Mr. Marzilli already had planned to visit Malawi for FEWS related work, and offered to install the technology at that time.

Team Two

USAID, Barbara Keating -- Team Leader
USAID/USGS, Layth Graangard
WFP, George Simon

Team Two visited Zambia, Malawi, and Tanzania. Barbara Keating continued on to visit WFP headquarters in Rome to debrief on the trip and set-up WFP Rome as a station on the SAFIRE system.

The specific purpose for each team's visit was:

1. to install equipment in each identified site as stipulated by the Memorandum of Understanding between the United States Agency for International Development and The World Food Program which would allow these organizations who are operational in drought relief activities to transfer messages and data files on drought related matters between locations in the region, WFP headquarters in Rome and USAID in Washington D.C.
2. to train at least two persons at every SAFIRE station to fully operate and maintain the system for the next six months.

METHODOLOGY

Each team spent approximately one work week in each of the countries visited. The following itinerary was observed in each country:

DAY 1

The teams visit all locations receiving SAFIRE technology on the first working day in each country in order to better understand the technical and training requirements of each site. The teams also spend the first day establishing a common training site for the following day's activities.

DAY 2

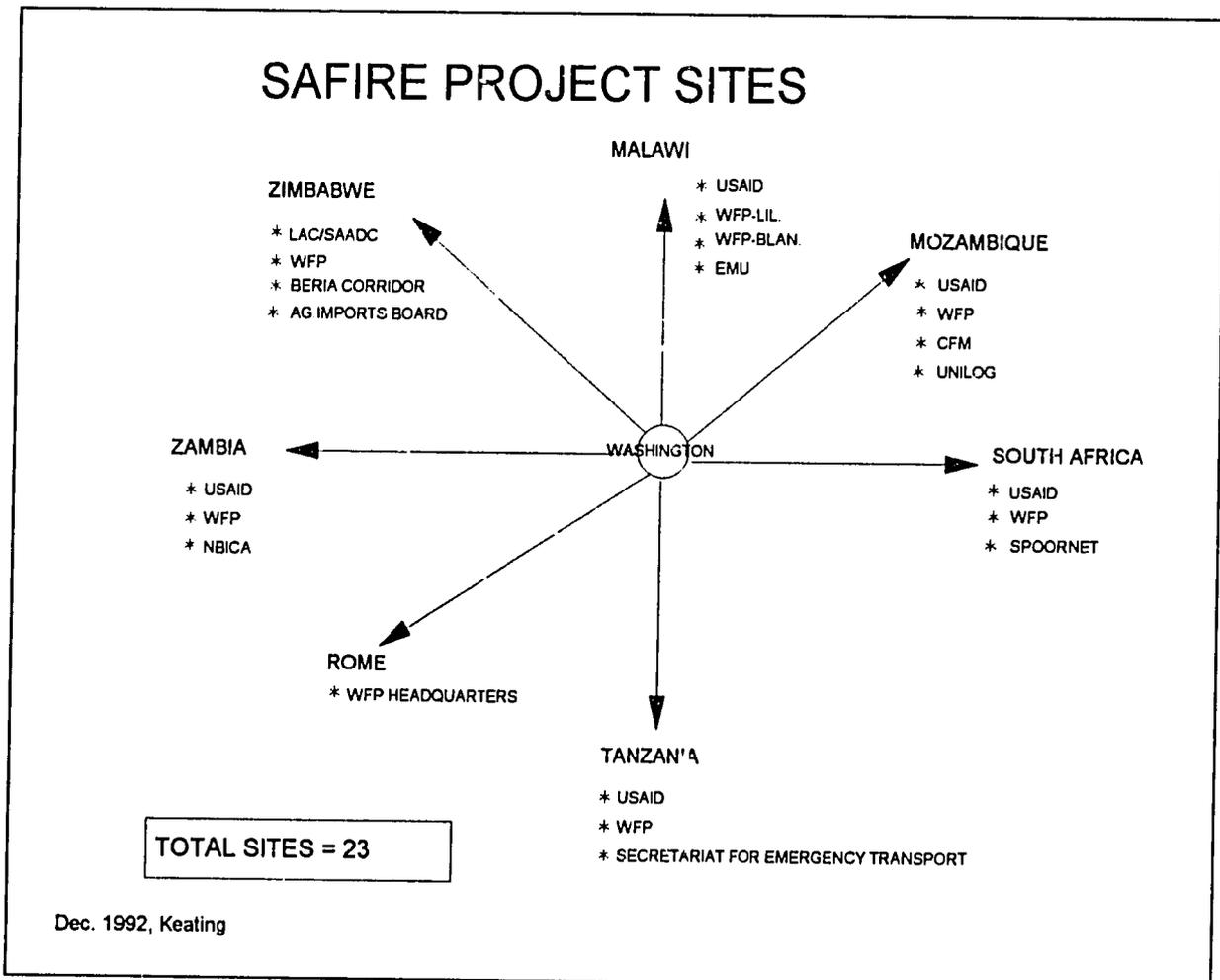
A common training session for all system operators and other interested parties in the country is offered in each country. In the morning, a general overview of the SAFIRE system is given which describes how the system works, where each country fits into the scheme of the entire project, and which local resources are available to provide assistance. Local FidoNet network operators presently functioning in the countries are invited to attend a general meeting designed to acquaint them with the SAFIRE system. The afternoon is spent training all operators on system basics: reading, writing, and sending messages.

DAY 3-5

The teams spend the final days in each country working either as a group or individually -- as determined by the team and the country's situation. They further install equipment in each SAFIRE site and train individual operators in greater depth.

