

Information and Communication Technology Training of Trainers:

Computer and Internet Use for Development

Participant Handbook



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The manual was compiled and adapted from excellent materials created by the Academy for Educational Development (for USAID's Leland Initiative) and the Center for Development and Population Activities.

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Introduction

This *Participant Handbook* provides the skills and resources needed to train others in basic computer and Internet use. It assumes that those using the handbook—participants in a training of trainers (TOT)—know how to use computers and the Internet but do not necessarily know how to teach others how to do so. Though some TOT participants may not have access to the Internet on a regular basis at their sites, it is likely that the Internet will be relevant to most sites in the near future and that considering the essential elements of an introduction to computer and Internet use will be useful.

The *Participant Handbook* contains the content and resource material for an information and communication technology (ICT) TOT for Peace Corps Volunteers during their Pre-Service Training (PST) or In-Service Training (IST). It is divided into two parts:

Part 1 contains information to help trainers understand how people learn and plan, conduct, and apply computer and Internet training.

Part 2 consists of detailed scripts of training modules to be used as guides, along with support materials for each module.

Appendices provide training design information and case studies.

Included at the back of the *Participant Handbook* are pages for notes. Use them as you wish. The handbook is intended as a compilation of materials for participants to build upon.

Note: The resources in the *Participant Handbook* are intended to be guidelines for designing and delivering computer and Internet trainings, but do not necessarily contain the specific content of training modules. When using these materials, trainers should spend time reviewing the scripts, selecting sample Internet sites, preparing personal anecdotes, and compiling materials to be distributed.



Part 1:

How to Teach Computer Skills

The following collection of resources is intended to help you understand how people learn and help you plan, conduct, and apply computer and Internet training.

As you progress through the ICT training of trainers program, your facilitator will periodically direct your attention to the appropriate resources and activities contained in Part 1 of this handbook. Once you have completed the ICT TOT and are ready to deliver your own ICT training activity, you can refer to these materials again in preparation. You might also find it useful to remove and duplicate for distribution relevant resources for your trainees.

How to Help Someone Use a Computer

(Adapted with permission from a May 1994 article by Phil Agre in the online newsletter The Network Observer.)

Computer people are generally fine human beings, but nonetheless they do a lot of inadvertent harm in the ways that they “help” other people with their computer problems. Now that we are trying to get everyone on the Net, I thought it might be helpful to write down in one place everything I have been taught about how to help people use computers.

First you have to tell yourself some things:

- Nobody is born knowing this stuff.
- You have forgotten what it is like to be a beginner.
- If it is not obvious to them, it is not obvious.
- A computer is a means to an end. The person you are helping probably cares mostly about the end. This is reasonable.
- They probably do not need to know how it works. You would probably be embarrassed to tell them how it really works anyway.
- The best way to learn is through apprenticeship—that is, by doing some real task together with someone who has skills that you do not have.
- Your goal is not to solve their problem. Your goal is to help them become one notch more capable of solving their problem on their own.
- Most user interfaces are terrible. When people make mistakes it is usually the fault of the interface. You have forgotten how many ways you have learned to adapt to bad interfaces. You have forgotten how many things you once assumed the interface would be able to do for you.
- Knowledge lives in communities, not individuals. A computer user who is not part of a community of computer users is going to have a harder time of it than one who is.
- By the time they ask you for help, they have probably tried several different things. As a result, their computer might be in a strange state. That is not their fault.

Having convinced yourself of these things, you will find yourself much more willing to do the following:

- Never do something for someone that they are capable of doing for themselves.
- Do not take the keyboard. Let them do all the typing, even if it is slower that way, and even if you have to point them to each and every key they need to type. That is the only way they are going to learn from the interaction.
- Be aware of how abstract your language is. For example, “Get into the editor” is abstract and “press this key” is concrete. Do not say anything unless you intend for them to understand it. Keep adjusting your language downward toward concrete units until they



start to get it, then slowly adjust back up toward greater abstraction so long as they are following you. When formulating a take-home lesson (“when it does this and that, you should check such-and-such”), check once again that you are using language of the right degree of abstraction for this user right now.

- Attend to the symbolism of the interaction. In particular, try not to tower over them. If at all possible, squat down so your eyes are just below the level of theirs. When they are looking at the computer, look at the computer. When they are looking at you, look back at them.
- If something is true, explain how they can see it as true.
- Find out what they are really trying to do. Is there another way to go about it?
- Whenever they start to blame themselves, blame the computer, no matter how many times it takes, in a calm, authoritative tone of voice.
- When they get nailed by a false assumption about the computer’s behavior, tell them their assumption was reasonable. Tell yourself that it was reasonable. It was.
- Do not say, “It is in the manual.” (You probably knew that.)

