A Funding Proposal to Support the Tuzla Center for Information Technology (CIT)

Friends of Bosnia
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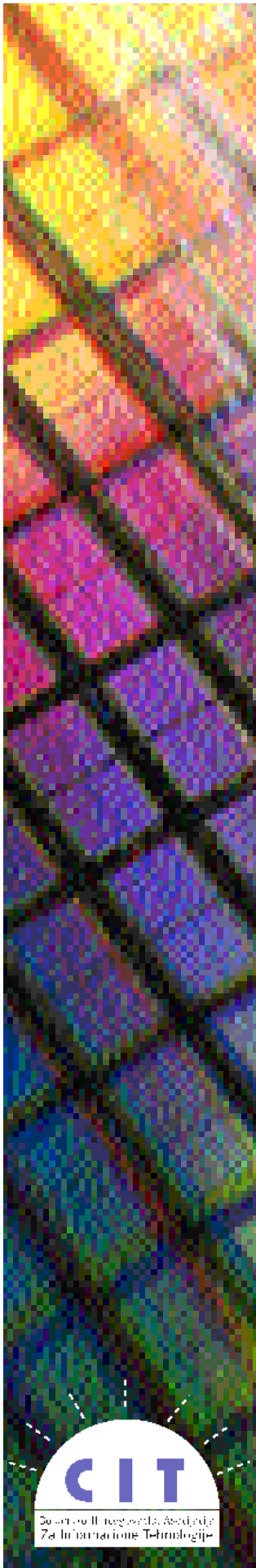www.friendsofbosnia.org
attn: Glenn Ruga, Director

The Tuzla Center for Information Technology
Bosansko Hercegovacka Asocijacija
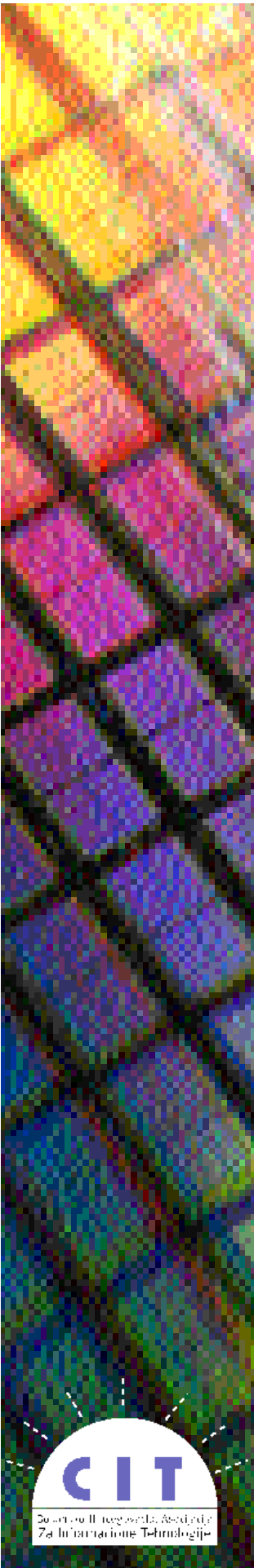**Za Informacione Tehnologije**
Malkoseva 2
75000 Tuzla
Bosna i Hercegovina
Tel: ++38735 250-320,250-321,250-322
e-mail: cit_bh@yahoo.com
attn: Adnan Salkic, President

Contents

Executive Summary

Friends of Bosnia (FOB) in Boston, Massachusetts is working with the Center for Information Technology (CIT) in Tuzla, Bosnia and Herzegovina to help them create a twenty-first century teaching facility to train bright young people in Bosnia in information technology (IT). The objectives of CIT are:

- Building and maintaining a teaching program to instruct students to design, implement and maintain enterprise management systems for wide area networks to serve government and small to medium size businesses.

- Developing an independent internet service that will provide free internet access to students and low-cost access to businesses.

- Providing employment opportunities for young people so that they do not need to leave Bosnia to pursue their professional objectives.

- Maintaining the most popular internet club in Tuzla as a source of revenue for CIT and a training for students.

- Designing and maintaining a People to People website that will present funding opportunities in Bosnia to international donors.

The management of CIT is made up of highly trained and experienced IT professional who are both students and alumni of Tuzla's College of Electrical Engineering. The Center is made up of representatives of all ethnic groups within Bosnia and is dedicated to a professional and non-partisan environment.

The mission of CIT
To improve education, promote the values of civil society, and build a healthy climate for investments, jobs, and sustainable growth through information technology.

The funding needs for the CIT over the next two years

Internet Club (immediate needs) $19,800
Internet Club (long-term needs) $19,800
People to People web site $15,670
Oracle/Java/C++ Learning Lab $3,650
Capital Improvements $25,530
Microsoft Windows 2000 Learning Lab $32,063
Operating Systems Learning Lab (Sun Solaris/Linux) $43,996
Cisco Learning Lab $16,112
ASP-ISP Student Internet Service $386,638
Total funding request $563,259

The Need for CIT

Among those dedicated to rebuilding Bosnia and Herzegovina's society, the greatest challenge today is convincing young people — especially the most talented – that they do not need to leave their country to create a future for themselves.

There is now a concerted and urgent effort to stop this "brain drain". Bosnians are saying, "Show me. Show me that that I can stay in Bosnia, that I can provide for my children, that they can speak the same language as my parents, and that we can all have a future here."

Revitalizing the economy, generating public support for reconciliation and moderate progressive politics, rebuilding a multi-ethnic democratic B-H as a full member of the European Community, recovering from a genocidal war, all hinge on this challenge of creating immediate and tangible opportunities.

The good news is that these opportunities exist *right now* in Bosnia and Hercegovina.

Despite unemployment approaching 80% in some regions of Bosnia, there are 100s of high paying jobs in Information Technology (IT) available today. Right now in Bosnia, entrepreneurial start-ups, large companies, and government agencies need IT specialists with hands on experience in network management and software development. Furthermore, with fully staffed IT departments, these companies can attract foreign capital and create more jobs by providing IT services to international corporations and foreign businesses.

A key problem now is that businesses are not willing to invest in training

Bosnians because of either a lack of funds or a lack of trust that, once trained, new employees will not simply emigrate with these new and highly marketable skills. On one side, you have young talented Bosnians eager to learn, to work hard and earn a living. On the other side, you have Bosnian companies and government agencies in desperate need of IT specialists.

Bridging this gap is the Tuzla Center for Information Technology (CIT), an organization founded by students and alumni of Tuzla's College of Electrical Engineering, and dedicated to the concept of education in action.

CIT works in two interrelated ways: one, CIT offers young Bosnians the invaluable experience of operating, managing and maintaining state-of-the-art computer/telecommunications equipment, thereby giving them the ability to compete in the wired, global marketplace; and two, CIT works on a more profound level by promoting the values of civil society and democracy, enabling the population at large to reach across former confrontation lines and bring their country back together again.

I invite you to learn more about CIT and I encourage you to contact me or the President of CIT, Adnan Salkic, to learn more of how you or your organization can help us in rebuilding a proud and prosperous Bosnia and Herzegovina.