DESCRIPTION of the SYSTEM

The Southern Africa Food Resource Information Exchange (SAFIRE) system is based on **FidoNet technology**, which is widely used in developing countries, because it adapts well to poor local telephone line conditions, and is inexpensive to maintain and operate. FidoNet is basically electronic mail or "e-mail" which allows messages and files such as Lotus 1-2-3, Dbase and Wordperfect to pass from one personal computer via modem and over ordinary phone lines, to another personal computer running a compatible software. The SAFIRE project uses a FidoNet technology software called **Iront Door** which is compatible with other FidoNet software such as SEADOG and IMail.



In computer terminology, the SAFIRE system is a star topology. Conceivably, all communications flow through one central location to reach another location. In keeping with the star topology, the systems in the field are on the points on the star, and the hub sits in the center. (See Drawing Above)

The communication hub for the SAFIRE system is located in Washington for the initial phase of the SAFIRE project. The hub is the center of communications activities and provides the vehicle for information flows. Each day, the hub in Washington calls each of the 22 stations in the six southern African countries at pre-determined times. When the hub calls the site, it picks up messages and files that are waiting to be transmitted to other stations on the network and drops any messages that it has for that station. Transmitted through the SAFIRE system are messages and documents that contain information on drought related activities.

It should also be noted that it is technically possible for the SAFIRE stations in the region of southern Africa to call Washington on a daily basis, or to call other stations on the system directly. In terms of cost however, it is much cheaper for Washington to call any of the countries in the region than it is for those countries to call Washington or other locations outside of their own country.

PARTICIPANTS IN THE SAFIRE PROJECT

The following is a list of all the participating stations in the region:

Zambia

USAID/Lusaka
WFP/Lusaka
(NBICA) National Bulk Import Commodity Association

Malawi

USAID/Lilongwe
WFP/Lilongwe
WFP/Blantyre
(EMU) Emergency Management Unit

Tanzania

USAID/Dar Es Saalm
WFP
WFP Secretariat for Emergency Logistics

Mozambique

WFP/Maputo
USAID/Maputo
UNILOG
CFM

South Africa

USAID/Pretoria
WFP/LAC Johannesburg
SPOORNET/Grain Ops Room

Zimbabwe

WFP SADC/LAC
Beira Corridor Group
National Rail of Zimbabwe
Agricultural Marketing Association
Grain Marketing Board

SITES NOT ESTABLISHED AS STIPULATED IN THE MOU

In the field, the teams found for a variety of reasons that several organizations identified to be recipients of SAFIRE equipment either were not capable or were not adequately prepared to become members of the SAFIRE network. The following is a list of those sites stipulated by the MOU between USAID and WFP, however were not set-up through the mutual agreement of WFP and AID personnel in the field.

MALAWI/ADMARC (Association D. Malawi Agricultural R. Commodities)

After discussions with both WFP and USAID Malawi, it was decided that ADMARC would not be set up as a station on the SAFIRE system. Because the information available from ADMARC is contained in a very detailed format, it would not be useful to others on the network. The gross numbers needed most by SAFIRE users are selected from ADMARC by EMU and then furnished in a more useable format. Furthermore, it appeared that ADMARC would not be in a position to operate the equipment for at least several weeks and there was some question as to their ability to manage the information. The team concluded, in full agreement with WFP Lilongwe and WFP Blantyre, that it was premature to install the equipment in ADMARC. However, the team met with ADMARC's upper management to instruct them on the implementation of the SAFIRE project.

TANZANIA - TAZARA

In Tanzania, it was decided concurrently by both the WFP Office and the USAID mission that the Tanzania-Zambia railways (TAZARA) did not need to be set-up with this system because most of the information regarding food aid flows through Tanzania was already available from the WFP Logistics Secretariat. Furthermore, the railways did not have a complete picture of food aid movements as the aid is actually transported by both rail and road. The team was also informed that the traditional donors of aid to Tanzania and particularly to TAZARA (the Railways) had recently expressed concerns over the way the railway company was managed. Therefore, the donors did not feel that TAZARA would be in position to properly collect, analyze, and disseminate information on food aid flows.

ZIMBABWE - USAID/Zimbabwe

USAID Zimbabwe decided not to participate in SAFIRE.

National Railways of Zimbabwe (NRZ)

NRZ/Bulawayo sent three representatives to Harare on one day's notice for the communal training. Mr. Elson Murevesi, the senior person among them, had repeatedly contacted USAID and FEWS to inquire into developments which would bring them on board the SAFIRE network. Gary Eilerts, FEWS/Harare, mentioned as recently as December 13 that many players in Harare recognize the importance of bringing NRZ on-board. The only reason NRZ was not permitted to take delivery of the equipment in the end was because of the last minute uncertainties in the overall distribution of sites in Zimbabwe. The machine allocated to NRZ was instead reassigned to the Grain Marketing Board. However, we were not able to establish suitable official contact with the GMB to warrant the installation. All that remains to install a site at NRZ is three to four days of technical assistance which consists of travel to Bulawayo to install, configure and test the system and to complete the training of its operators.

Grain Marketing Board (GMB)

There was some confusion concerning the need to establish the Grain Marketing Board's participation in the SAFIRE Project. Mission Director Morse made reference to the GMB in a fax dated 4 November. Mike Jones (WFP) was noncommittal in saying whether WFP believed the role of the GMB was sufficient enough to include it in the SAFIRE Project. Nevertheless, neither WFP nor the team found anyone at the GMB who was willing to return the numerous phone calls placed over the course of the week. The team finally was able to contact Mr. Military Hlahla in the Computer Section who agreed to attend the training at the Agricultural Marketing Association. Mr. Hlahla was quite impressed with the SAFIRE system and said he would work immediately to see that the appropriate contact is made between the GMB and WFP (Mike Jones) regarding participation in the SAFIRE project. However, it was recommended that no further action be taken or equipment be installed until requested by the Grain Marketing Board.