Seven Steps to Using the Internet Effectively



Step 1: Awareness Building

Cultivate a general appreciation and knowledge of what the Internet is and what it can do for your organization.

Step 2: Assessment

Identify factors involved in creating a positive environment for the use of the Internet within your organization.

Step 3: Finding Answers to Technical Questions

Plan and carry out practical steps for connecting to the Internet.

Step 4: Training

Develop a hands-on knowledge of Internet tools useful in achieving your organization's goals.

Step 5: Action Planning

Produce a plan for the use of the Internet in your organization's work.

Step 6: Implementation

Begin to implement the action plan.

Step 7: Reviewing and Looking Ahead

Determine the level of success of your Internet activities and identify your next steps for its use.

Trainer's Responsibilities

Management

Plan, organize, and run effective training sessions.

Mentoring

Provide guidance and support to individual participants.

Intervention

Help design organizational change strategies to help participants use newly gained competencies.

Planning

Prepare participants for challenges of implementing goals upon returning to work.

Encouragement

Support participants in meeting their learning objectives.

Change agents

Catalyze the learning process for participants and challenge them to think creatively.

Ideal ICT Trainer Capabilities

Trainers, while having enough technical background to understand and explain computers and the Internet, should follow an approach that encourages participants to appreciate them as resource persons who assist them in achieving their professional goals.

Trainers should be able to explain technical concepts and terms simply and keep participants thinking of potential communication, research, and networking uses of computers and the Internet.

Trainers should design the training sessions to ensure that participants have the maximum hands-on time to explore the potential of the computer and the Internet to meet their needs.

Trainers should ensure that the participants are continually interacting with the facilitators, asking and answering questions, and thus helping to tailor the training to the participants' needs, concerns, and circumstances.

Whenever possible, trainers should use examples and cite resources relevant to the professional interests of the participants.

Training Design and Preparation

The planning and logistical requirements to organize this training are significant. The success of the training is largely dependent on careful trainer selection, adequate preparation, and the training environment. The Ten Steps of Planning listed below are a useful guideline in designing and preparing to administer training. For each step, you might want to ask yourself the following questions:

Ten Steps of Planning

1. Determining Needs

What are the participants' training needs?

What makes this training necessary at this time?

Are there specific changes that have taken place?

2. Setting Objectives

What results are we trying to accomplish?

What are the concrete tasks to complete at each session?

What knowledge, skills, and attitudes should participants expect to acquire?

3. Determining Program Content

What topics should be presented to meet the training needs and objectives?

What material will be communicated?

What lessons and information will be exchanged among the participants?

4. Setting the Schedule

What is the available time frame?

Is the schedule culturally appropriate?

Are there any holidays that might interrupt the training?

5. Selecting Facilitators

What kind of training experience do the trainers have?

Will instructors be sought outside or inside of the organization?

Is there a selection process established?



6. Selecting and Preparing Appropriate Facilities

Is the location of the training site convenient and accessible?

Is the environment comfortable?

Can the location accommodate all of the training requirements?

7. Selecting Participants

Who is the target audience that would benefit most?

What are the profiles and skill levels of the participants?

How much exposure have participants previously had to the material?

What are the needs of the participants?

8. Selecting and Preparing Materials

What materials will be used to support training techniques and methods?

How will the participants be actively involved?

What resources will be most helpful for specific participants?

9. Coordinating the Program

What are the logistical requirements?

What are the procedures for travel, lodging, and meals for participants?

Who will be responsible for each of the training requirements?

10. Evaluating the Program

How do participants and facilitators know that learning is accomplished?

What can be done to improve specific aspects of the training?

To what extent does the content meet the participants' needs?

Countdown to Training

The following section is an example of what must occur before training takes place and what the organization hosting the training must provide. Follow the checklist and tailor it to your own needs, starting as early as six months prior to training and continuing to the day before the training is scheduled to begin.

Six Months Ahead

- ✓ Establish communications with host organization
 - Describe training
 - Find out current level of knowledge at organization
 - Detail what training can offer
 - Establish goals and potential outcomes
 - Make sure that upper management is aware and supportive of training and objectives
- ✓ Select target audience
 - Identify potential training participants
 - Distribute training needs assessment
 - Establish basic skill level required to participate
- ✓ Decide on the training length
 - Ascertain the availability of personnel
 - Identify holidays that might interfere with schedule
 - Make sure that participants are available during this time
- ✓ Explore the types of space available for training
 - Refer to the handout titled “Requirements for the Training Site and Computer Equipment” in this manual for details on computer and room specifications
- ✓ Make arrangements to secure a facility for the training
 - Ensure location is suitable for training a group of the size anticipated
- ✓ Construct a list of active Internet service providers
 - Obtain contact information
 - Obtain rates and services
 - Determine their availability to participate in training

