ISOC PROJECT DESCRIPTION TEMPLATE

APPLICATION CHECKLIST

Please make sure the following are completed as part of your project application package:

___ Application Form is complete, including all compulsory items (marked with an asterisk *).

___ Maximum funds requested from ISOC is US$15,000.

___ 'Other Documents' and letters verifying Other Sources of Support are uploaded to the Application Form.

___ All fields in Project Description Template are complete.

___ Clarifying Sources of Support (see below) shows all project partners, the amount of support they are providing, and in what form (cash or in-kind). Other Sources of Support represents at least 25% of the total project budget.

___ Budget Breakdown Template and Project Description Template are completed in full & uploaded to the Application Form before submission.

Note well: Applicants should prepare to provide clarification of or revisions to application materials immediately after the cycle closes.

CLARIFYING OTHER SOURCES OF SUPPORT

ISOC will not fund the entire cost of the Project. At least 25% of the total budget for the Project must be contributed from other sources. This contribution can include cash contributions or in-kind donations. In general, in-kind donations demonstrate a strong collaboration with partner organizations and are preferred over cash contributions. Other partners/funding sources are expected to participate as a means of establishing sustainability and forging partnerships.

In-kind sources of funding are accepted, provided they are from other sources, rather than from the applicants themselves.

Please provide any CASH contributions that you, as the applicant, are contributing toward the Project.

AMOUNT OF CASH (IN US$)	CONTACT PERSON & DESIGNATION	CONTACT ADDRESS	E-MAIL, TELEPHONE & FAX

Please provide the contact details for all funding partners/sources of support below. The sources identified below may be contacted to verify their support during the selection process. Please include all Foundation, Government, Corporate, and In-Kind* sources.

	TYPE OF SUPPORT (CASH OR IN-KIND)	DESCRIPTION	AMOUNT (IN US$)	CONTACT PERSON & DESIGNATION	CONTACT ADDRESS	E-MAIL, TELEPHONE & FAX
Source Name-1	In-Kind	Computers Systems for the development: 3 systems ~ $1810 Access to labs with high speed Internet connection, and all associated utilities provided for 6 months @ $170/Month Amount ~ 1012$ Meeting rooms with the availability of multimedia projector for 6 months @ $100/Month Amount ~ 600$ Attendant / support person for project team for 7 months @73$/Month Amount ~ 506$	$3,925.00	Dr M. Mansoor Ahmed, Executive Vice President, M. A. Jinnah University, Islamabad, Pakistan	M. A. Jinnah University, 74-E Jinnah Avenue, Blue Area, Islamabad, Pakistan	mansoor@jinnah.edu.pk Tel: +92-51-111-878787 Fax: +92-51-2822743
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*In-Kind contributions are defined as support made in the form of ***goods*** and services, rather than ***cash***. Examples may include access to technology equipment or other infrastructure that you do not have or access to a place to conduct meetings and trainings. In-kind contributions are accepted only from project partners, not from the Applicant.

If you have additional sources of support, please include the required information for each on a separate sheet.

PROJECT DESCRIPTION

Please refer to the Criteria for a list of application best practices.

Project background and justification State concisely what networking or educational need is being addressed by the project
Pakistan is home to a significant proportion of the population that survive beneath a poverty line evaluated as the cost of basic food and essential non-food items. As a consequence of rampant poverty and government's exceptionally low spending on education (which amounts to less than 3% of the GDP), the net primary school enrolment remains barely over 50 percent. With education sector in such a condition, the question of imparting knowledge and training to underprivileged children to survive in this digital age is simply hard to answer. This project aspires to compensate for the low spending on education and overall lack of IT infrastructure for educational purposes by creating a “virtual classroom” at a street-corner, where underprivileged children can explore and experience the rapidly expanding dimensions of the Internet age, in spite of their poor financial standing impeding their progress. The objective will be achieved by embedding a Secure Computer System on the outer side of the boundary wall of a charity school and giving restricted Internet access to the children of all ages. The children will be able to access on-line virtual classrooms, on-line children competitions, on-line educational games and many other different activities available for children on the Internet. (This Internet access will be restricted to only those on-line activities that are related to children. This access will be restricted with the help of a light weight, open source operating system like Ubuntu or Fedora. We will install only the required utilities and will allow only the desired activities to be performed by the children). The basic purpose of embedding the system in the wall is to provide round the clock access to the system for the children. The system will be free to access and will not be supervised by an attendant. The children will be allowed to use the computer system