ADDITIONAL SITE REQUESTS

Malawi/MANICA

The Emergency Management Unit, EMU/Lilongwe, requested that MANICA, a freight forwarding agent working for food aid donors and WFP, be provided with similar facilities. In line with the directives provided by Washington before departure, the team informed the EMU that USAID would be willing to provide the technical directives only if MANICA acquires the hardware at its own costs. It is felt that USAID/Lilongwe will soon be contacted by EMU and MANICA in this respect. It should be mentioned that all involved in drought relief operations in Malawi have confirmed that MANICA's request to be a part of the network is justified.

Zambia

USAID/Zambia requested that the Zambia Met Service be added to the SAFIRE network. The Met service is already familiar with FidoNet technology and the front door software, adding them to the network would require some remote technical support by the hub operator (located in Rosslyn Va.) and adding the Met service to the daily polling schedule.

Zimbabwe

Zimbabwean Rail, the Grain Marketing Board and WFP/Harare have requested additional support in getting up and running. The Beira Corridor Group (BCG) does not have access to an international telephone line and therefore cannot be an active participant in the SAFIRE project at this time, but follow up support has been requested.

Mozambique/Beira

The Beira Corridor Group in Harare has requested that the Beira group in Mozambique be added to the Network. According to BCG Harare, this site is more critical than any other.

SUMMARY of COUNTRY REPORTS

ZAMBIA

<u>Sites</u>	<u>Official Contact</u>	<u>System Operators:</u>
WFP	David Barker	David Barker
USAID	Bruno Kosheleff	Jean Sherring
NBICA	Neal Walker	Adam Ng'uni

OVERVIEW

As a whole, Zambia was relatively problem free to set-up as part of the SAFIRE network. This is due in great part to the existing network at the University of Zambia (UNZA) run by Mark Bennett. The team was invited to attend a conference session held by ESANET at UNZA. ESANET is the "Eastern and Southern Africa Network" sponsored by the Canadian International Development Agency (CIDA) to link African Universities. The meeting was fruitful in that we were able to establish contact with others operating similar systems in the region and to make supportive connections for the Tanzanian and Zimbabwean SAFIRE installations. The team installed the equipment at the three agreed sites and completed the training of the staff responsible for its operation. The team also informed the other staff at these sites of the facilities offered by the SAFIRE project.

NBICA expressed specific interest in developing its communications and data exchanges with both SPOORNET and the port of Dar-es-Salaam in Tanzania. WFP foresees being able to utilize this system to inter-exchange data with Rome and the Regional Logistics Advisory Center in Harare as well as to increase communications between its Logistics Advisory Unit in Johannesburg, the Corridor Groups, and the other WFP offices in the region.

WFP -- System operators: David Barker, Freda Luhila, Nob Kida

The WFP office was a bit difficult to establish due to faulty wiring in the UN building. It is expected that these problems will be solved through the installation of a new line. Pending this provision, it was agreed that the WFP would have its SAFIRE mail sent to UNZA 24 hours a day. The WFP office will then call the UNZA system by modem to pick-up and/or deliver the mail at 8:00 am Zambian time each day. This will allow better access to their system from the outside.

USAID -- Sytem Operator: Jean Sherring

The installation of the USAID site went smoothly thanks to the pre-existing FidoNet system in place. Jean Sherring, the system operator, already well in command of the system basics of sending and receiving messages, needed instruction only in the finer points of the SAFIRE system. She found the SAFIRE user manuals very helpful. As the system will be left running all night, she can be contacted between 10am - 5pm US time.

(NBICA) National Bulk Imports Commodities Association

System operator: Adam Ng'Uni, Neal Walker

The NBICA was a simple operation to set-up. Adam N'gui, the systems operator, is computer literate and a FidoNet veteran. The system is set-up to ring 6 times before connecting because there is a phone and a modem connected to the same line and both are quite active during the day.

MALAWI

<u>Sites</u>	<u>Official Contact</u>	<u>System Operators</u>
WFP/Lilongwe	Philip Ostenso	David Barker
USAID/Lilongwe	Monty Crisp	Monty Crisp
EMU/Lilongwe	Jim Lawrence	Andy Marsden
WFP/Blantyre	ET Tagoe	ET Tagoe/Vince Owen

OVERVIEW

Due to the lack of any prior existing Fido network in Malawi, the installation of the SAFIRE sites was expected to be problematic. However, this was not the case and the Malawi station ultimately proved to have a very vibrant network of users. At all four sites,

sites, the team was able to install the equipment and to train the staff -- including the staff of the Emergency Management Unit in Lilongwe. Since there was no telephone line available and EMU was moving to its new premises in early December, it was decided that the equipment should be left in the custody of USAID/Lilongwe until December. In view of the above, the team requested that a member of the other team -- Mr. Jeff Marzilli, who was planning to visit Lilongwe at the end of the year as part of his contract with FEWS, be authorized to spend one additional day in Lilongwe to install the equipment in the new EMU premises. The installation of the technology was completed in early December as had been arranged.