One to Three Months Ahead

- ✓ Establish the training schedule and format



- Group participants in sessions according to their interests or sectors
- Consider normal break and lunch times in scheduling
- ✓ Establish training budget
 - Decide who will pay for meals and breaks
- ✓ Send invitation letters to potential participants
- ✓ Notify host organization of requirements for an effective training environment
- ✓ Handle all logistics related to transportation, food, housing, and personal needs of participants
- ✓ Select trainers
 - Be sure that trainers have the skills necessary for the planned training
 - Ideally, provide one trainer for every five to 10 participants
 - Determine who can provide backup support and assistance for trainers during training sessions

Two Weeks Ahead

- ✓ Finalize training agenda
- ✓ Prepare workshop materials
 - Prepare flip charts with agenda, workshop objectives, illustrations, etc.
 - Prepare and order overhead slides to be used in presentations
 - Prepare and copy necessary handouts
- ✓ Provide or arrange for access to lunch and customary refreshments at break times
- ✓ Reconfirm who will be attending the training
- ✓ Load appropriate software onto computers
- ✓ Establish location of power outlets and light switches
- ✓ Ensure existence of backup electrical power in case of outage or emergency
- ✓ Test the equipment to be used during the training (computers, projectors, etc.)
- ✓ Prepare offline Internet training sites in case of failed network connections or power outages

Training Day

- ✓ Check that computers, network, connections, and services are properly functioning

- ✓ Place materials in a readily accessible location for easy distribution
- ✓ Set up computer so facilitator can view projector, type, and keep participants in sight at all times
- ✓ Arrange chairs (no more than two per computer)
- ✓ Plan to greet participants at the door to make them feel welcome. At this time, ask them to complete the sign-in sheet

Requirements for the Training Site and Computer Equipment

Computers and Other Equipment

- An overhead projector with spare bulbs
- A reliable power source
- Surge protectors for each computer
- One computer for every two participants
- Reliable Internet connectivity for each computer (preferably a leased line)
- E-mail software and a Web browser on every machine
- One computer connected to an LCD projector/panel and a printer
- A pointer (laser pointer is optional)

The Training Site and Room

- Secure against theft
- Shades for training room windows for demonstrations requiring projection equipment
- Room and furnishings suitable and comfortable for large- and small-group work
- A separate conference room or workspace away from the computers
- A photocopier conveniently located for duplicating certificates and other handouts
- Clerical assistance available in preparation for and during the training
- Comfortable room temperature, even with all computers running
- Technical support staff available to handle basic setup and to address technical problems that may arise at any time

Food

- Food and beverages arranged for breaks (one each morning and afternoon) and perhaps lunch

Techniques for Effective Training

Moderate level of content

Be selective. Concentrate on critical learning areas, giving participants what they need to know about a topic. Let participants take the initiative themselves to learn any supplemental information. Instead of trying to cover too much, save time for application and reflection.

Variety of learning approaches

Employ a wide assortment of methods. Using various learning approaches keeps energy levels high. Because adults have many learning styles, certain techniques will work for some better than others. Changes in the group formats and the physical environment also enhance variety.

Opportunities for group participation

Involve the group in as many activities as possible. Group activities engage participants and encourage them to work in partnership with one another and with the trainer. Lecturing is minimized and more participatory methods are employed.

Use of participant experiences

Encourage each participant to bring his or her unique experiences into the training. By soliciting actual experiences that might be directly applicable, learning becomes more relevant. Participants are able to learn from one another.

Recycling learned concepts and skills

Constantly refer back to previous exercises, skills, concepts, and shared information. Participants have the chance to review and reinforce what they have already learned. In this way, the curriculum may build from the simple to the more advanced with a strong base for learning.

Real-life problem solving

Emphasize the real world. Concentrate on applications of course content to help solve actual problems that the participants are facing. Participants learn best when they concentrate on their own cases or case studies that are similar to their situation. This adds a sense of immediacy to the material.

Allowance for reentry planning

Consider next steps. Build on the training by helping participants devise individual plans for what to do with their learning at the conclusion of the training. Emphasize action planning and a consideration of the necessary resources, challenges, and opportunities in implementing their new ideas.

Source: Silberman, Mel. *Active Training: A Handbook of Techniques, Designs, Examples, and Tips*. San Francisco: Jossey-Bass/Pfeiffer, 1998.



Training With the Leland Initiative Method

Remember this adage at each training and during each session:

When I hear, I forget.

When I see, I remember.

When I do, I understand.

The following tenets should be kept in mind at all times when conducting the training. They represent proven training techniques designed to engage participants and create an effective environment for learning and information sharing. They make up the core of what may be characterized as the “Leland Initiative Method.” These principles are not set in stone. They are intended as a starting point to help you conceptualize and tailor your method to your particular audience and to address the specific needs of your learner. These principles are dynamic, meaning they will evolve and change over time.