With Respect and Appreciation,

Chris Bragdon
Outreach Bosnia Director
Friends of Bosnia
fob@crocker.com
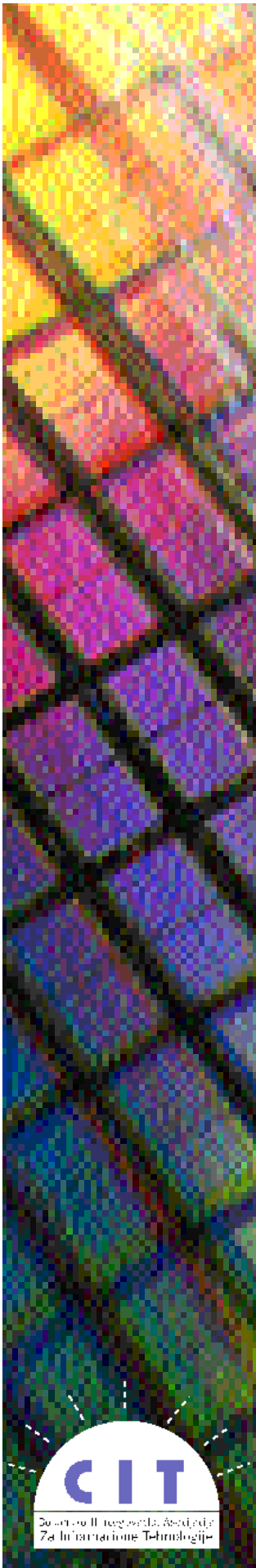
Welcome to CIT

As president of the Bosnia and Herzegovina Association for Information Technology, I thank you for taking the time to learn about our Center for Information Technology (CIT). Founded by students and alumni of the Electrical Engineering College of Tuzla University, we are dedicated to doing our part in rebuilding our country. Our mission is to improve education, to promote the values of civil society, and build a healthy climate for investment, jobs, and sustainable growth through information technology.

Our most valuable assets are the group of dedicated and talented people we have in our management team, our building of 1,300 square feet ideally situated in the center of our city, and our internet club which is the most popular internet club in Tuzla. We are currently upgrading our internet service with the goal of not only achieving self-sufficiency but also generating revenue for further development of our center.

We are currently hosting courses in IT and provide hands-on experience to our students through maintaining our computer network. We have an excellent working relationship with Tuzla University and one of our goals is to provide an "tuzla.edu" internet-based student service for all of Tuzla University's students. We are establishing an IT ESL program with Cornell University's "English-for-Bosnia" Project. We have established several relationships with international donors including SOROS and OSCE (donated to our student conference in 1999) and are currently receiving funding from the Boston-based organization Friends of Bosnia and the Chicago-based Post-Conflict Foundation.

We are now embarking on an ambitious campaign to significantly increase our internet capacity and our computer labs for teaching all aspects of IT including SQL databases (Oracle, Borland Interbase), operating systems (Sun Solaris, Windows 2000, and Linux), web programming (Java), and network maintenance (TCP&IP).

I invite you to learn about our center, our people, our contribution to rebuilding civil society, and our plans for the future. We have both a step by step approach to improving our center and a master plan that would catapult CIT into being the most dynamic and capable IT center in the entire northeastern region of BiH if not the entire country.

I hope that you seriously consider contributing to our center whether it helps us along one step at a time or gives us a major leap forward. I am very grateful for your interest and will honor and respect whatever contribution you can make.

Please feel free to contact me or our representative in the United States, Chris Bragdon, at any time.

And if ever you are in northeastern Bosnia and Hercegovina, please visit us so I can share with you first hand our current projects and our plans for the future.
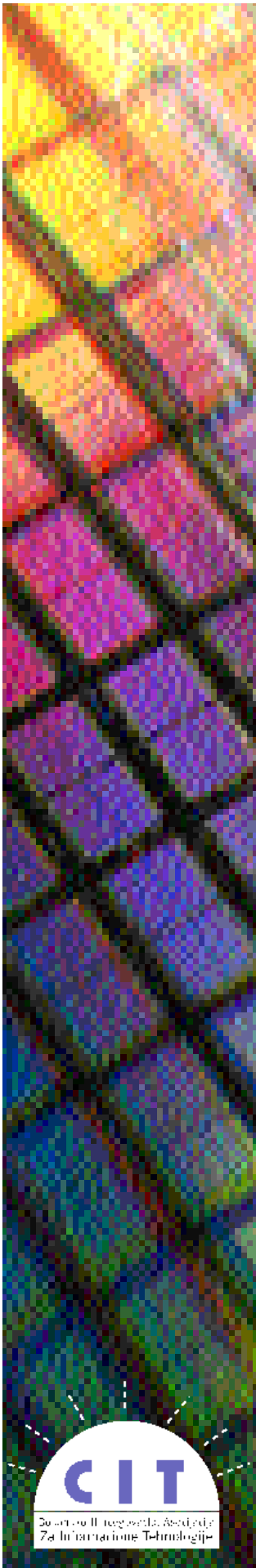
With Respect,

Adnan Salkic
President
The Tuzla Center for Information Technology
Phone:++375 66 193 337
E-mail: adnan_salkic@yahoo.com

CIT Leadership Team

Adnan Salkic, *President*

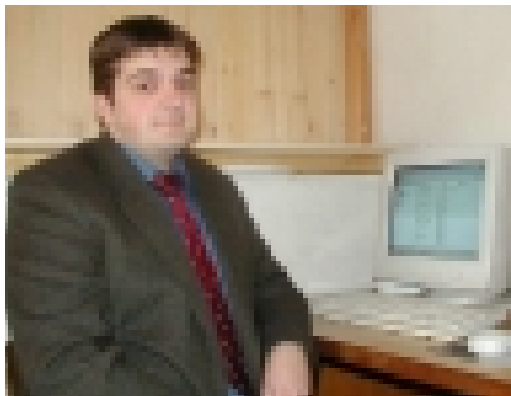Sladana Pejic: *Management Board Member, Development*

Damir Imamovic: *Chairman of the Management Board*

Jasmin Musanovic: *Management Board Member, Curriculum*
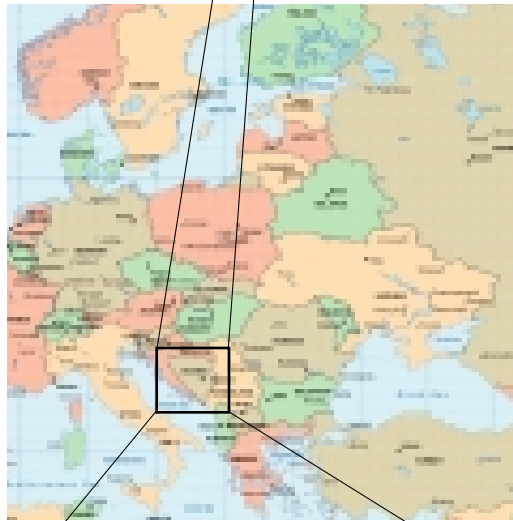

Elvedin Talic: *Management Board Member, Operations*

The mission of CIT
To improve education, promote the values of civil society, and build a healthy climate for investments, jobs, and sustainable growth through information technology.

Where is CIT

The City of Tuzla

Tuzla, the second largest city in Bosnia, is located on a branch of the Spreca River, at the western foot of the Majevica mountain range. Nearby are stone quarries, saltworks, plum orchards, and mineral springs. A road and rail hub, Tuzla is the center of a lignite, oil, and gas region, although much of its industry has disappeared as a result of the war.

Unlike much of Bosnia, in Tuzla, Croatian Roman Catholic churches, Islamic mosques, and Serb Orthodox churches stand unscathed from the recent war. The congregations worship separately, but the people walk the streets together.