The SAFIRE project was enthusiastically welcomed by its users and, as a result, several specific requests were put forward to the teams. WFP/Lilongwe, who had just installed a Novell local area network, requested the team advise them on how the system could be operated on such a network so that each individual operator could directly access the system from his/her own terminal and keep his/her own log files of outgoing and incoming material (10 users were identified in WFP Blantyre). In view of the fact that a similar request was put forward during the short stopover in Harare and because of the rapid growth of the number of LAN's, the team requests advice on this topic from the supporting group in Washington.

Both WFP offices have requested that the facility submit its data files and spreadsheets to WFP Rome as soon as possible.

WFP/Lilongwe -- System Operators: David Barker

The installation of the WFP office in Lilongwe went well due to the installation of a dedicated phone line. However, we did have one strange occurrence with a laptop which caused us to pause in Lilongwe. We ran the laptop all day on AC with the battery in the machine. In the evening, we turned off the machine and took out the battery. When we turned the machine back on, it read the message: "hard-disk controller errors" and would not access the hard-drive. We unhooked the machine, reconfigured another machine for WFP/Lilongwe, and took the bad machine back to the hotel. At the hotel, we turned on the laptop and it worked! The next day we put the laptop back into the WFP office where we left it running for several days to see if anything would occur. As nothing further happened, we left the machine in WFP/Lilongwe. We also experienced the same unusual wiring as was seen in Zambia, but had no problems compensating for this. The training of staff members in WFP and AID/Lilongwe went well, as they are a very computer literate staff.

USAID -- System Operator: Monty Crisp

The installation of the USAID site went smoothly. The machine is

Natural Resource Officer. The polling of this office will be done only in the evenings as the line is shared with Rockeman's direct line during the day. The system located at USAID will be left running all night, and so can be contacted between 10am -- 5pm US time. Immediately, we were able to send and receive files immediately, which greatly pleased Carol Peasely, the country director.

EMU/Lilongwe -- System Operators: Andy Marsden

The EMU was visited by Jeff Marzilli from one. Hardware failures and telephone problems plagued the mission however. Follow up technical support from Washington has been requested. If problems persist, temporary assistance will be required to sort out specifics.

WPF/Blantyre -- System Operators: ET Tagoe/Vince

The installation for Blantyre went flawlessly -- we were able to install the system and leave. They have a computer literate staff as well, so training went smoothly. They immediately began using the system to send files directly between Blantyre and Lilongwe. Previously, Vince would climb in his truck once a week with diskette in hand and drive three hours to Lilongwe to deliver the weekly report. Now, they can do it immediately through the SAFIRE system.

TANZANIA

<u>Sites</u>	<u>Official Contact</u>	<u>System Operators</u>
USAID WFP Secretariat For Emergency Transport	Tej Mathur	Tej Mathur

OVERVIEW

Tanzania was not as problematic to set-up in terms of equipment and phone line capabilities as the team was led to expect. In fact, the highest data transmission rates the entire trip were achieved during the daytime hours.

The WFP Logistics secretariat, also known as the Secretariat for Emergency Food Aid Coordination, was the object of long discussions with both the AID and WFP officials. The secretariat, presently financed by the Swedish government and WFP the project comes up for renewal in January 1992. The continuation of Swedish financial support has not yet been confirmed, and so the continuance of the project is in some question. However, the WFP supervision of food aid flows will continue until July 1993. In view of the fact that the Secretariat produces an outstanding weekly report which is required and highly utilized by several actors within and outside the region, it was decided in agreement with the USAID mission and the WFP office to install the equipment in this office under the auspices of WFP. The implication being that the equipment is essentially under the control of the WFP. By the time the mission left the country, the WFP Logistics Secretariat had already sent its first weekly report with attached spreadsheets to the other actors in the region. Although there was a programmer with the Swedish embassy serving the Secretariat present who was trained in SAFIRE, the team was concerned about setting up the system under the primary responsibility of two people with limited computer skills.

USAID --- Systems Operator: Tej Mathur

At the outset, there seemed to be some misunderstanding about what the network could offer and what its uses were. After a conversation with Mr. Dale Pfeiffer, the Mission Director, the system was installed in the mission. The machine is located on the fax line and is situated in the computer room. The local staff took to the idea immediately, as they have had great difficulty sending faxes and found the SAFIRE to be a reasonable alternative.

WFP -- Systems Operator:

The WFP office found the SAFIRE system to be of great use. Phone calls are prohibitively expensive, and they keep tight control over telephone and fax use. The great benefit of the SAFIRE system is that outside entities can call into them at a less expensive rate than for them to call out. Therefore, the SAFIRE system was found to be an extremely useful tool.

Secretariat For Emergency Transport Logistics

Management was very enthusiastic about the SAFIRE system, and immediately distributed their latest report using it. However, the staff is somewhat weak in computer skills, and will possibly need continuing assistance in the short term.

MOZAMBIQUE

OVERVIEW

The team arrived in Mozambique on Sunday evening November 8, 1993. They were met by Mr. Pablo Recalde of the World Food Program and a representative from the USAID/Maputo motorpool. Customs formalities were handled without a problem by Mr. Recalde. Initial meetings were held between Mr. Darell McIntyre of USAID/Maputo and Mr. Pablo Recalde of WFP/Maputo early Monday morning before visiting each site, all of which were tested successfully by Monday evening. Permanent installation continued throughout the week.