Hands-on and interactive

It is important to balance a detailed explanation of the material to be learned with a sufficient mix of opportunities to practice using the technology and discuss experiences and lessons learned.

Constant feedback

Participants should be encouraged to comment, make suggestions, and interact with the trainer at every opportunity. To ensure the material is being comprehended, at regular intervals pause and ask participants if what you said makes sense to them. The guidelines for effective feedback should be used to engage in a constructive feedback process.

Candy is dandy

One of the most effective ways to involve participants is through a rewards system. Candy is an easy way to gain the attention of trainees. However, any small reward is appropriate, and the reward should fit your specific cultural context. If the group seems particularly silent, the reward also may be used to entice participants to answer questions. This kind of process will encourage participants to learn from and share experiences with one another.

Learning to learn

The emphasis throughout the training should be on learning to learn, so participants are empowered to learn on their own, rather than rely on trainers to answer every question for them. For example, if a participant asks a question, you might ask him or her to attempt an answer. Also, you might ask for ways to research this answer on the Internet.

Demonstrate and replicate

Instead of talking about a concept or explaining it in abstract terms, involve participants in a demonstration of the information in action. When participants see, hear, and touch the information, technology, and learning materials, the descriptions come to life. Demonstrations also afford participants the opportunity to practice skills.

Questions, questions, questions ...

From the beginning, it is important that all participants feel comfortable asking questions. Welcome questions at all times. Also, after each activity, pause and ask the group if there are any questions. You might also try the question “parking lot” procedure, in which participants are invited to write any unanswered questions on a flip chart to be answered at a later time.

Review and revisit

To reinforce the learning of each session, take time to review the objectives of the session and make sure that all have been achieved. Also, ask participants to state in their own words the major concepts and ideas that have been covered. Build upon learning that has already taken place.

Note: The Leland Initiative is a five-year \$15 million U.S. government effort to extend full Internet connectivity to 20 or more African countries (www.usaid.gov/regions/afr/leland/project.html#twenty) in order to promote sustainable development. The Leland Initiative seeks to bring the benefits of the global information revolution to people of Africa, through connection to the Internet and other global information infrastructure technologies.



Training Technique 1: Presentation

Description

A presentation is an activity conducted by a resource specialist to convey information, theories, or principles. The forms of presentation can range from a straight lecture to some involvement of the learner through questions and discussion. Presentations depend more on the trainer for content than does any other training technique.

Uses

- ✓ To introduce participants to a new subject
- ✓ To provide an overview or a synthesis
- ✓ To convey facts and statistics
- ✓ To address a large group

Advantages

- Covers a lot of material in a short time
- Is useful for large groups
- Can be adapted to any kind of learner
- Can precede more practical training techniques
- Lecturer has more control than in other situations

Things to Be Aware of Before You Decide to Use a Lecture

- Emphasizes one-way communication
- Is not experiential in approach
- Learners' role is passive
- Lecturer needs skills to be an effective presenter
- Is inappropriate for changing behavior or for skills learning
- Learner retention is not as great unless lecture is followed up with a more practical technique
- Is common in more formal situations

Process

1. Introduce the topic—tell the learners what you're going to tell them
2. Tell them what you want to tell them—present the material using visual aids
3. Summarize the key points you've made—tell the learners what you've told them
4. Invite the learners to ask questions

Adapted with permission from *Training Trainers for Development: Conducting a Workshop on Participatory Training Techniques* (CEDPA Training Manual Series, Vol. 1), page 37. Washington, D.C.: Centre for Development and Population Activities, 1995.

Training Technique 2: Demonstration

Description

A demonstration is a presentation of a method for doing something.

Uses

- ✓ To teach a specific skill or technique
- ✓ To model a step-by-step approach

Advantages

- Easy to focus learners' attention
- Shows practical applications of a method
- Involves learners when they try the method themselves

Things to Be Aware of Before You Decide to Use a Demonstration

- Requires planning and practice ahead of time
- Demonstrator needs to have enough materials for everyone to try the method
- Is not useful in large groups
- Requires giving feedback to learners when they try themselves

Process

1. Introduce the demonstration—what is the purpose?
2. Present the material you're going to use
3. Demonstrate
4. Demonstrate again, explaining each step
5. Invite the learners to ask questions
6. Have the learners practice themselves
7. Discuss how easy/difficult it was for them—summarize

Adapted with permission from *Training Trainers for Development: Conducting a Workshop on Participatory Training Techniques* (CEDPA Training Manual Series, Vol. 1), page 38. Washington, D.C.: Centre for Development and Population Activities, 1995.