During the war, Selim Beslagic, former mayor of Tuzla, organized residents into multiethnic civic groups, protected the city's Serb minority from harassment, and worked with peace activists in Serbia and Croatia. In recognition of his efforts, Mr. Beslagic has was nominated for the Nobel Peace Prize in 1997.

Under Beslagic's leadership, Tuzla remained the largest free region in Bosnia for the duration of the war. The militia that staved off the Serb onslaught was itself 20 percent Serb.

Beslagic forbade the persecution of the city's Serb minority, personally checking up on people like Vojislava Vasiljevic. The elderly Serb woman says that whenever Beslagic saw her on the street he would stop his car and ask if she was experiencing any harassment.

Because of his vigilance, Tuzla's Orthodox church stands as one of the few Serb religious buildings in the federation that is not destroyed or defiled. In fact, the only damage the church suffered during the war came from a Serb shell in 1993.

Excerpted from October 9, 1997 edition of the *Christian Science Monitor*

Technical Assessment

Most systems in Bosnia and Herzegovina operating over the last ten years have depended on MS DOS based systems with data base systems dBase and Clipper. Between 60 and 70% of SME's (small and mid-sized enterprises) and about 30% of government agencies still run on this antiquated system.

Many businesses and government agencies are struggling to upgrade their systems. Government agencies are quickly acquiring the latest technology but lack the required IT specialists to maintain their systems. The larger companies face the same challenge. SME's are eager to update their systems but are not able to hire the needed IT specialists. And, many SME's and government agencies that do have the latest technology are only using 20% of capacity of those systems because once again they lack IT specialists.

While there is an adequate number of pc technicians for repairing hardware, companies today in BiH need trained IT specialists with hands-on experience in hardware and software technology such as Cisco, Sun Microsystems, Oracle, Java. They need IT specialists who can design, implement and maintain enterprise management systems for wide area networks. They need IT specialist who have the communication skills to walk a customer through problem solving via the phone – a skill very few Bosnians possess.

With this shortage in trained IT specialists, it is very difficult for a major BiH company to fully staff their IT department. For instance, government agencies and large businesses have enterprise class systems which require RISC based enterprise servers with relation database management systems as a database backend engine all connected with routers and switches and protected with firewalls and public key infrastructure. The average enterprise class system requires a minimum of four IT engineers, network infrastructure engineer, security engineer, database administrator, and network administrator. Furthermore, many companies and government agencies need contractors to whom they can outsource their application software needs. In all cases, there is an intense need for custom software developers for the Bosnian market.

To meet the demand for IT specialists, CIT will institute a training program that will teach the most complex and capable systems such as Checkpoint, Cisco, Oracle, Java, Sun Microsystems, IBM, Lotus. In this way, CIT graduates will have the ability to work with similar products from other venders.

Our teaching philosophy emphasizes experiential learning with small class sizes. There is an emphasis on one-on-one tutoring and real life learning challenges, for instance, thinking on one's feet while trying to revive a crashed system. CIT intends to create a new breed of graduates who are not just "book smart" but have true experience before their first job assignment.

Please feel free to contact me if you have any technical questions regarding CIT projects.

Best Regards,

Damir Imamovic
Chairman of Management
CIT
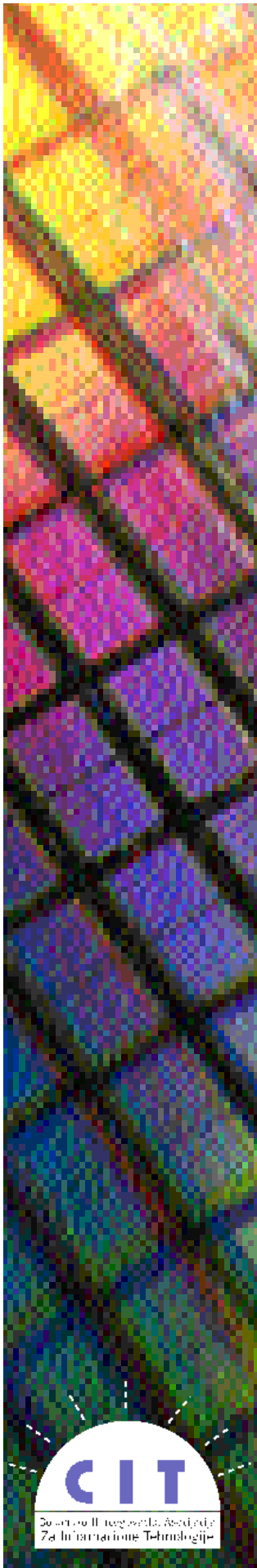
Background Information on Friends of Bosnia

Friends of Bosnia is one of the oldest grass roots organizations in the U.S. working to increase awareness about the Balkans and supporting efforts for a long-term and just peace. Beginning in February 1993—ten months after the outbreak of war in Bosnia—Friends of Bosnia started a campaign to educate the American public about the genocide being committed against the people of Bosnia and provide humanitarian aid to its victims. Through educational projects in the U.S. and reconstruction projects in the Balkans, Friends of Bosnia continues to be at the forefront of the national effort to bring informed awareness to the issues generated by the wars in the Balkans and to provide relief for the victims.

Friends of Bosnia also provide resources to organizations and individuals across the U.S. Through our newsletter, exhibitions, speaker program, resource library, and other reference materials, we are a resource for all areas of the U.S. to draw upon for information and analysis on Bosnia and the Balkans. Friends of Bosnia was located in western Massachusetts until 1999 when it moved to Boston.

1998–2001 Friends of Bosnia Major Projects

Outreach Bosnia, 2000-2002
Friends of Bosnia is launching a major new initiative in eastern Bosnia, Outreach Bosnia, to help returning refugees and long-time residents rebuild their communities five years after the end of the war. Chris Bragdon from Ithaca, NY, is directing this project and has already achieved significant success both with fundraising and implementing the program

Reconstructing Kosovo, 2000-2002
A documentary photography/ text exhibit on war, reconstruction and reconciliation in Kosovo. Photographs by Glenn Ruga and Frank Ward with text by Barbara Ayotte. Has been shown in six locations across the U.S. since October 2000

Cultural Heritage Reconstruction in Kosovo
July 2000 - September 2002
Friends of Bosnia, in collaboration with the Kosovo Cultural Heritage Project from Cambridge, has received a grant from the Packard Humanities Institute in Palo Alto, California to reconstruct three important cultural monuments in Kosovo that were destroyed or badly damaged by Serb forces prior to and during the war in Kosovo. Total project budget: $350,000

Medical Aid for Kosovo
On November 27, 2000, Friends of Bosnia sent $10,000 worth of donated medical supplies to the Prosthetics Clinic at the Pristina Hospital

Emergency aid to Kosovar refugees in Macedonia
Shortly after the war began in Kosovo on March 24, 1999, Friends of Bosnia director Glenn Ruga traveled to the Kosovo/Macedonia border to deliver emergency aid and to document the plight of refugees. Since returning, Ruga has spoken at more than twelve public meetings and to numerous radio, and TV stations and newspapers about the war in Kosovo. FOB also raised $8000 for Kosovo relief and contributed $5000 to El Hilal, a Macedonian relief organization working with Kosovar refugees.