at any time. This will develop a sense of availability of a computer system, in the children belonging to the families who simply cannot afford a computer. The computer system embedded in the wall will be referred to as “EduScope”

Another important purpose of this project is to enhance and nurture the self learning abilities in children. By nature, children are blessed with a much stronger learning ability. With the help of this project we will also observe the activities of children that how can Internet help the children to enhance their self learning abilities.

When there will be no restrictions on when to use the computer or how to use the EduScope in the wall, the children will be able to explore it with an open and free mind and this factor can play an important role in enhancing the self learning abilities of these children.

Classify proposed work

State if the proposal is to support ongoing work, or if it would be a new effort, when the work must begin

The proposal for this project was submitted to ISOC in the month of March this year (2009), but the proposal was not accepted and we were encouraged to apply again in the next round, with the following observations:

- short project duration would have minimal impact
- it wasn't clear on the rationale for having the terminals in a wall rather than in a computer lab

Both of the above mentioned issues are addressed in this proposal in detail.

New Effort: This project is a completely new effort to take place in Pakistan. The project EduScope is inspired by the project called “Hole In the Wall” in India (brief description of this project in India is given below).

Starting Time: The work will start as soon as the approval of funding from ISOC is given. We plan to initiate the project in January 2010.

Resource justification

Why are you (the applicant) the most capable chapter or individual to address this need?

M. A. Jinnah University, Islamabad, being run under a non-profit educational trust, is keen to pursue and facilitate any initiative for educational upbringing of unprivileged children, using state of the art technological aids. University management feels its social responsibility and moral obligation to help any effort of this kind, and hence wants to become a supporting partner in this project.

Prof Dr Amir Qayyum, a professor at M. A. Jinnah University, Islamabad with a Doctorate degree from University of Paris-Sud, France, is motivated to pursue social uplift projects for the nation's benefit, similar to what he is pursuing in research and development projects in his area of research, computer networking. Complementing his area of expertise with an educational welfare project is considered by him as a perfect match to contribute in the society. He considers himself capable to execute the project by using his technical expertise in ICT technologies for the benefit of the society.

Ms Ambreen Sheikh, a key member in the project, is a capable individual for this project as she has been involved in different social and voluntary activities of this kind in the past, and is a person who is willing to give to the society. She looks for results that eventually disseminate within the society and make it a better place to live for all. She has a Masters degree in Computer Engineering and is an active member of the research community. She is motivated to use her technological abilities for the advantage of the society.

Key Individuals

Please list the key individuals who will be engaged in the project, along with their qualifications

- Dr Amir Qayyum
  - Professor at M. A. Jinnah University, Islamabad
  - Ph.D. Mobile Wireless Networks, University of Paris-Sud, France

- M.S. Computer Engineering, E.S.I.M., France

- Ambreen Sheikh
  - Senior Software Engineer in a research project called “End to End Mobility Management Framework for multihomed mobile devices” funded by ICT R&D Fund (www.ictrdf.org.pk), Ministry of IT, Pakistan
  - M.Sc Computer Engineering, University of Engineering and Technology, Taxila, Pakistan

Objectives

State what the project aims to achieve and what specific outcomes are expected from the project

Interactive Learning Environment for Children : One of the key objectives of this project is to provide an interactive learning environment for children by allowing them to use their imagination without having to confine it to the conventional (and sometimes tedious) academic curriculum. Traditionally, with computers in a lab of a school, children go and sit in a lab and use the computer in a restricted environment for some specified period of time. In contrast, our proposed learning stations, called EduScope, seek to create a new paradigm in the learning process by providing unrestricted computer access to groups of children at a street-corner. We believe that such an open setting will use child’s natural curiosity and ability to stimulate learning.