Training Technique 3: Case Study

Description

A case study is a written description of an actual situation that is used for analysis and discussion.

Uses

- ✓ To discuss common problems in a typical situation
- ✓ To provide a safe opportunity to develop problem-solving skills
- ✓ To promote group discussion and group problem solving

Advantages

- Learner can relate to the situation
- Involves an element of mystery
- The hypothetical situation does not involve personal risks
- Learners are involved

Things to Be Aware of Before You Decide to Use a Case Study

- Case must be closely related to the learners' experience
- Problems are often complex and multifaceted
- There is not always just one right solution
- Requires a lot of planning time if you need to write the case yourself
- Discussion questions need to be carefully designed

Process

1. Introduce the case
2. Give learners time to familiarize themselves with the case
3. Present questions for discussion or the problem to be solved
4. Give learners time to solve the problem
5. Have some learners present their solutions/answers
6. Discuss all possible solutions/answers
7. Ask the learners what they have learned from the exercise
8. Ask them how the case might be relevant to their own environments
9. Summarize

Adapted with permission from *Training Trainers for Development: Conducting a Workshop on Participatory Training Techniques* (CEDPA Training Manual Series, Vol. 1), page 39. Washington, D.C.: Centre for Development and Population Activities, 1995.

Training Technique 4: Role Play

Description

In a role play, two or more individuals enact parts in a scenario related to a training topic.

Uses

- ✓ Helps to change people's attitudes
- ✓ Enables people to see the consequences of their actions for others
- ✓ Provides an opportunity for learners to see how others might feel/ behave in a given situation
- ✓ Provides a safe environment in which participants can explore problems they may feel uncomfortable discussing in real life
- ✓ Enables learners to explore alternative approaches to dealing with situations

Advantages

- Can be stimulating and fun
- Engages the group's attention
- Simulates the real world

Things to Be Aware of Before You Decide to Use a Role Play

- A role play is spontaneous—there is no script to follow
- Actors must have a good understanding of their role for the role play to succeed
- Actors might get carried away with their roles

Process

1. Prepare the actors so they understand their roles and the situation
2. Set the climate so the observers know what the situation involves
3. Observe the role play
4. Thank the actors and ask them how they feel about the role play—be sure that they get out of their roles and back to their real selves
5. Share the reactions and observations of the observers
6. Discuss different reactions to what happened
7. Ask the learners what they have learned and develop principles
8. Ask the learners how the situation relates to their own lives
9. Summarize

Adapted with permission from *Training Trainers for Development: Conducting a Workshop on Participatory Training Techniques* (CEDPA Training Manual Series, Vol. 1), page 40. Washington, D.C.: Centre for Development and Population Activities, 1995.



Training Technique 5: Simulation

Description

A simulation is an enactment of aspects of a real-life situation.

Uses

- ✓ Allows learners to experience decision-making in “real” situations without worrying about the consequences of their decisions
- ✓ Is a way to apply knowledge, develop skills, and examine attitudes in the context of an everyday situation

Advantages

- Is practical
- Learners are able to discover and react on their own
- Requires high involvement of the learner
- Provides immediate feedback

Things to Be Aware of Before You Decide to Use a Simulation

- It is time-consuming
- The facilitator must be well prepared, especially with logistics
- It is often a simplistic view of reality

Process

1. Prepare the learners to take on specific roles during the simulation
2. Introduce the goals, rules, and time frame for the simulation
3. Facilitate the simulation
4. Ask learners about their reactions to the simulation
5. Ask learners what they have learned from the simulation and develop principles
6. Ask learners how the simulation relates to their own lives
7. Summarize

Adapted with permission from *Training Trainers for Development: Conducting a Workshop on Participatory Training Techniques* (CEDPA Training Manual Series, Vol. 1), page 41. Washington, D.C.: Centre for Development and Population Activities, 1995.

Training Technique 6: Small Group Work

Description

Small group work is an activity that allows learners to share their experiences and ideas or to solve a problem with a small group of participants.

Uses

- ✓ Enhances problem-solving skills
- ✓ Helps participants learn from one another
- ✓ Gives participants a greater sense of responsibility in the learning process
- ✓ Promotes teamwork
- ✓ Clarifies personal values

Advantages

- Learners develop greater control over their learning
- Participation is encouraged
- Allows for reinforcement and clarification of lesson through discussion

Things to Be Aware of Before You Decide to Use Small Group Work

- The task given to the group needs to be very clear
- The group should be aware of time limits for the discussion
- Participants should be able to listen to each other, even if they don't agree
- Group discussion should not be dominated by one or two people
- Questions help guide the discussion
- Everyone should be encouraged to participate

Process

1. Arrange the learners in groups of four to seven
2. Introduce the task that describes what should be discussed
3. Ask each group to designate a discussion facilitator, a recorder, and a person to present the group's findings to the larger group
4. Check to make sure that each group understands the task
5. Give groups time to discuss—this should not require the trainer's involvement unless the learners have questions for the trainer
6. Have one person from each group summarize the findings of the group (this could be a solution to a problem, answers to a question, or a summary of ideas)
7. Identify common themes that were apparent in the groups' presentations



8. Ask the learners what they have learned from the exercise
9. Ask them how they might use what they've learned

Adapted with permission from *Training Trainers for Development: Conducting a Workshop on Participatory Training Techniques* (CEDPA Training Manual Series, Vol. 1), page 42. Washington, D.C.: Centre for Development and Population Activities, 1995.