An initial half-day introduction and training was held for interested USAID staff on Tuesday, November 10. An open training for all other participants was held from 9:00 am to 5:00 pm on Wednesday, November 11. Training was held in the USAID conference room and involved extensive use of the mission's PBX to conduct live Fido demonstrations and practice communications from office to office within the mission. Additional one-on-one training was provided to Mssrs. Recalde, Mendes, Dodson, MacIntyre and Findlay over the remainder of the week and weekend. It should be noted that USAID staff Buddy Dodson and Darell MacIntyre forfeited two holidays (one Mozambique and one American) and most of a weekend to work right along with us on SAFIRE.

General telephone conditions in Mozambique are mediocre to good. International out-dial lines appear to be quickly and easily available to anyone who is willing to pay the bill in hard currency. The quality of international circuits to the US and Europe can be somewhat problematic but it is by no means unsuitable to Fido development. It was not unusual to have several failed connections during the busiest hours of the day, but it was the rare case when persistence didn't eventually pay off. It was also not unusual to experience a perfectly clear line that would permit maximum data throughput. Regional calls within southern Africa did not require payment in hard currency and appeared to be at least as reliable as calls to the U.S. when

calling Zimbabwe and South Africa. Connections to other countries in the region were not attempted. Local telephone connections on the other hand were quite good and the team experienced few problems in communicating from site to site in Maputo.

These characteristics of the telephone system in Mozambique (good local connectivity, problematic but possible long-distance and regional connectivity) provide a strong argument in favor of a modified local hub-routing arrangement whereby mail into and out of Maputo can be pooled at one site for collection and pick-up. This would significantly reduce the time and money necessary to service SAFIRE sites by assuring that unpreventable, costly re-try episodes are not repeated for each and every site. The first successful connection into the country (even if it takes five tries) will carry all mail destined for all sites in Mozambique. The mail can then be automatically distributed from site to site within the country via a much less-problematic local connection.

Mozambique does not currently have a local FidoNet amateur network and therefore there are no immediate opportunities for cooperation on that front. However, both Don Findlay of SatelLife and Phil Gray of CARE are very interested in expanding FidoNet possibilities in Mozambique in the future.

WFP/Maputo: System Operator

The WFP/Maputo office installation went smoothly. WFP had undertaken the installation of a dedicated, direct-dial international telephone line shortly before we arrived. Mr. Pablo Recalde, the designated sysop, is very enthusiastic and quite capable in spite of the fact that he is terribly over subscribed in his duties. Although he was unable to attend more than one day of training, he took avid notes and delved voluntarily into the most technical aspects of the software. While such a short, intense approach could not be expected to yield technical acumen, it did give him a strong understanding of the substantial power behind the software. Of importance was his realization and admission that this software had many more uses for them than they had originally imagined, and that they indeed wanted to use it to its fullest capacity. Given enough time, I think they will do so. WFP/Maputo took full delivery of all equipment and is expecting future delivery of the printer and manuals. They require DOS, Dell and FD Administrator manuals.

USAID/Maputo

The USAID office in Maputo was also quite easy to install. They too are operating on a dedicated, direct-dial international line. Co-Sysops Buddy Dodson and Darell MacIntyre attended approximately two full days of on-site training comprising both group and individual sessions. The in-house PBX capabilities of

USAID were such that we were able to install several of the SAFIRE computers on branch extensions and conduct live Fido sessions from office to office within the building. This gave the USAID players additional opportunities for hands-on practice even while we were away, something of which they appeared to take serious advantage. Additional USAID personnel were involved in the half-day communal training and even more attended a two-hour seminar/demonstration for the NGO/PVO, university, and consultant community. At least one other USAID staff member (Robin Mason) is already using the SAFIRE system for Internet messaging. I have no doubt that Darell MacIntyre, when he returns from home leave in January, will keep this mission active on SAFIRE and excited about a range of other possibilities. USAID/Maputo took full delivery of all equipment and promised to provide their own UPS system. They are expecting delivery of the printer and ONLY Dell and DOS manuals. Both FrontDoor User and Administrator manuals were provided to them.

UNILOG

The Systems Specialist at UNILOG, Albert Mendes, is the individual in Maputo most likely to lead all others on FidoNet technology. He has both the technical training and interest necessary to do this and do it well. I suggest focusing as much encouragement and as many resources as possible here. The UNILOG office resources and mandate are also quite compatible with strong leadership on Fido. While they do not have a direct-dial, international line, they do have good local-dial connections and therefore can support most fido efforts in Mozambique indirectly. Mr. Mendes and Mr. Recalde work often and quite well together. I expect this relationship to boost Fido efforts in Mozambique as well. The UNILOG Fido station shares the Director's voice line and can therefore be accessed from outside only after hours or on prearrangement. Much time was spent attempting to configure Fido to share a line already divided between the fax machine and regular voice line; the efforts came to nought. The UNILOG director appeared quite open to sharing the voice line as required. UNILOG took full delivery of the equipment and is expecting delivery of the printer, DOS, DELL and FrontDoor Administrator manuals.

CFM -- Caminhos de Ferro Mozambique

CFM the national railways is very interested in setting up a SAFIRE station. They designated the office space, telephone line, UPS and the staff to run it. Furthermore, he attended our one-day training session at USAID. However, the situation fell apart at CFM shortly before leaving Mozambique; this was apparently due to some resistance from a superior who apparently was not fully consulted on either the placement of the machine or the use of the direct telephone line. He threatened not to approve the placement of the SAFIRE technology. After making us

wait overnight for his decision, he had the laptop placed in his office, a move a local consultant told us would assure it would not be fully utilized.