Roads to Reconciliation: Peacebuilding in the Former Yugoslavia
October-November, 1998
FOB collaborated with the Karuna Center for Peacebuilding and the UMass Office of Jewish Affairs to organized a series of lectures and events with peace activists from the former Yugoslavia. Speakers included Jakob Finci from Sarajevo, Mirha Kratina from Zenica, Bosnia, Lidija Obad from Osiek, Croatia, and Dragan Popadic from Belgrade, Serbia.

### Reconstruction/Aid Project, 1998
FOB sent a 40-ft. container of medical supplies, school supplies, and computers to Bosnia in November, 1998. The aid will help foster reconstruction and training for refugees and others who have lost their livelihood as a result of the war. Value of donated supplies: $150,000.

Washington Press Conference
On July 28, 1998 FOB organized a press conference with Congressman John Olver to present a letter to the president signed by 80 members of Congress demanding a more forceful response to aggression by Belgrade in Kosovo. We also presented a petition to the president signed by 18,000 people demanding for the arrest of Radko Mladic and Radovan Karadzic.

In Search of a Nation: Restoring a Multiethnic Bosnia, April 1998
A conference at Wellesley College to discuss the historial basis for multiethnicity in Bosnia, current political dynamics in the Balkans including Kosovo and Serbia, US foreign policy, and the International Criminal Tribunal. Attended by more than 200 people from across the U.S. and Canada with speakers from Serbia, Bosnia, and across the United States.
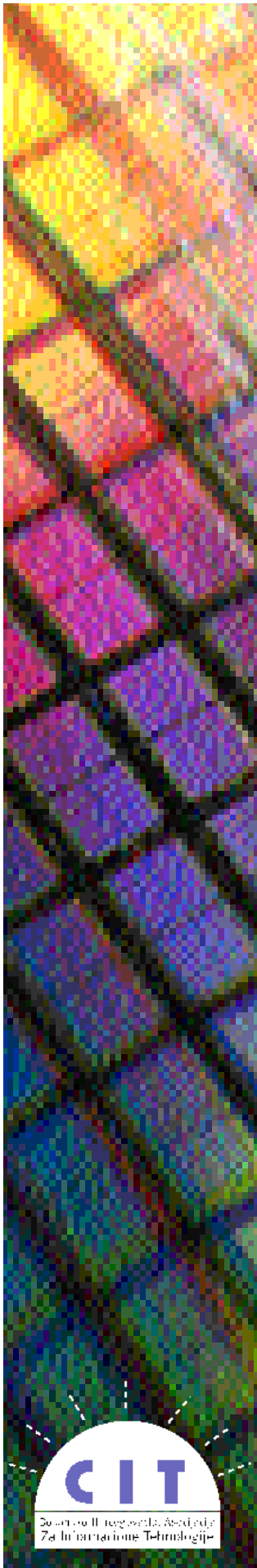
Internet Club Equipment

Immediate Needs

Description	Unite Price $	Quantity	Total $
IBM Workstations and Server			
IBM NetVista 20 C700 64 MB 10GB 15" NET	$900	18	$16,200
IBM x220 Server PIII-933 128 18GB	2,600	1	2,600
24-port 10/100Mbs Switch	1,000	1	1,000
Total Immediate Needs			**$19,800**

Long-term Needs

Description	Unite Price $	Quantity	Total $
IBM NetVista 20 C700 64 MB 10GB 15" NET	$900	22	$19,800
Total Long-term Needs			**$19,800**
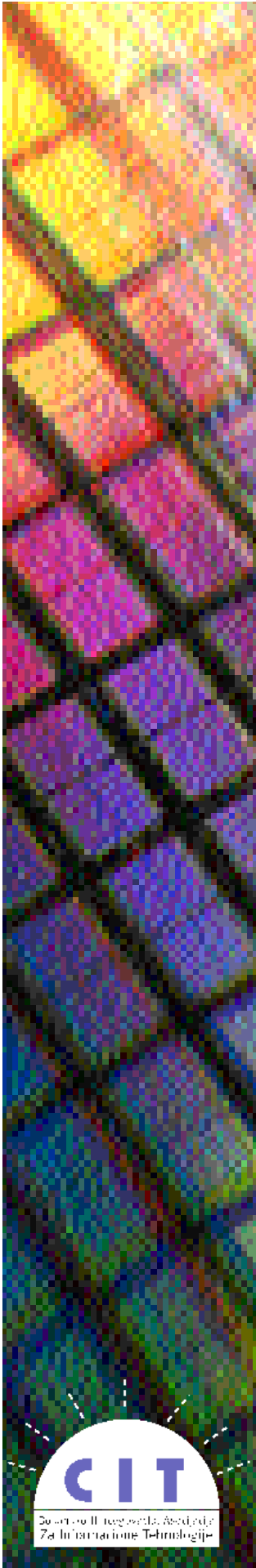
People to People Empowerment Website

In partnership with Friends of Bosnia, CIT is developing an interactive website that will empower people to make "real time" donations in Bosnia. Instead of making a donation to an organization, people choose through the P2P site exactly how their money is spent. For example, a person could visit the Tuzla orphanage and click on $20 of babies milk or a computer for the children, and the donation would be delivered within 5 days and documented on the website. The donor would also get a confirmation e-mail thanking them for their donation.

This site will be an excellent service to the effort to help Bosnia and Herzegovina recover from the war.

 This site will also be an excellent learning module for CIT students.

Description	Unit Price $	Qty	Total
IBM x330 server PIII-866 256MB 18.2GB HS RAID	$4,900	1	$4,900
Monitor 15" fro server	200	1	200
Digital Camera Toshiba M70 or similar	800	1	800
Web Design workstations	1,500	3	4,500
Cold Fusion Server 4.5.1 Professional	1,500	1	1,500
UPS 1400 VA	500	1	500
Tape Backup 20/40GB	700	1	700
CD-RW with 50 blank CD	250	1	250
HP LaserJet Printer 1220	520	1	520
16-port switch	1,000	1	1,000
Payment server software		1	0
Rack	800	1	800
TOTAL			**$15,670**
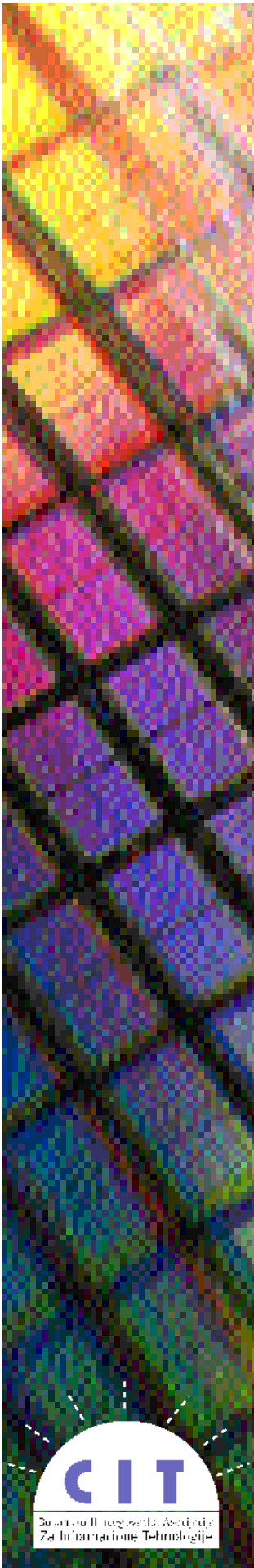
Oracle/Java/C++ Learning Lab

SQL Databases

Most of Information technology is data processing. IT specialists are involved in content creation, acquisition, organization, and distribution in B2B or B2C environments or within their own organizations.