Work Plans

A work plan is a schedule drawn up at any point in the long-term planning process to keep everybody up to date on where you are. The following is an example of a work plan for organizing a tree-planting project.

Nonformal Education Sample Work Plan Tree-Planting Project, October to November

Objective/ Task	Current Status	Planned Activities	Who Is Responsible?	Achievement Indicators	Time Indicators	Resources Needed
1. Develop posters						
A. Designs by children	Meeting scheduled with headmaster	Hold contest for school-children: Designs	Kofi	Designs completed	Contest: Nov. 1-10	Paper and paint for children
B. Artist makes posters	Two possible artists identified	Choose artist Get supplies	Tchao and Etienne Etienne	Posters up in community	Artist finishes by Nov. 20 Posters distributed by Nov. 25	Artist supplies
2. Plant trees						
A. Prepare land	Initial survey completed	Meeting with chief to discuss tree planning	Robert will request meeting	Meeting scheduled	Meet in early November	
B. Obtain seedlings	Sources of seedling identified	Contact ministry for seedlings	Tchao and Chris	Ministry agrees to supply seedlings	Agreement by mid-November	Transport to capital

Source: *Non-Formal Education Manual*. Washington, D.C.: Peace Corps, December 1989. (ICE No. M0042)



Guidelines for Planning Participatory Programs

**If you want to SUCCEED,
you need to:**

**If you do,
you will:**

Set a brief, clear task rather than lecture
or ask questions



Share power

Use “hands-on” multisensory materials
rather than rely only on verbal
communication



Broaden the base of
participation

Create an informal, relaxed climate



Equalize status

Choose growth-producing activities



Draw out talent, leadership,
and mutual respect

Evoke feelings, beliefs, needs, doubts,
perceptions, aspirations



Ensure relevance

Encourage creativity, analysis, planning



Enhance personal confidence,
self-esteem, resourcefulness,
and skills

Decentralize decision making



Develop capacity for practical
action

Source: *Non-Formal Education Manual*. Washington, D.C.: Peace Corps, December 1989. (ICE No. M0042)

Part 2:

Training Scripts and Resource Materials

The following collection of materials includes detailed scripts of training modules to be used as guides in developing lesson plans, along with resource materials for each module.

As you progress through the ICT training of trainers program, your trainer will periodically direct your attention to these materials. Once you have completed the ICT TOT and are ready to deliver your own training activities, you can refer to these materials again in preparation. You may also find it useful to duplicate for distribution relevant materials for your trainees.



Module 1: Opening Session

Learner Objectives

By the end of this session, participants will be able to:

- ✓ Describe their training expectations.
- ✓ Agree on expectations for individual and group training norms.
- ✓ Understand the connection between written materials and training.

Time

55 minutes

Materials and Setup

- Sign-in sheet (including spaces for at least name, organization, telephone number, and e-mail address)
- Name tags for participants
- Marker for name tags
- Participant handbooks

Flip Charts or Transparencies

- Training schedule
- Words to describe the Internet (to be completed with participants in this session)

Handouts

- Training schedule
- Objectives of the training

Session Outline

- I. Sign-in (5 minutes)
- II. Welcome and Trainer Introduction (5 minutes)
- III. Training Overview (10 minutes)
- IV. Participant Introductions (25 minutes)
- V. Training Norms and Expectations (5 minutes)
- VI. Participants' Workbooks (5 minutes)

Delivery

I. Sign-in (5 minutes)

Step 1:

Greet participants at the door.

Step 2:

Let them know that they are in the right place for the training.

Step 3:

Point to the sign-in sheet and have them write (legibly) their name, organization, telephone number, and e-mail address.

Step 4:

Ask participants to write their first name on a name tag with a marker. It is fine if they are more comfortable using their last name.

Step 5:

When all have arrived, begin the welcome.

II. Welcome and Trainer Introduction (5 minutes)

Step 1:

Have an official introduce himself or herself and the training. The official might talk about his or her commitment to this process and the resources that are available to each of the participants to sustain the learning at the close of the workshop.