There should be no doubt in anyone's mind at CFM about the conditions for the use of this equipment. All parties were clearly told that if the equipment is not used for SAFIRE purposes, it will be removed and returned to AID. We briefed USAID staffers Darell MacIntyre and Buddy Dodson on possible problems with CFM before we left. It is recommended that USAID request Pablo Recalde of WFP to explore the issue with his contacts at CFM as a first step. He seems to exercise some influence over CFM on relief matters. If that is unsuccessful, USAID should remove the equipment immediately. CFM took delivery of all equipment and is awaiting the additional delivery of Dell, DOS and FD Administrator manuals.

SOUTH AFRICA

OVERVIEW

The team arrived in Johannesburg late Sunday, November 15, and was met by Arnt Breivik of WFP and the USAID driver. Marziili and Basit were taken to Pretoria, while Burberry stayed behind with Breivik in Johannesburg. Customs arrangements were handled easily by customs officials who sought the team out based on paperwork provided in advance by USAID. Initial meetings were held at USAID Monday morning. Those present consisted of Janice Weber, Steve Brent and the two sysops, Geoff Carter and Raquel Foba. Steve Jackson, the intended primary user of the system was travelling with the Ambassador all week and unfortunately was not available.

All team members convened in Johannesburg at noon on Monday to conduct testing of phone lines and electrical set-ups at the WFP sites. By the end of the day, testing was completed successfully at all three sites. USAID staff Brent, Foba and Carter accompanied the team to Johannesburg on Tuesday morning for a full day of training in the Grain Operations Room at SPOORNET. The Grain Ops Consortium sent three staff members for training, while the WFP/Logistic Advisory Unit sent one. A full day of group training was conducted with extensive use of both in-house (PBX), local and international connections for demonstration and practice purposes. Small group and one-on-one training followed quite smoothly the rest of the week, making the South Africa installations one of the best trained sectors of the entire SAFIRE network.

General telephone conditions in South Africa are fair to good. The quality of the lines is generally quite good, however the availability of quality lines is what poses a problem. International and regional (long-distance) connections appeared somewhat easier to come by than local and in-country connections. For instance, dialing from Pretoria to Johannesburg was quite problematic in the late morning and late afternoon. When an available line could be found, the quality was generally quite good. Availability of out-dial international phone lines was much less limited than in any of the other countries we visited.

South Africa also stands apart with respect to the availability and sophistication of local FidoNet, BBS and international data line connectivity. There is very little that is lacking here. Every site we installed has redundant Fido and Internet connectivity options through the amateur FidoNet, Worknet and the University of South Africa. When taking into consideration the very strong hobby-oriented interest shown by USAID staff like Brent, Johnson, Foba, Carter and others, it is certain that they will have no trouble finding adequate local support through any

one of these institutions. Initial assistance from SAFIRE in forming these associations and making introductions would be much appreciated by USAID staff and tremendously helpful in improving the skills of those who will be expected to contribute to SAFIRE efforts.

USAID/Pretoria

The USAID mission to Pretoria is fortunate to have two of the best systems people we met on our entire journey. Rachel Foba and Geoff Carter will have no problem making FrontDoor work to its fullest capacity. It is my guess that they will have the support of influential mission administrative personnel in the process. USAID/Pretoria appears to be behind Fido all the way, and not necessarily just as it applies to SAFIRE. There appears to be wide recognition of the usefulness of this type of information system for the other projects as well. The mission is waiting for the embassy to install a dedicated international out-dial line (originally expected to be completed before we left) and they have already installed the software on additional computers, including one of their LAN servers. If Geoff and Rachel were asked, they could produce and operate a very sophisticated mission Fido system in no time at all.

WFP/LAC Johannesburg

Susan Kimberley and Arnt Breivik were sleeping technological giants waiting to be unleashed. While appearing somewhat non-plussed or unmoved by the technology, they turned around and started using the system to its fullest almost as soon as we departed. With access to technical support when they need it, they should have no problems. They are running on a dedicated line and have the Grain Ops people upstairs for mutual support. Compared to most sites, their office, electrical and telephone situation is enviable.

Grain Ops Room

This is the group that is housed at SPOORNET, and represents seven or eight organizations, of which SPOORNET is only one. One of the SPOORNET representatives in this office was the quickest study in our training group and recognized immediately the usefulness (and uniqueness) of the technology. He has already probably installed it other places within SPOORNET. The rest of the group we trained were able to comprehend the basics of Fido and should perform solidly with occasional help from others, including SAFIRE and the WFP/LAC downstairs. It is not anticipated that any problems will occur.

ZIMBABWE

OVERVIEW

SADC-WFP/LAC staff member Mike Jones met us at the airport in Harare on Saturday and took us to the Bronte Hotel. We had hoped to begin the configuration and testing of the replacement computers over the weekend but Mike knew nothing of them as USAID had not sent any personnel or any information to the airport or hotel. The rest of Saturday was spent instead discussing outstanding technical issues like routing and control tables, and the use of fax-modem switches.

On Monday morning, the team was picked up and taken to WFP/LAC by Mike Jones. At LAC we learned that arrangements for site setup in Zimbabwe were very informal. While most of the organizations had been contacted and informed of our upcoming visit, no solid appointments or training schedules had been worked out. It was quickly determined that WFP had precious little office space to spare and limited vehicles/drivers to provide to the SAFIRE efforts. In addition, a new director had arrived the same day and was absorbing much staff time.

