Spreading the ICT gospel with Cisco Networking Academy Program

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Educators and policymakers agree that student learning occurs best when high-quality curriculum, instruction, and assessment are standards-based, aligned and reinforcing each other. The Cisco Networking Academy Program is NOT just a virtual class or an online course.

The Academy program provides students with the Internet technology skills essential in a global economy
- Prepares students for the demands of the workplace
- Leads to continued education and learning
- Preparation for industry standard certifications

The Academy program creates opportunities
The program contributes to countries’ development through IT education and skills development
Creates short-term and long-term impact in communities, one student at a time
Develops a global economy through IT education
Empowers underserved populations with high quality IT education, promoting social and economic opportunities
Provides local business with skilled workforce (productivity and community sustainability)
Transcends geographic barriers to provide IT skill transfer worldwide
Cisco’s Solution:
The Cisco Networking Academy Program

Public Private Partnership between Cisco, governments, educational institutions and NGOs created to teach students how to design, build and maintain computer networks thereby equipping them with the skills to be economically active in an area of employment vital to the new Internet economy.
A Cisco initiative helped schools design practical, cost-effective networks, but they lacked the financial and human resources to manage networks.

**Challenge:** Schools lacked financial and human resources to manage networks

**Solution:** Curriculum to train teachers, staff, and students to wire and maintain networks in their schools

**Academy program launched**
- August 1997 in the United States with 64 Academies in 7 states
- Globally in 1998 – Argentina, Australia, Canada, and UK/Ireland

The Academy program launched in October 1997 with 64 Academies in the United States.

Students completed the Academy curriculum with practical skills and real experience.

The program rapidly expanded to become an IT career development program.

Academies quickly spread to schools, colleges and universities, and other not-for-profit educational institutions around the world.
Why is the Program Important?

Creating **short-term and long-term impact** in communities, one student at a time

Cisco is **giving back to the community** – not just because it is smart for the business, but because it’s the right thing to do.
Cisco Systems® creates social and economic value

The Networking Academy program demonstrates that information technology is changing education

Global partners combine social mission with business objectives
Slide objective:
Quality is an important component of the Academy program
Cisco ensures quality in the program

The curriculum, training, certification, and on-going support ensure consistent quality among Academy programs around the world.

Instructors receive professional development on an ongoing basis
Cisco Academy Training Centers (CATCs)
  Train the trainer (train instructors)
  Contract with Cisco
  Receive training and support from Cisco

Regional Academies
  Train instructors
  Contract with Cisco
  Receive training and support from CATCs
  Market to and recruit Local Academies

Local Academies
  Teach students
  Contract with Regional Academies
  Receive training and support from Regional Academies
## Curriculum and Certification Mapping

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CCNP 1-4</td>
<td>CCNP</td>
</tr>
<tr>
<td>IP Telephony</td>
<td>“Cisco IP Telephony Specialist”</td>
</tr>
<tr>
<td>Network Security</td>
<td>Cisco Firewall Specialist</td>
</tr>
<tr>
<td>Fundamentals of Wireless LANs</td>
<td>Cisco Wireless LAN Support Specialist</td>
</tr>
<tr>
<td>CCNA 1-4</td>
<td>CCNA</td>
</tr>
<tr>
<td>HP IT Essentials II</td>
<td>CompTIA Server+</td>
</tr>
<tr>
<td></td>
<td>(when combined ITE 1 curriculum)</td>
</tr>
<tr>
<td>HP IT Essentials I</td>
<td>CompTIA A+</td>
</tr>
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</table>
Potential Career Paths

Network Design and Administration
- Network Administrator
- Network Engineer
- System Administrator
- Network Analyst
- Internet Network Specialist

Telecommunications Industry
- Cabling Installation Technician
- Telecommunications Technician
- Cabling Installation Coordinator

Technical Support Professionals
- PC Support Specialist
- Help Desk Technician
- Network Technician
- Hardware Installation Coordinator
- Software Applications Support

Foundation for Most Careers in the Information Economy

Programming and Software Engineering
- Visual Programmer
- Programmer/Analyst
- Software Applications Analyst
- Quality Assurance Analyst
- Technical Writer
Cisco Networking Academy Program: Impact Since 1997