CIT's learning lab for SQL databases will teach one of the leading and most capable software infrastructures for the internet's next generation of intelligent, collaborative applications: Oracle. With this ability, CIT graduates will be competent in the most advanced data processing software as well as fully capable of managing the simpler database systems prevalent in Bosnia and Herzegovina such as Borland Interbase.

Java

As programming language drafted for Internet computing, Java has gained more software developers than any other programming environment in recent history. This popularity is a result of multi-platform support, the capability to build applications people can use from anywhere in the world and the very large number of implemented functions and procedures that can be used in custom software projects for rapid application development. This is exactly what Bosnia needs, the lowering of the total cost of ownership for computer systems by centralizing application management

The funding requirements for establishing this learning lab is as follows:

ISBN #	Description	Unit Price $	Qty	Total $
0-07-212146-7	Oralce8i Advanced PL/SQL Programming	$50	10	$500
0-07-211-863-6	Oracle JDeveloper	45	10	450
0-07-212489-X	Oracle XML Handbook	50	10	500
0-07-212442-3	Oracle 8i for Linux Starter Kit	50	10	500
130273635	Thinking in Java	35	10	350
0-07-212160-2	Oracle8i SQLJ Programming	50	10	500
0-07-212242-0	Oracle8i Web Development	50	10	500
020170353X	Accelerated C++: Practical Programming by Example	35	10	350

Total for month: **$3,650**
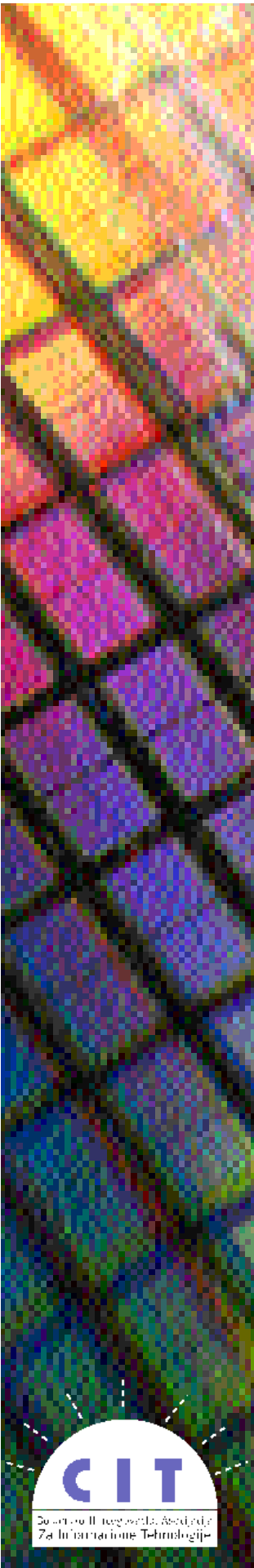
Capital Improvements

The following funding request will constitute a complete restoration and refurbishing of our 1,300 square foot building. With this funding, Tuzla University will extend the present lease arrangement and provide long term stability for CIT.

This funding request is as follows:

| Description	Unit Price $	Qty	Total
Computer Desks	$150	25	$3,750
Chairs	75	50	3,750
Floor fixing with PVC material with installation	2,650	1	2,650
Security system with installation	1,900	1	1,900
"Cortega" type of roof with installation	2,450	1	2,450
Air-conditioning system with installation	4,500	1	4,500
Lab's furniture	1,500	1	1,500
PVC doors, windows with installation	2,600	1	2,600
FSN light beams 4x18 W with installation	950	1	950
Electrical installation with cable PGP 3x1,5 for light beams	330	1	330
Wall painting inside	450	1	450
Wall painting 2nd time inside	280	1	280
Wal painting outside	420	1	420
Total			**$25,530**

Microsoft Windows 2000 Learning Lab

One of most popular operating systems today in desktop environment is Microsoft Windows 9x, NT and 2000. Windows 2000 is gaining more and more users every day through easy to use, improved stability and lower TCO in small, medium and enterprise market as desktop and server operating system.

The funding requirements for this lab are as follows:

Part #	Description	US $	Qty	Total $
Server with raid controller				
P2574A	LC2000 RAID Model: PIII/800MHz, NR-1Si, three 9.1GB HDD	$4,532	1	$4,532
D8265A	HP 128MB 133MHz DIMM	360	1	360
D8266A	HP 256MB 133MHz DIMM	976	1	976
D8267A	HP 512MB 133MHz DIMM	2,590	1	2,590
P1217A	9.1GB Ultra-3 Hot Swap LP HDD (7200 RPM)	446	1	446
D9185A	Pentium III Coppermine 800 MHz 256KB Cache CPU	1,939	1	1,939
C5686A	HP SureStore DAT 40i	1,180	1	1,180
D6028A	HP TopTools Remote Control Card	724	1	724
D6138A	HP TopTools Remote Control Card Optional AC Adapter	76	1	76
D8894A	HP 55 15" Color Monitor	204	1	204
Two Servers without raid controller				
D9401A	E800 PIII/733 Mod 1 Base Model	1,895	2	3,790
D8265A	HP 128MB 133MHz DIMM	360	2	720
D8266A	HP 256MB 133MHz DIMM	976	2	1,952
D8267A	HP 512MB 133MHz DIMM	2,590	2	5,180
P1769A	Pentium III 733MHz 256KB on-die Cache	1,961	2	3,922
P1167A	18.2GB Ultra-3 SCSI CT Hard Disk Drive (10K RPM)	859	4	3,436
D8894A	HP 55 15" Color Monitor	204	2	408
Workstations				
D8015N	HP Kayak XU800 PIII733 18G 256R GVX1CDRW	4,690	1	4690
D5065A	HP L1800 18.1" An. LCD	3,154	1	3154
Printers				
C4253A	LaserJet 4050N	1,430	1	1430
Active network components				
WS-C2912-XL-EN	CISCO 12-port 10/100 Switch (Enterprise Edition)	1,495	1	1495
Books				
	MCSE Training Kit: Microsoft® Windows® 2000 Accelerated	89	1	89
	MCSE Training Kit: Microsoft® Windows 2000 Core Requirements	199	1	199
	MCSE Training Kit: Upgrading to Microsoft® Windows® 2000	59	1	59
	MCSE Training Kit: Microsoft® Windows® 2000 Network Infrastructure Administration	59	1	59
	MCSE Training Kit: Microsoft® Windows® 2000 Server	59	1	59
	MCSE Training Kit: Microsoft® Windows® 2000 Active Directory™ Services	59	1	59
	MCSE Training Kit: Microsoft® Windows® 2000 Professional	59	1	59
	Microsoft® Certified Systems Engineer Core Requirements Training Kit	299	1	299
Total:				**$32,063**
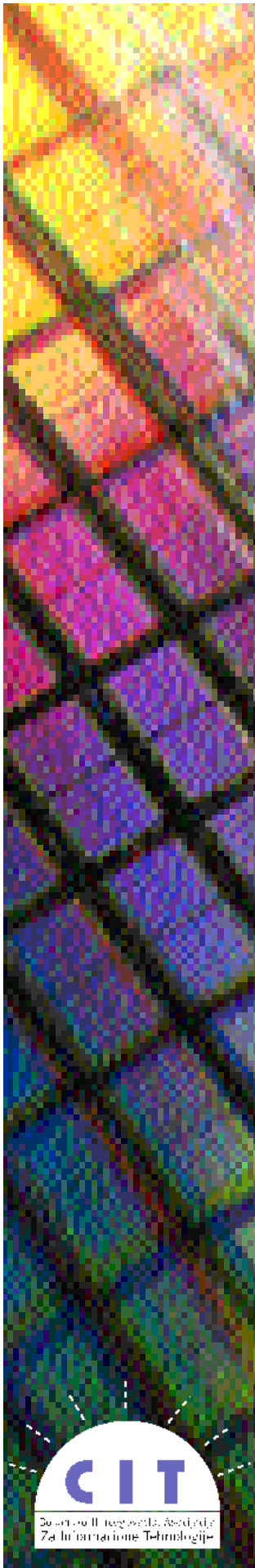
Operating Systems Learning Lab Sun Solaris/Linux