Self Learning Ability in Children Through Internet: The project also focuses on enhancing the self learning ability in children through the Internet. When children will be encouraged to explore the the EduScope at their own time and free will, this behaviour will impart in them the problem solving skills and an ability to think critically. Hence, while a child learns how to use Internet and educational software, he/she also develops an ability to analyse and evaluate information. This ability of analysing and evaluating the information will help these children throughout their life.

Explore Things with an Open Mind: In a traditional society, it is a culture that adults try to control the child in every possible way. This is one of the biggest hindrance in a child's learning ability where adults try to scare the children about the severe consequences of any bad result of their effort. We believe that with a secure computer system in a wall, without adult supervision, the child will be able to enjoy it more and will be able to explore it with an open mind. It will be the task of EduScope project team to secure the system, embedded in the wall, against any harm. A child will not be held responsible if something goes wrong. We truly believe this will create a sense of freedom in the children and will give them confidence.

Availability of a Computer: The children will have access to a computer 24/7, and this round the clock access will give children a sense of having their own computer. This in turn will encourage and motivate the children to learn when they feel like, at their own pace.

Integration with the School System : A big advantage of the EduScope learning station is that it fits nicely with traditional schooling and seeks to reinforce and complement the structured learning through peer discussions, increased curiosity and better retention.

Collaborative Learning - The EduScope project will also evaluate the fact that how children will develop a habit of learning while standing with a group of children, instead of following the usual model of sitting in the class room and giving exams. Gathering of children around an EduScope and giving comments and suggestions to the one who is controlling the station will allow children to explore, share and learn even more as a result of this exchange of knowledge. This collaborative learning effect can be fully utilised and analysed by EduScope learning stations.

Compensate for Computer & Internet Illiteracy : The project aims to compensate for computer illiteracy among children in the underprivileged areas of Pakistan. The project is expected to increase literacy, knowledge and general awareness in

underprivileged children, who do not have access to computers, schools and other materials of learning.

Optimum Utilisation of EduScope: In a traditional computer lab setting, the instruction based method is followed and the focus is on dissemination of information through a teacher. Secondly, in a lab, access to computer is restricted by average usage time available per user. As opposed to this, EduScope learning stations rely more on exploratory learning where children can freely experiment on the learning station. Groups of children accessing the Learning Station give the advantage of collaborative learning with multiple children using the Learning Stations at the same time. This leads to much greater impact on children than a traditional, lab based setting.

Friendship with the Internet : The project also aims to create a long lasting friendship between the under privileged children of Pakistan and the Internet, with the hope that this friendship will continue and will bring many benefits in the life of these children. This is achieved by introducing the children at the bottom of the pyramid to the marvellous world of Internet and instil in them the desire to use the Internet.

Method

State how the general objectives will be achieved

We plan to initiate with deployment of three computers that will be referred to as “EduScope”' in the boundary wall of a charity school located in a less privileged area of Rawalpindi city, called Ghareebabad.

Robust Computer Systems : The “EduScope” will be very robust computer systems as they will be used publicly. They will be free of proprietary software, and will be built around robust platforms to keep them secure and safe. They will be put together in such a way that their cost and power requirements are minimum.

Light Weight, Open Source Operating System: Open source, customised and light weight version of an operating system will be used as the main operating system on all EduScope machines. There are many light weight versions of Fedora and Ubuntu distribution of Linux operating system, which are easily available. These light weight operating systems will be used in the EduScopes and only the required software and utilities that are enough to support the theme and educational requirements of EduScope will be installed. Intuitive, easy-to-use, custom, Internet based applications and educational games will be used to aid the children in interactive learning.