COUNTRIES WORLDWIDE
155 +

INSTRUCTORS WORLDWIDE
32,000 +

STUDENTS WORLDWIDE
1.9 Million +

TOTAL EXAMS TAKEN
48 Million +

ACADEMIES WORLDWIDE
11,000 +

LANGUAGES
9

Source: Academy Connections  February 2006
The US is the single largest NetAcad Country
The US is the second largest Region behind Western Europe
Other countries throughout the world that have a mature NetAcad program are also experiencing a decline in Participating Students and Academies
Africa is the fastest growing Region – 45% YoY growth
However ...
Plus ... Leakage and Wastage

Unemployed
### Table 1

**Total Networking Skills in South Africa, 2005-2009, FTEs and Skilled People Estimates**

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>90,453</td>
<td>97,306</td>
<td>103,934</td>
<td>110,054</td>
<td>110,072</td>
<td>6.9%</td>
</tr>
<tr>
<td>Supply</td>
<td>72,841</td>
<td>77,279</td>
<td>81,417</td>
<td>85,280</td>
<td>89,586</td>
<td>5.3%</td>
</tr>
<tr>
<td>FTE Gap</td>
<td>17,613</td>
<td>20,107</td>
<td>22,516</td>
<td>24,774</td>
<td>20,486</td>
<td>12.8%</td>
</tr>
<tr>
<td>% FTE Gap of Demand</td>
<td>19.5%</td>
<td>26.6%</td>
<td>21.7%</td>
<td>22.7%</td>
<td>24.1%</td>
<td></td>
</tr>
<tr>
<td>Skilled People Gap Estimation</td>
<td>70,500</td>
<td>80,400</td>
<td>90,100</td>
<td>100,300</td>
<td>113,500</td>
<td>12.7%</td>
</tr>
</tbody>
</table>

Note: *The skilled people gap is estimated on the assumption that, on average, people with networking skills spend 25% of their time using these skills.*

Source: IDC, 2006
Slide objective: How does the Academy program happen? How is it possible? through partnerships

The Academy program is delivered through educational institutions around the world
   Universities, technical schools, community colleges, high schools, community based organizations and others

Content is developed and maintained through IT industry leaders
   Cisco Systems, Hewlett-Packard, Panduit

Fluke: Provides state-of-the-art test equipment for Academy labs at discounted rates.
CompTIA: Provides certification and job placement opportunities for Academy students.

Cisco has partnered with education, business, government, and community organizations around the world to ensure that Academy students have maximum opportunities for success inside and outside of the classroom.

Successful partnering is a key component of the e-learning model, where content providers, educators, suppliers, and students are all important members of an educational ecosystem.

Cisco believes that partnering is a key success factor in the Internet Economy and has made partnering one of its top priorities.
- To extend its strength in the education field, WWE has been engaged in building a strong ecosystem since its inception.
Examples:
   Fluke: Provides state-of-the-art test equipment for Academy labs at discounted rates.
   CompTIA: Provides certification and job placement opportunities for Academy students.
Many Pathways and Exit Points

University → Security
College → Advanced Routing
High School → CCNA

1. Basics
2. Routing
3. Switching
4. WAN
Wireless

1. Remote Access
2. Advanced Routing
3. Multilayer Switching
4. Trouble Shooting

Career
Enterprise Networking
SMB Networking

1120 Hours of Teaching

Fundamentals Courses
ITE 1
ITE 2
VDC PDU

Network Installer
Basic IT Support
System Admin
E-learning, the combination of the Internet and education, eliminates barriers of time, distance and socioeconomic status. The Academy is crossing Digital Divides around the world by establishing Academies in disadvantaged regions and recruiting target populations. Cisco is not alone and our partners make key initiatives possible:

The LDC initiative partners with international development organizations and has established 90 Academies in 32 of the world's poorest countries.

The Gender initiative supports the recruitment and retention of women at all Academies. An Academy in the country of Jordan is helping women gain economic independence.

Academies have been established in economically disadvantaged regions with attention to recruitment and retention of minority groups.