Step 2:

Introduce yourself and say a few words about your background. For example, you might mention your experience with computers and the Internet, your experience as a trainer, and your experience in the country or region.

Step 3:

Say a few words to welcome the participants. Mention how important their attendance is to the success of their organization in the Information Age.

III. Training Overview (10 minutes)

Step 1:

Briefly describe the training and how it relates to the participants.

Step 2:

Review the training schedule on the flip charts.

Step 3:

Explain where restrooms and water are located.



Step 4:

Tell participants about the arrangements for breaks and lunch.

Step 5:

Review overall training objectives:

You will receive a basic introduction to the Internet and electronic communication, by the end of which—

- You will know how to use the Internet effectively for work-related tasks.
- You will feel comfortable with the use and concept of the Internet.
- You will be able to locate relevant information on the Internet.
- You will have acquired the tools necessary to share the training concepts and information with co-workers.

Step 6:

Refer participants to the objectives flip chart and state that this will be posted for the duration of the training to make sure that they achieve each of the objectives.

Step 7:

Ask if there are any questions.

IV. Participant Introductions (10 minutes)

Step 1:

Tell the participants that it is now their turn to give information and initiate the information sharing process.

Step 2:

Ask the participants to state their name, organization, and expectations for the workshop, and to say one word that describes the Internet. You might also have them state their experience with the Internet.

Step 3:

One trainer should record all of the names, or check them off an established list, and include the participants' training expectations.

Step 4:

Another trainer should write the words used to describe the Internet on a flip chart.

Step 5:

Address the expectations mentioned by the participants, giving particular emphasis to those that will be the focus of the training.

V. Training Norms and Expectations (5 minutes)**Step 1:**

State that it is important that this group work together over the next two days (or the duration of the training) to help one another learn and to accomplish all of the objectives.

Step 2:

Suggest to the group that giving everyone a chance to speak without interruption is beneficial for all. This and other norms should be agreed upon and upheld by the entire group for the duration of the training.

Step 3:

Ask participants to volunteer other norms and expectations that may be important. Write all of these on a flip chart. Some examples: one person speaks at one time, listen to and learn from colleagues, define technical words, ask questions, etc.

Step 4:

When finished, ask if there are any norms or expectations that they do not agree with. If so, remove those items from the list.

Step 5:

Once there is consensus, post the flip chart in the room for the rest of the training.

VI. Participants' Workbooks (5 minutes)**Step 1:**

Hand out one workbook to each participant.

Step 2:

Describe the workbook's contents and organization, which includes places to write notes. Flip through the various sections as you describe them.

Step 3:

Explain that there are many resources in the book but that there is room to add appropriate resources that fit their needs.

Step 4:

State that each session has related material in the workbook. During the course of the training, they will be referred to sections of the workbook where they can obtain additional information about the topics covered. This material can be referred to at home in the evening and can be used to educate counterparts at their organizations.

Step 5:

Ask if there are any questions.

Ask a participant to reread the objectives read at the beginning of the module. After each objective, ask the group if each was achieved.



Module 2: An Introduction to Computers

Learner Objectives

By the end of this session, participants will be able to:

- ✓ Identify the hardware components of a computer and explain what they are used for.
- ✓ Describe what software is and name several kinds.
- ✓ Use a computer for several basic tasks.
- ✓ Describe, in general terms, what a computer network is.

Time

3 hours

Materials and Setup

- A computer (for demonstration) connected to a projector, a printer, a modem, a scanner, speakers (and any other accessories available), and word processing and Internet browser software
- One computer per two participants with word processing, Internet browser software, and a mouse tutorial program (try “mouercise,” created by Chris Rippel at the Central Kansas Library System in Great Bend, Kansas, and available at
- www.ckls.org/~crippel/computerlab/tutorials/mouse/page1.html)
- Four colors of Post-It notes
- Blank flip chart paper
- A file on the hard drive of each computer with several questions for participants to answer

Handouts

- List of hardware devices and approximate costs (in your country)
- Picture of a computer and its components and accessories (labeled)
- Picture of a network of computers
- Diagram of the Internet

Session Outline

- I. Identifying the Hardware (40 minutes)
- II. What Is Software? (30 minutes)
- III. Using a Computer (1 hour and 30 minutes)
- IV. Networks in Brief (20 minutes)

Delivery

I. Identifying the Hardware (40 minutes)

Step 1:

Turn the computer on. Pass out Post-It notes with the following words written on them to individuals or teams (some may be given more than one):

Blue	Yellow	Pink	Green
Mouse	Printer	CPU	Disk drive
Keyboard	Monitor		CPU
Scanner	Modem		
Modem	Disk drive		
Disk drive	Earphones		
Joystick	Speakers		
Digital camera	LCD projector		
CD-ROM			

Step 2:

Ask each individual or team to stick their Post-It note on the correct device. Once all individuals or teams have finished, ask what the colors signify.