The Operating Systems Lab will provide attendees with the ability to get up to speed with one of most stable and secure operating systems today. Together with Microsoft Windows 2000, Sun Microsystems make 90% of operating infrastructure in BiH and more then 70% in rest of the world.

System engineers and administrators in CIT will get hands on experience with installing and maintaining secure and high available intranet and internet business sites in small, medium and enterprise companies. Also this lab will be used for education with fastest growing operating system, Linux. Linux has not yet entered the enterprise arena but our students will be ready to implement this open source product as CIT anticipates this system to become prevalent in BiH IT relatively soon.

The funding requirements for this lab are as follows:

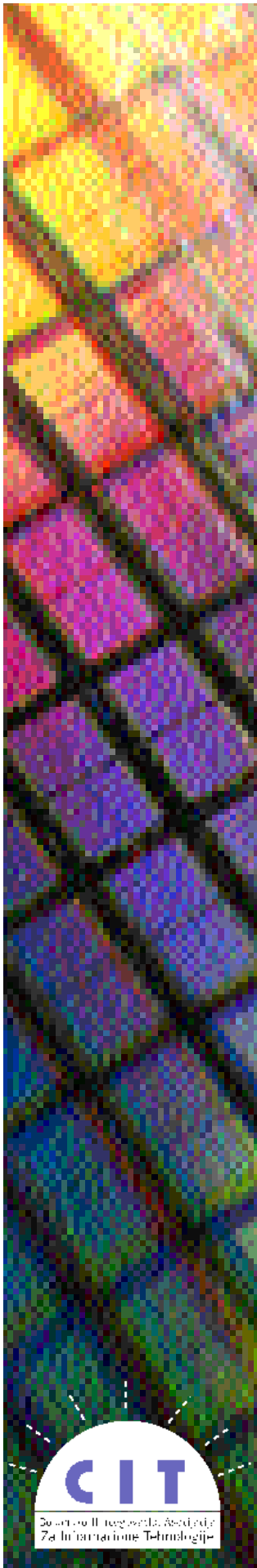| Description	Unit Price $	Qty	Total $
25 Seat Class bundle			
25 seat Sun Ray 100 appliance workgroup bundle. Includes configured E250 server and 25 Sun Ray 100 appliances. Country kits ordered separately.	$30,430	1	$30,430
Type 6 Country Kits for U.S./ Universal/ Canada with USB interface	56	25	1,400
Sun Ray Enterprise Server Software 1.1, for Workgroup servers (UE2, E250, E450). 40-bit encryption.	1,105	1	1,105
Solaris 8 Standard, Latest Release English-Only Media Kit	110	1	110
E250 Rack mounted Kit	739	1	739
Additional 360W Power Supply	850	1	850
UltraSPARC-II CPU Module, 400MHz, 2Mbyte External Cache	4,930	1	4,930
Internal 4mm 12-24 GB DDS-3 Tape Drive	1,530	1	1,530
Sun Fast Ethernet Card, PCI	850	1	850
17" Entry Color Monitor	357	1	357
Installation and configuraton of the system	6,609	0	0
Active networking components			
Catalyst 6000, 1 Supervisor Module, RPS, 48 10/100 FE Ports	22,000	0	0
Software			
Solaris Easy Access Server 3.0 Single Server RTU license 128 bit Encryption, English (media, documentation and license)	645	1	645
Forte Developer 6 University Edition (SPARC) Includes: License and Media Kit for Forte C++ 6 (formerly Visual Workshop C++), Forte C 6 (formerly Workshop Professional C), Forte for High Performance Computing 6 (formerly Performance Workshop Fortran), and Forte TeamWare 6 (formerly Workshop TeamWare)	150	1	150
Forte Developer 6 University Edition (Intel) Includes: License and Media Kit for Forte C++ 6 (formerly Visual Workshop C++), Forte C 6 (formerly Workshop Professional C), Forte for High Performance Computing 6 (formerly Performance Workshop Fortran), and Forte TeamWare 6 (formerly Workshop TeamWare)	150	1	150
Netscape Messaging Server 5.0, (128Bit) Media/Doc Kit	120	1	120
iPlanet Calendar Server, 2.1 (56Bit) Media/Doc Kit	120	1	120
Netscape Directory Server 4.1 (40Bit) Media/Doc Kit	150	1	150
iPlanet Web Server 4.1 (128Bit) Media/Doc Kit Worldwide	120	1	120
Netscape Collabra Server 3.52 (40Bit) Media/Doc Kit	120	1	120
Netscape Mission Control Desktop 4.5, (40Bit) Media/Doc Kit	120	1	120
Borland Jbuilder 4 Enterprise Solaris Version	4,500	0	0
Uninterruptible power supply - ONLINE			
Sicon Socomec UPS 10kVA swith ext. Battery pack	8,449	0	0
(American Power Conversion equivalent)			
Total			**$43,996**

Cisco Learning Lab

The Cisco Learning lab teaches students to design, build, and maintain computer networks. This learning lab prepares CIT students for the 21st Century workplace with an emphasis on hands on training. CIT will keep class sizes small to give students ample one-on-one tutoring while reviving crashed systems. It is CIT's goal to have students who are beyond "book smart" and are armed with real life experience in network management.

The funding requirements for this learning lab are as follows:

| Part #	Description	Unit Price $	Qty	Total $
CISCO Routers				
CISCO1750-2V	Cisco 1750 10/100 Modular Router w/2 Voice channels, IOS IP/VOICE + SW	$2,295	3	$6,885
WIC-1B-S/T	1-Port ISDN WAN Interface Card(dial and leased line)	500	2	1,000
CAB-SS-X21MT	X.21 Cable, DTE Male to Smart Serial, 10 Feet	100	2	200
WS-C2912-XL-EN	12-port 10/100 Switch (Enterprise Edition)	1,495	1	1,495
Telindus Modems (www.telindus.be)				
165 893	CROCUS SDSL 220V TT. Modem	949	3	2,847
142 200	X.21 Interfejs CROCUS serije	155	3	465
152 489	BRIDGE Interfejs (Nx64K) CROCUS HDSL/SDSL serije	450	2	900
152 490	ROUTER Interfejs (Nx64K) CROCUS HDSL/SDSL serije	560	2	1,120
PTT Dial-up lines				
	BRI ISDN line	350	2	700
	POTS line	250	2	500
Total				**$16,112**

ASP-ISP Student Service

As with most universities, the need is for an information system that students can use 24 hours a day. To provide students with such a system, CIT will design and maintain a system capable of handling the student population of the entire city of Tuzla. This system will give any student the use of 50 MB of data storage, an e-mail address with additional 50 MB of storage, the free use of office productivity software (Staroffice) and unlimited Internet access from CIT facilities or home. Also, the design submitted in this proposal will have the lowest possible TCO in today's market.