High Speed Internet Connection: All the terminals will have high-speed Internet access, using wired or wireless broadband. DSL broadband Internet connections are easily available in the city of the Rawalpindi, and can be utilised to provide the high speed Internet connection. In extension to this, WiMax wireless broadband connection are also available in the locality, and can also be utilised according to the need.

Learning Stations : As the Learning Stations will be deployed on a wall in street, they will be especially designed with tough outdoor conditions in mind. A customised steel case will be made and the computer will be placed inside the steel case. The children will be able to see the monitor screen inside the case and will be able to access it through a specially designed keyboard and a mouse pad. The Learning Stations will also be designed to be tamper proof by using specially designed frames and materials to protect the system and peripherals from damage.

Unsupervised Use: To be able to function in unsupervised setting, the EduScope are made sturdy with effective fault tolerance systems for software and protective covers for hardware, so as to reduce downtime.

Electric Power Management System: The electric power management system will be provided by the charity school. As power

failures are common in Pakistan, so UPS will be provided by the EduScope Project with every computer system.

Basic Level Training: A very basic level training will be provided by the project to facilitate the school children and the children of the locality to learn how to use the EduScope.

Learning Portal: If time, resources and budget allowed us at the end of the project, an online learning portal will also be made to facilitate the access to educational content such as videos and programs for the children.

Beneficiaries

List who is expected to benefit from the project

- The children at the very bottom of the pyramid, from the poor and deserving segment, who cannot afford to send their children to school, let alone buy them a computer.
- The whole society will benefit from this project, if implemented on a large scale (over a span of more than five years).

Sustainability

Describe how the project will be sustained (if at all) after the project funding

The importance of maintenance and support for the overall effectiveness of the entire project cannot be ignored. It is assured that proper support and maintenance is provided even after the project has finished, so that the children continue to benefit from the learning stations.

As mentioned above, the EduScope will be embedded in the outer boundary wall of a charity school. We have communicated with the school and their response was very encouraging. The issue of sustainability of the project was also discussed with them. The concept of the project is such that the project needs minimal support for sustainability. As the learning systems will be securely

embedded in the wall, there are less chances of damage to the machines. Internet connectivity will also be available all the time. The charity school is willing to take the responsibility of maintaining and managing the EduScope learning system, whenever there is a requirement, like for example if there is a problem with any computer system or with the Internet connection.

Trusts, Charities & Media

- The funding from ISOC will help us establish a substantial platform to seek further funding from other organisations. Once the project has been successfully completed with the funding from Internet Society, we will seek funds for the sustainability of the project from various local charities and trusts. There are different trust and organisations in the country that are working to promote health and education in remote and underdeveloped areas, and we hope to secure some continuous funding from then for the sustainability of the EduScope project, which is already very minimal.
- Print and electronic media may also be used to further propagate our cause.

Targets & Milestones

Please include a timeline of key activities/events

If January 2010 is considered to be the starting date for the project, then following milestones will be achieved:

January 2010 → Project commencement

January 2010 to Feb 2010 → Design and deployment of the secured computer systems

March 2010→ Design and deployment of a light weight open source operating system

April 2010 → Installation of EduScope

May 2010 → School staff and children training for the use of EduScope

May 2010 → Supervised monitoring of the users

June 2010 → Unsupervised monitoring, using liaison with school administrative staff

July 2010 → Compilation of Results

August 2010 → Submission of project completion report to ISOC

Outputs

State what the project will deliver and how the results/information will be disseminated

Following are the outputs that we expect to deliver from this project.

- Three complete computer systems, installed as EduScope, enclosed in separate steel cases.
- Each system will be connected to high speed broadband Internet connection.
- Each system will be embedded in one boundary wall.
- Every system will be supported by a UPS, for electric power failure.
- The charity school will take care of EduScopes, after the project has finished.
- An easy to use, customised, light weight, easily available open source operating system will be running on EduScopes.

- Complete project report with statistics will also be provided to ISOC.

Following methods may be used to disseminate the statistical data/results of the project:

- On-line Publishing
- Newspapers
- Mailing lists and newsgroups

Evaluation & Impact

State what evaluation processes are proposed; how will you verify that your work will create change or benefit others?