We reported to USAID later in the morning and established that USAID had no plans for participating in SAFIRE. Our contact person, Charles Scheibel, was on leave for the entire week, and no one had been assigned to fill in for him. We were also told that our replacement computers were not yet cleared from customs as we had expected. Mr. Sam Mintz informed us that it was the mission's understanding that we would be working under the guidance of WFP while in Zimbabwe. Based on this understanding, it was agreed on Monday to move the base of operations immediately to the hotel and begin operations quickly. Given the amount of work to accomplish in the space of the four and one half days remaining, the team could not afford to lose even so much as another half day. Operations commenced immediately at the Sheraton Hotel -- a training facility was established and equipment was assembled for Thursday. By 14:00, the team was back on-track again and contacting/visiting designated Fido sites.

A communal training was held on Thursday, November 26, from 08:30 until 17:00 in a conference room the Sheraton Harare. The hotel provided a very professional setting with all the flip charts, power boxes, telephone connections and ice water anyone could ever want. FEWS provided a color monitor. After blowing one isobar for no apparent reason, the training proceeded without a hitch. The National Railways of Zimbabwe, Beira Corridor Group and the Logistics Advisory Unit supplied three trainees each, for a total of nine. Neither the Agricultural Marketing Authority or the Grain Marketing Board could attend. Each group in attendance worked on one laptop computer. Telephone lines were shared among

the various stations in order to permit each group regular "live" connections with other groups around the room and with the NGO-based MANGO telecommunications Project across town.

While the communal training in Harare was the best of all sites, testing and installation were hampered continuously by the terrible local telephone situation. Simply calling across town in Harare was as difficult as anything faced to late on the entire trip. Equally disappointing was the very informal nature of contacts with the prospective sites that had occurred prior to our arrival. This led to several problems, not the least of which led to the confusion of the Agricultural Marketing Authority for the Grain Marketing Board. In addition, USAID non-participation in SAFIRE and other technical factors, including the late arrival of the replacement computers (after C.O.B. Wednesday) made site installation difficult at best. As a back-up measure, the Team decided to leave one notebook computer unassigned and in storage at FEWS/Harare awaiting decisions about further site installation to be determined at a subsequent date.

General telephone connections in Zimbabwe are very poor but still not impossible. Local and international calls during regular business hours certainly try one's patience. After hours, both line availability and quality seem to improve considerably. Out-dial international lines are nearly impossible to acquire: USAID informed us that the U.S. Embassy has been waiting six months for an additional line to be installed. For this reason, nearly every site we installed has been severely limited on outside lines and has a fax machine already sharing a voice line. For numerous reasons, the team was not able to successfully install voice-modem switches on lines that were already sharing fax and voice. Continuous frustrating attempts to do so wasted days of valuable time.

On the brighter side, Harare has a local FidoNet resource in the MANGO (Micro Computer Assistance to NGOs) Project. This project, currently under the direction of Dr. Rob Borland, Chairman of the Department of Computer Sciences at the University of Zimbabwe, could provide valuable assistance and alternate mail routing for SAFIRE and other related sites in the future. Borland has NGO/PVO sites already installed in Zimbabwe, most of which operate a suite of Fido software similar to that provided in the Permanent kit. MANGO welcomes all who are interested and provides a very reasonable service at a cost of \$ZIM 10.00 per month subscription fee and .10 cents a message. MANGO connects to Worknet (Johannesburg) three times daily. The SAFIRE team arranged for Borland to address the communal training on Thursday, November 26 and his presentation was very well received.

Logistical Advisory Center (LAC)

The WFP/SADC LAC is the designated coordination center for all drought related activities in the region. Our initial contact there, Mike Jones, is probably not the primary SAFIRE user in the office. Rick Corsino is more familiar with computers and more immediately motivated by the Fido possibilities. The LAC Chief,

Anthony Mornement, who arrived in Harare the same day we did, took an immediate liking to the concept and reportedly called Rome to push for full implementation of a Fido site there. The LAC Director has seen that FTSC can do x and y, and

now he will push his staff vigorously to see they use it to its fullest. This could prove very useful to SAFIRE, but the LAC staff must receive immediate support required as they are probably being pushed the hardest to get up to the fullest speed in the shortest time possible.

The LAC SAFIRE station shares a voice line and is configured to answer the telephone only after 18:00 when everyone should have departed. The only other direct line is taken by the fax; Abdul and Keith were unable to get the fax and modem to share the line successfully. WFP/Harare has a secondary installation for the main WFP office but, when we left, it was still resident on a spare WFP/Harare computer in the LAC office. This station is running the shareware version of the Permanent kit, with no FrontDoor Commercial update.

Beira Corridor Group

David Zausmer, BCG Chief, appeared skeptical of the FTSC technology at first but left a believer. In fact, he is lobbying strongly for a second SAFIRE site to be installed in Beira, Mozambique itself as soon as possible. The BCG offices in Harare were tested, wired and just waiting for a telephone line to be moved by the time we left. Zausmer took delivery of second set of official FrontDoor software (originally intended for AMA) that he requested for immediate transfer to their Beira office. He said he would make sure the Beira office received a modem if they didn't already have one. Beira supposedly has fine connections to Europe and the States, and was instructed to have staff in Beira contact John Glaser in Washington for voice installation assistance as soon as they had secured a machine and modem. BCG/Beira is expecting full SAFIRE support, if not a second complete set-up (notebook computer w/modem) in the very near future.

National Railways of Zimbabwe (NRZ)

NRZ (Bulawayo) sent three representatives to Harare on one day's notice for the communal training. The senior person among them, Mr. Elson Murevesi has repeatedly been in touch with USAID and FEWS to inquire into developments to bring them on board the SAFIRE network. Gary Eilerts (FEWS/Harare) mentioned as recently as December 13 that many players in Harare recognize the importance of bringing NRZ on-board. The only reason NRZ was not permitted to take delivery of the equipment in the end was because of last minute uncertainties in the overall distribution of sites in Zimbabwe. The NRZ machine was reassigned to the Grain Marketing Board, with whom we were not able to establish suitable official contact. All that remains to installing an NRZ site is three to four days of technical assistance in order to travel to install, configure and test the system and complete training.