Curriculum supports learning for persons with disabilities.
Africa Success Stories and Current Projects
Networking Academy Program in Africa
June 2006

250+ Academies
14,600 Participating Students in Sub-Saharan Africa
40% Yr/Yr Growth
Kenya

14 Academies:

12 Local Academies
2 Regional Academies

Students:
July 2006 – 1,696 Participating

Curriculum:
IT Essentials, CCNA, Wireless, Security
East Africa

60 Academies

Students:
July 2006 – 14,394 Participating,
28% Female Enrollment
53% Growth/FY05

Curriculum:
IT Essentials, CCNA, Wireless, Security, CCNP
### Participating Countries in Africa

#### West & Central Africa
- Benin
- Burkina Faso
- Cameroon
- Cape Verde
- Central African Republic
- Chad
- Republic of Congo
- Côte D'Ivoire
- DRC
- Gambia
- Ghana
- Guinea
- Guinea-Bissau
- Liberia
- Madagascar
- Mali
- Mauritania
- Niger
- Nigeria
- Sao Tome and Principe
- Senegal
- Sierra Leone
- Togo

#### East Africa
- Eritrea
- Ethiopia
- Kenya
- Rwanda
- Seychelles
- Uganda
- Burundi
- Djibouti
- Tanzania

#### Southern Africa
- Angola
- Botswana
- Lesotho
- Malawi
- Mauritius
- Mozambique
- Namibia
- South Africa
- Swaziland
- Zambia
- Zimbabwe
Uganda, Makerere University

- **Growth**
  - High Student Enrollment
  - (2,000+ continuing students)
  - Advanced Curriculum (CCNP)
  - Diversified Curriculum (Wireless, ITE)

- **Private Sector Linkage**
  - Workforce Development Program
  - Private Sector Partners

- **Quality**
  - Softskills & Training for Instructors
  - Instructor Retention & Advancement Opportunities
  - Communication with other Academies

- **Sustainability**
  - Support of Administration & Gov’t
  - Sustainability Plan
  - Stakeholders/Partnerships

<table>
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<tr>
<th>LDC Initiative Awards 2003-2005:</th>
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<tbody>
<tr>
<td>Highest Country Female Enrollment</td>
</tr>
<tr>
<td>(Uganda)</td>
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<tr>
<td>Highest Country Enrollment</td>
</tr>
<tr>
<td>(Uganda)</td>
</tr>
<tr>
<td>Highest Enrollment, Local Academy</td>
</tr>
<tr>
<td>(Makerere University, ICS)</td>
</tr>
<tr>
<td>Job Placement Award (Makerere</td>
</tr>
<tr>
<td>University, ICS)</td>
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</tbody>
</table>
Ethiopia 100 Academies

Objectives

- To provide a comprehensive ICT Education and Capacity Building program to the Ethiopian Government in the next 6-18 months
- To transform 600 schools across the country to Community Centres delivering ICT training, i.e. ITE, CCNA, i-Exec and Community Dev programs (Net Corps) in the next 6-24 months
- To deliver digitized E-Learning curricula developed by Education Media Agency in Ethiopia in the next 6-12 months
- To promote ICT sector development (SW & Content Dev) by way demand creation from Gov, Schools, Telco and SME in the next 12-24 months
Addis Ababa Youth Association NetAcad Project
Cisco.com

**Story**
- Create the ICT future work force for Ethiopia
- Train the instructors in ITE and CCNA
- Instructors will open ITE classes for youth in the sub-cities
- Train the AAYA youth to install, maintain and troubleshoot PCs in schools
- Instructors will manage the Internet Cafes in a way that will make the internet community centers sustainable

**Strategic Partnership**
- AAYA – Classrooms, project management, youth
- Cisco Systems – Labs, part funding, curricula, knowledge transfer
- CTG – Computers for the classrooms
- The Neta Project – Instructors, knowledge transfer
- The DOT initiative – OTI, funding, leadership & biz skills

**Back ground**
Young people in developing countries make up the fastest growing segment of the world population. More than half of the five billion people who live in the developing world are under the age of 25. Children and youth represent nearly 50% of the population in developing countries. 85% of youth between 15-24 live in these countries. 1.4 billion children will be born into the world by 2010, 92 percent in developing countries. The number of new births will rise to 2.7 billion by 2025.