The funding requirements for this system are as follows:

Part #	Description	Unit Price $	Qty	Total $
CISCO Routers				
CISCO3662-AC	Dual 10/100 E Cisco 3660 6-slot Modular Router-AC with IP SW	$11,700	1	$11,700
NM-2CE1B	2-Port Channelized E1/ISDN-PRI Balanced Network Module	4,200	2	8,400
NM-30DM	30 Port Digital Modem Network Module	8,600	2	17,200
S366CHK2-12103T	Cisco 3660 Series IOS IP/FW/IDS PLUS IPSEC 3DES	5,000	1	5,000
MEM3600-8U16FS	8-to-16MB Flash Factory Upgrade for the Cisco 3600	700	1	700
MEM3660-32U96D	32-to-96MB DRAM Factory Upgrade for the Cisco 3660	3,848	1	3,848
MMTL-3600-30	Modem management technology license for 36003,000		1	3,000
SUN Equipment for E-mail, Application Providing				
	Sun Enterprise 220R Server	37,841	3	113,523
	Enterprise 220R Server Base Configuration, one power supply,			
	32x CD ROM, Solaris server license, 10/100 Ethernet	4,420	1	
	UltraSPARC-II 450MHz processor module with 4MB cache	6,800	2	
	Sun Ultra Systems Memory 256-Mbyte Memory			
	Expansion (2 x 128-Mbyte DIMMs)	2,380	4	
	Internal 18.2-Gbyte, 10000 RPM UltraSCSI disk drive, 1" high	1,190	2	
	Redundant 380W Power Supply	850	1	
	10/100 FastEthernet PCI Adapter	850	1	
	Quad FastEthernet PCI Card (QFE) Quad FastEthernet	2,253	1	
	5 meter Null Ethernet Cable	186	1	
	Dual-channel differential UltraSCSI host adapter, PCI	1,657	2	
	4-meter 68-pin to VHDC differential Ultra SCSI cable	179	2	
	Localized Power Cord Kit Continental Europe	0	2	
	Solaris 8 Std English-Only	110	1	
	Solaris PC NetLink (No charge when purchasing a new E220R)	0	1	
Disk Storage		24,377	4	97,508
	218-Gbyte (12 x 18-Gbyte 10,000 RPM disks) Sun StorEdge A1000 Rackmountable w/ 1 HWRAID Controller, 24MB std.cache, 2 Power supplies, 2 fantrays (4fans), 2 Differential UltraSCSI to host ports, RAID Manager v 6.22	20,910	1	
	VERITAS Volume Manager 3.1 on Solaris, Media Kit & Documentation	195	1	
	VERITAS Volume Manager License on Solaris, for Desktop			
	and Workgroup Server Class, RTU Only	3,272	1	
or **Network attached disk storage 335GB for 100 students**		167,580	1	167,580
	NetApp F740, NFS, 3x36GB, 1 Shelf	50,220	1	
	36 (34) GB FCAL Drive	1,944	11	
	StorageShelf FC9	4,860	2	
	NetApp Networking for Windows	13,284	1	
	SnapMirror for F740	21,600	1	
	SnapRestore for F740	5,940	1	
	Cabinet 36U 220V NEMA L6-20P,1	6,426	1	
	1000BASE-SX GB Ethernet Kit	2,155	1	
	FC Adapter for Tape Backup	2,943	1	
	FC-AL Adapter w/ Cab & Term	2,943	1	

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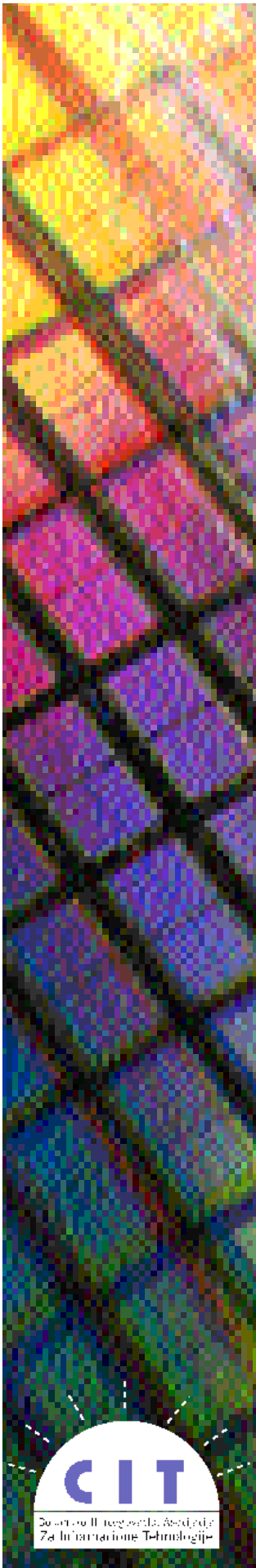
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Student Training 5 Days	3,767	1	
SecureAdmin 1.0 CD-ROM	270	1	
SW Subs SecureAdmin	22	1	
SnapManager for F740	16,200	1	
SW Subs F740 SnapManager 1yr	3,672	1	
SSP Plan:F740,Warranty+,12 Months,Phone Included,N,C,0,0, SnapMirror,SnapRestore,0,0	7,034	1	
Svc Plan:F740,Warranty+,12 Months,Phone Included,3 Shelves,Sys Svc-Next Business Day,Disk Svc-Next Business Day	0	1	

Cluster enviroment

Sun Enterprise Cluster Terminal Concentrator Kit w/ 3 Long serial cables, 5 meters	3,103	1	3,103
Sun Cluster 2.2 Software	9,919	1	9,919
Sun Cluster 2.2 license ONLY Sun Enterprise E220R	2,465	2	4,930
Sun Cluster 2.2 ORACLE HA AGENT license ONLY	2,465	2	4,930

Rack Enclosure

72-inch StorEdge Expansion Rack	8,925	1	8,925
Front door assembly for 72" expansion cabinet	808	1	808
Fan assembly for 72" expansion cabinet	1,615	1	1,615
International power cord for StorEdge expansion cabinet	0	1	0
Installation and configuration for entire system	26,089	0	0

CISCO Fast Ethernet Components

	16 Port GB module for Catalyst 6000	19,000	0	0
WS-C2924-XL-EN	24-port 10/100 Switch (Enterprise Edition)	1,995	0	0

Telindus Modems (www.telindus.be)

165 893	CROCUS SDSL 220V TT. Modem	949	2	1,898
142 200	X.21 Interfejs CROCUS serije			
	155	2	310	620

PTT Dial-up lines

PRI ISDN line JP PTT BiH	10,000	1	10,000
Leased lines install			
800	1	800	800

Uninterruptible power supply - ONLINE

Sicon Socomec UPS 10kVA swith ext. Battery pack	8,449	1	8,449
(American Power Conversion equivalent)			