Agricultural Marketing Authority (AMA)

Mr. Felix Masanzu, Chief Economist at AMA, is very supportive of the technology and assigned two staff members, Agnes Chaonwa and Busi Sibanda, to configure, test and train on the system. However, AMA personnel were not able to attend the communal training due to a report deadline that fell on the same day as the training. Mr. Masanzu recognizes the technology not just for its capabilities for drought response, but also for its power as a link into world information sources--particularly world commodity prices, movements, markets, etc. AMA is the parent organization of the Zimbabwe Grain Marketing Board. Brian d'Silva, a colleague of Mr. Masanzu for some time, strongly supports the placement of SAFIRE in AMA. He feels they will use FTSC technology very effectively to gather regional price and market information.

Grain Marketing Board (GMB)

There was some confusion concerning the site installation of the Grain Marketing Board. Mission Director Morse mentioned the GMB in a fax dated 4 November. WFP was somewhat ambivalent concerning their importance for coordination of drought relief activities. Whatever the case, neither WFP nor the team found anyone willing to return our numerous phone calls over the course of the week. Mr. Military Hlahla in the Computer Section finally agreed to attend the training at AMA. Mr. Hlahla was quite impressed with FTSC and said he would work immediately to see that the appropriate contact is made between The GMB and WFP regarding participation in SAFIRE.

APPENDIX

TECHNICAL RECOMMENDATIONS

1. The installation kit contains too many utilities. A new user would not have any use for them and an experienced user can always get them from a bulletin board (only the ones they need). On a virgin machine with 120 M of disk it is fine, but for some one who has been using the machine for other things 15 M. is a lot of disk space, especially in Africa, to be dedicated for this luxury.

2. The amount of time allocated for training was not enough. A better strategy might have been to send one person to each country for 3 weeks total in each country.

3. Some standardization should be set in terms of spreadsheets or word processors. If the two sites have the same spread sheet program, they can easily send their work-sheets back and forth. If they don't, reports have to be exported to ASCII files where they lose all formatting and some of the wide reports wrap to create an unpleasant mess. We also found that not all users of Word Perfect or Lotus 123 knew how to export to ASCII files. It would be worthwhile if training in Word Perfect was provided to the field sites.

4. Since there is some form of communication mechanism already in place at all sites, it is probable that the staff at these installations could fall back into using methods with which they are more comfortable. They may not use the new technology, even when it is the more convenient method. The Washington office should create a training program to encourage the field staff to use the SAFIRE system. For best results, they should not be told that it is an exercise; they should merely be requested to retrieve certain information and/or files, forward replies to someone else, and etc.

Some specific examples of possible training tasks could include:

Asking the field sites to update a point list, compiling it by following the instructions in the message. They should also be asked to print this message for future reference.

NOTE: If SAFIRE.PTS exists in INBOUND Directory the next incoming SAFIRE.PTS is automatically renamed to SAFIRE.PT1, .PT2 etc. This should be kept in mind and resolved. (DEL c:\fd\inbound*. * will do it).

Next, they should be asked to request the file and to compile it.

POLLING SCHEDULE

<u>Hours of Operation</u>	<u>Specific US Poll Times</u>
<u>ZAMBIA</u>	
USAID: 5pm--8am (US 10am--5pm) all weekend	6pm (US 11am)
NBCIA: 8am--5pm (US 1am--8am)	2:30pm (US 7:30am)
WFP: 24 hours (UNZA feed)	6pm (US 11am)
UNZA: 24 hours	6pm (US 11am)

MALAWI

USAID/Lilongwe: 5pm--7am
(US 10am--4pm)

WFP/Lilongwe: 24 hours

WFP/Blantyre: 24 hours

EMU

FrontDoor Log Statistics for the period
From Mon 2 Nov 92 to Tue 29 Dec 92 Appendix A

Part I - Message Transfers & Calls					
Transaction Period	Telephone Calls			Message Bytes	
	Out	Connect	In	Outgoing	Incoming
NOV/DEC MONTHLY	568	915	347	2,334,604	1,363,835
TOTALS	1136	1830	694	4,669,209	2,727,671
DOCUMENT PAGES PER MONTH				Outgoing 1167	Incoming 681

PART II - Network File Transfers				
TRANSACTION PERIOD	File Names	File Bytes		Tran Min
		Outgoing	Incoming	
NOV/DEC MONTHLY		6,393,268	7,642,156	
TOTALS	533	12,786,537	15,284,313	1063.0
DOCUMENT PAGES PER MONTH		3,196	3,821	

PART V - SUMMARY	
Message Bytes Transferred	= 7,396,880
File Bytes Transferred	= 28,070,850
TOTAL Bytes Transferred	= 35,467,730
Message Connect Time	= 7.7
File Transfer Connect Time	= 17.7
TOTAL Connect Time (Hours)	= 25.4
TOTAL Network Session Costs	= \$1483.0

PART VI Monthly 2 Months Nov/Dec Statistics Per Month	
Message Bytes Transferred	= 3,698,440
File Bytes Transferred	= 14,035,425
TOTAL Bytes Transferred	= 17,733,865

Message Connect Time	=	3.85
File Transfer Connect Time	=	8.85
Monthly Connect Time (Hours)	=	12.7
Monthly Network Session Costs	=	\$741.00