Young people tend to be the most vulnerable part of society. Their voices are often the least considered when the global community discusses strategies and implements projects designed to improve living standards. Some 238 million young people survive on less than $1 a day, and account for 25% of the extremely poor in the world. Some 133 million 15 to 24 year-olds are illiterate. Another 130 million children are presently not in school. One third to one half of 15-24 year-olds are unemployed in many developing countries. Globally young people represent 41% of all unemployment.

About half of new HIV/AIDS infections are in youth under 25. Almost 12 million youth live with HIV/AIDS. In the hardest hit countries, some 75% of 15 years-old are projected to die of AIDS in the future.

Ethiopia is one of the least developed countries of the world. The GNP is round USD 102 and health coverage is only 51%. Adult literacy rate is around 23% and primary school enrolment is less than 50%. The age distribution shows that 44% of the population are below 14 years while 42% are in the age group 15 and 49. This indicates that the young generation represents the largest proportion among the total population of the country.

Currently, this age group is further compounded by the emergence of HIV/AIDS and natural & man-made calamities. About 90% of the AIDS cases are between the age of 29 and 49, which are the most productive ages from both an economic and socio economic stand point.

**Problem statement/Justification**
Lack of effective and efficient access by the young people of the developing countries to Information technology is aggravating its current social, economical and political problems.

“AIM MUST BE FOR PEOPLE EVERYWHERE TO HAVE ACCESS TO INFORMATION TECHNOLOGY” Secretary-General Kofi Annan to the fifth meeting of the UN Information and Communications Technology Task Force in Geneva, 12 September:

Technology shapes the future, but ultimately it is people who shape technology, and decide to what uses it is put. Education and employment, trade and health, governance and tolerance — all these areas of life, and others too, can be transformed.

New technologies and applications continue to emerge. Current technologies are maturing, and old ones are finding new uses. We must ensure that the poor are not left further behind by all these dramatic changes, but can join in, and benefit from them.

Ultimately, our aim must be to ensure that people everywhere have access to information technology, and can use it to build better lives, for themselves and for their children.

Establishing an integrated information system and services can be mentioned significantly for the development of Ethiopia. It is noted that this service is very peculiar and unique in its nature that it can provide an exchange of youth voice, data and video communications among youth found in different nations, nationalities and peoples at a time.

Currently, in Ethiopia it is said that efforts made to alleviate youth problems are not under taken in an organized and coordinated manner. It is seen that there exists absences of organized youth focused data’s, researches and studies electronically, poor networking knowledge of implementing organization, poor cooperation and coordination locally, nationally and internationally. Thus, focuses for filling the gaps should be done by establishing an integrated information system. This indicates that mainly or totally well organized information is the priority concern of the findings/gaps.

In the Policy document and strategic plan of the Ministry of Youth in Ethiopia, it is identified that information is the intersection point of all the strategies mentioned in the same document. Moreover as the age we are living is best explained as the information age, our best option for filling the identified gaps and for the realization of the implementation strategies of the youth policy, particularly establishing an integrated information system to the targeted society in an efficient and fast manner is mandatory.

Therefore, this project is expected to contribute to the efforts of the Ethiopian Government and non-government organizations to satisfy the increasing demand of information communication technology services of the Ethiopian community, specifically the youth.

**Objectives**
- Lack of effective and efficient access by the young people of the developing countries to Information technology is aggravating its current social, economical and political problems.
- Technology shapes the future, but ultimately it is people who shape technology, and decide to what uses it is put. Education and employment, trade and health, governance and tolerance — all these areas of life, and others too, can be transformed.
- New technologies and applications continue to emerge. Current technologies are maturing, and old ones are finding new uses. We must ensure that the poor are not left further behind by all these dramatic changes, but can join in, and benefit from them.
- Ultimately, our aim must be to ensure that people everywhere have access to information technology, and can use it to build better lives, for themselves and for their children.
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Special Projects

Kibera Goes Online

- Oldest and Largest Slum in Kenya and Africa
- Population of 1M in 20sq mtr area
- 30% of population are youth.
- Most of the people living there have no jobs, or the ones who do, work as low paid labourers

NetAcad in Defense - Egypt

- 34 Defense academies in EMEA
- Based in Military universities and high schools
- Students build, design and maintain networks
- Faster skill development
- Develops problem solving and critical thinking skills