Web enabling software

Tarantella 100-User Starter Pack (Base+UNIX+Windows)	33,215	0	0

Total **$ 386,638**
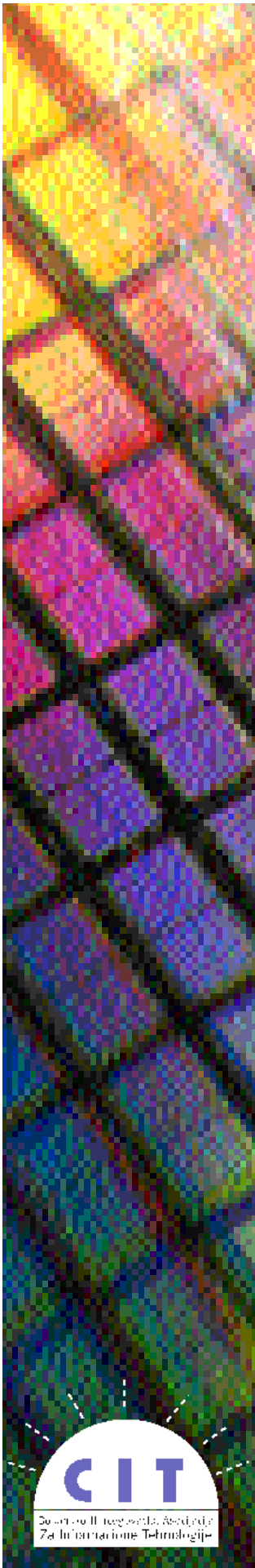
Appendix A: Friends of Bosnia Balance Sheet

May 27, 2001

Accounts	5/27/01 Balance
Assets	
Cash and Bank Accounts	
Fleet CD 3 months	0.00
Fleet CD 6 months	0.00
Fleet DDA	55,496.43
Petty Cash	50.00
Petty Cash - Chris B.	331.73
Premium Money Market - Savings	287,177.84
Total Cash and Bank Accounts	343,056.00
Total Assets	**343,056.00**
Liabilities & Equity	
Liabilities	
Credit Cards	
American Express	58.28
Total Credit Cards	58.28
Total Liabilities	58.28
Equity	342,997.72
Total Liabilities & Equity	**343,056.00**
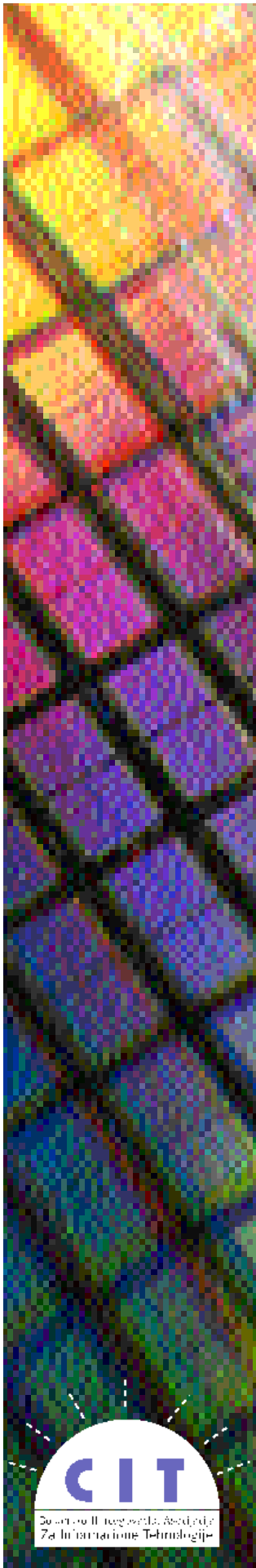
Appendix B: Letter of Support from Selim Beslagic, former Mayor of Tuzla
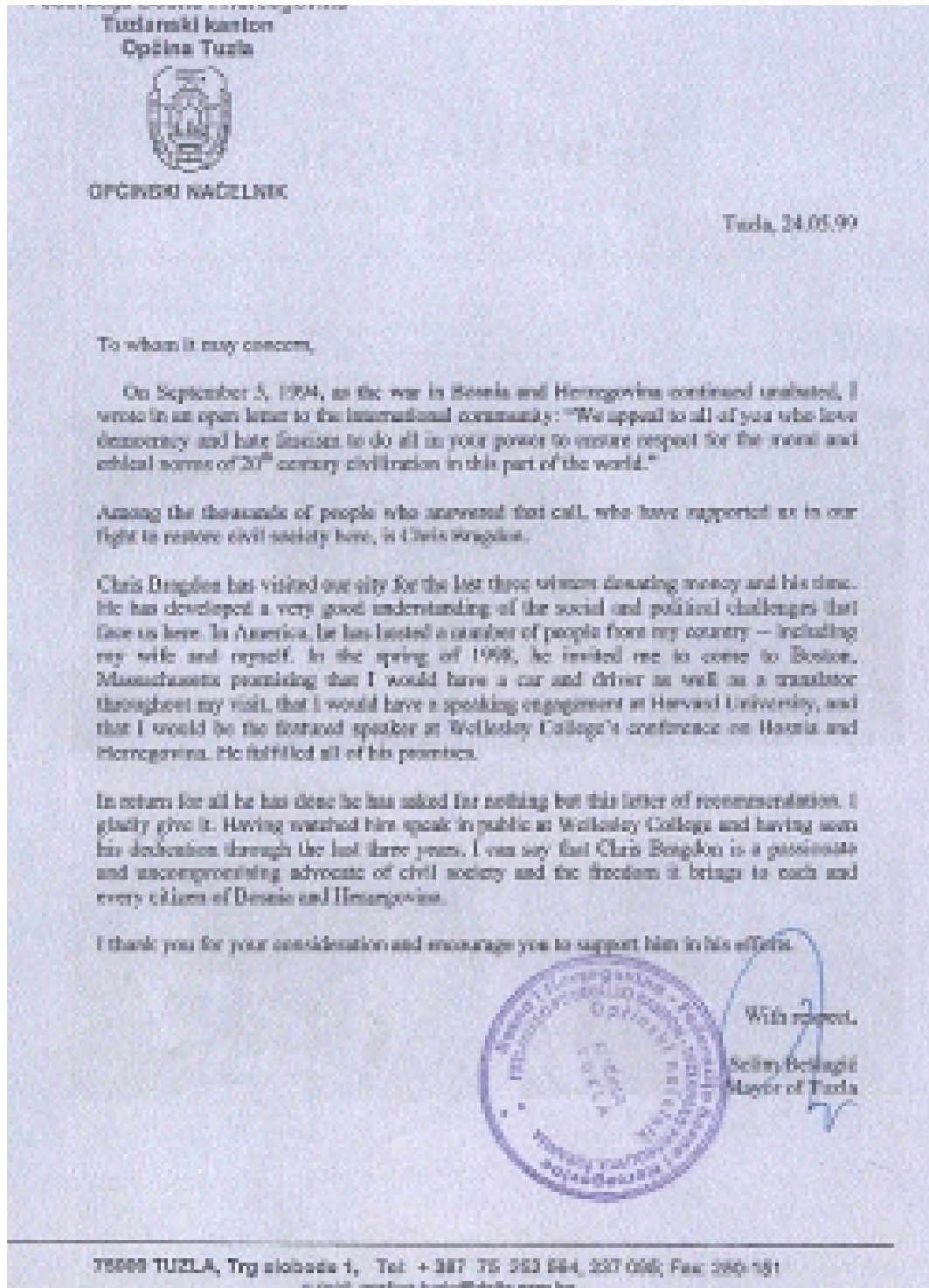
Chris Bragdon, referred to in this letter, is Friends of Bosnia's Outreach
Bosnia Program Director