A practical KPI framework will be adapted to benchmark our performance and achievement at every step of the project. The efficiency and effectiveness of the project will be measured using Key Performance Indicators such as:

- Benefit-cost ratio
- Project activity
  - Individual volunteer participation
  - Cumulative volunteer participation
- User activity
- Logs
- Number of sessions
- Statistical surveys

The above mentioned performance indicators will be expressed in the form of numbers, percentages, ratings and ratios to assess

the overall effectiveness and benefit of our project to the targeted community.

Elaboration of aforementioned KPIs

- The unit manufacturing and deployment process will be optimised to ensure that maximum possible benefits are attained from least possible investments.
- Maximum efforts will be made to disperse the workload over the maximum number of volunteers to arouse a spirit of community, reduce individual work-pressure and accelerate our progress. Regular meetings between project members and volunteers will be held where discussions regarding current progress and future agendas will take place, hence establishing a perfect synergy between all the working bodies. This will also help in performance monitoring.
- The system usage will be divided into thirty-minute timed sessions which will help us estimate the number of children benefiting from the project. After the expiry of each session, the activity must be resumed which will be logged. Logs will give us an insight into the computer usage habits of children and help us develop more effective software applications that are more suited to their general aptitude.
- Surveys will be conducted and general public opinion will be taken into account to appraise the level of positive impact on the society.
- The project progress will be monitored by regular liaison between project members and the school administration.

Additional information

Please state any other relevant information

Pakistan is a country of varied culture and people. One can find people on extreme ends of social setup. There are people who are extremely rich and enjoy all the facilities of a lavish life and at the same time millions of people are living below the poverty line. When it comes to kids, there are children studying in high society schools with heavy monthly school fee and on the other end

there are children who struggle to even buy books or stationary. There are children who have their own personal laptops, mobile phone and play stations and the children on the other end have never touched a keypad in their whole life.

The point of giving these examples is to portray the imbalance that is present in the society, imbalance that is evident from the life styles of extremely privileged children and children living below the poverty line. The project EduScope aims to reduce this imbalance by giving children of the poor areas a free and 24/7 access to a high-tech educational computer system in order to introduce them to a new way of learning.

The children that this projects aims to focus are the one who are intelligent, bright and motivated but due to the lack of facilities they are not able to excel as much as they want to. The project will focus on the children who know what a computer is and have seen people using a computer but does not have access to a computer. The computer systems that we plan to implement in the wall, called EduScope, will be there to give the children a feeling of owning a computer, as the computer will be available to them 24/7. If we place a computer in a lab or under some supervision, the children will not have access to it all the time and one of the objectives of this project that how Internet enhance the self learning ability of children will not be achieved.

This project is inspired by a similar project called “Hole in the Wall” running successfully and on a huge scale in India. Dr Sugata Mitra launched something he calls "the hole in the wall experiment." He took a PC connected to a high-speed data connection and embedded it in a concrete wall in New Delhi. Dr. Mitra simply left the computer on, connected to the Internet, and allowed any passer by to play with it. He monitored activity on the PC using a remote computer and a video camera mounted in a nearby tree. What he discovered was that the most avid users of the machine were ghetto kids, aged 6 to 12, most of whom have only the most rudimentary education and little knowledge of English. Yet within days, the kids had taught themselves to draw on the computer and to browse the Net. Dr Mitra has since installed a computer in a rural neighbourhood with similar results. He's convinced that 500 million children could achieve basic computer literacy over the next five years, if the government put 100,000 Net-connected PCs in schools and train the teachers with some basic teaching techniques for guiding children in using them.

We believe that this project, or the idea called EduScope, if started in the right direction can bring a number of positive changes in the Pakistani society, by training the young children who will be the forerunners of the society in the future. If the outcome and the results of this project are according to our exceptions and if they meet the criteria to move on to the next level, we plan to implement this project on a much larger scale.