Blue: input

Yellow: output

Pink: processing

Green: storage

Step 3:

Once participants have answered, talk about how a computer works. Explain that computers process information based on one's instructions and produce the output one requests. Ask for several examples of something someone has done with a computer that shows the input-processing-output sequence. If participants do not have examples, provide several.

Step 4:

a. Examine each piece of hardware and discuss how it works and what it is used for:

CPU (central processing unit): processes instructions, manages the flow of information, and stores data; explain that documents and software "take up room"; talk about the



speed and capability of, and therefore the value of buying, a newer machine; explain all ports

Monitor: explain that there are different sizes, affecting clarity of images

Keyboard: review the keys on the keyboard, including the function keys and status lights

Mouse: demonstrate how it is used; talk about the different kinds: trackball, touch pad

Disk drive: portable storage for data; examine and explain

Printer: can have different printing speeds and image quality; can be color or black-and-white

Modem: describe it as a translator between the computer and the data coming in or going out via a phone line; transfers data at varying speeds depending on capability; can also be used for faxes; can be a device within the computer or a piece of hardware connected to the computer

CD-ROM: used to input data; can also play music (with appropriate software)

Speakers: used to project sound (all, not just music)

Scanner: used to convert paper copies into electronic files; can be used for graphics or text and for color or black-and-white

Projector: allows for projection of the computer screen to a group of people

Digital camera: takes pictures that convert to files that can be used by a computer

Earphones: those used for stereos and Walkmans can also be plugged into a computer

Joystick: controls objects when playing games

- b. Ask participants to name other pieces of hardware that can be used with a computer and to describe what they are used for.
- c. Provide a list of the approximate cost of each piece of equipment.
- d. Talk briefly about what it means to upgrade computer hardware and how easy it is to add other components to a basic computer.
- e. Ask if there are any questions.

II. What Is Software? (30 minutes)

Step 1:

Ask for a volunteer to define “software.”

The definition might be something like this:

A set of instructions that tells the computer how to perform specific tasks, using data entered by the user and producing a specific kind of output. Also called a program.

Step 2:

Project the computer’s screen. Define an icon as a picture that represents a program.

Step 3:

Click on the icon for the word processing software and explain that this software allows the user to write documents that can include tables and graphics. Briefly demonstrate some of the basic functions. Explain that there are a number of software packages like this, and that users shop for software as they would a kind of car, dress, etc.

Step 4:

Click on the Internet browser software and explain that this software allows the user to find information on the Internet. Compare this software with the word processing software, pointing out the similarities and differences in screen presentation and functions.

Step 5:

Ask participants to list other kinds of software and talk about what they are used for.

Step 6:

Ask participants where one might go to purchase software (be sure to mention the World Wide Web). Explain that software can be downloaded (explain this word) onto a computer using a floppy disk, using a CD-ROM, or through the Internet. Mention that software takes up room on the CPU.

Step 7:

Ask participants where they would go if they needed help using software. Be sure to mention the software manual, the help function, a friend or colleague, classes, the vendor, and the Internet as possibilities.

Step 8:

Ask participants if they have any questions.

Optional:

If time permits, have participants practice installing a software program.

III. Using the Computer (1 hour and 30 minutes)**Step 1:**

Have each pair of participants find the power button and turn on the computer. Also have them turn on any of their computer's accessories (speakers, printer, etc.).

Step 2:

Once the computers are on (if needed, walk participants through log-on procedures), have them double click on the icon for the mouse tutorial. Ask participants to complete the mouse tutorial until they are capable of using the mouse, aiming for no more than 20 minutes each. (If some participants are faster to learn or are already comfortable, you may want to point them to a game.)

Step 3:

Ask participants to resume working in pairs and to open the word processing software. Explain the basics of the screen, including the buttons, the scroll bar, and the pull-down menus.

Step 4:

Ask them to open the file on the hard drive (walk them through, step by step) and answer the questions. Then ask them to save the file under their name (walk them through, step by step), then print it and give it to you.

Step 5:

Once all pairs have printed their answers, encourage them to explore the hardware. Allow 15 minutes for exploring.

Step 6:

Ask them to close the document (walk them through, step by step) and to close the program.

Step 7:

Ask if there are any questions.

IV. Networks in Brief (20 minutes)

Step 1:

Define a network as a group of connected computers that allows people to share information and equipment. If possible, use the computers in the room to show the principle of a network and the participants' ability to share files and print to the same printer. Explain that networks come in all sizes. Some networks join several computers in an office, some join several office buildings, and some join a company's offices worldwide. The biggest network is the Internet. Give a brief explanation of the Internet, showing the diagram for clarity.

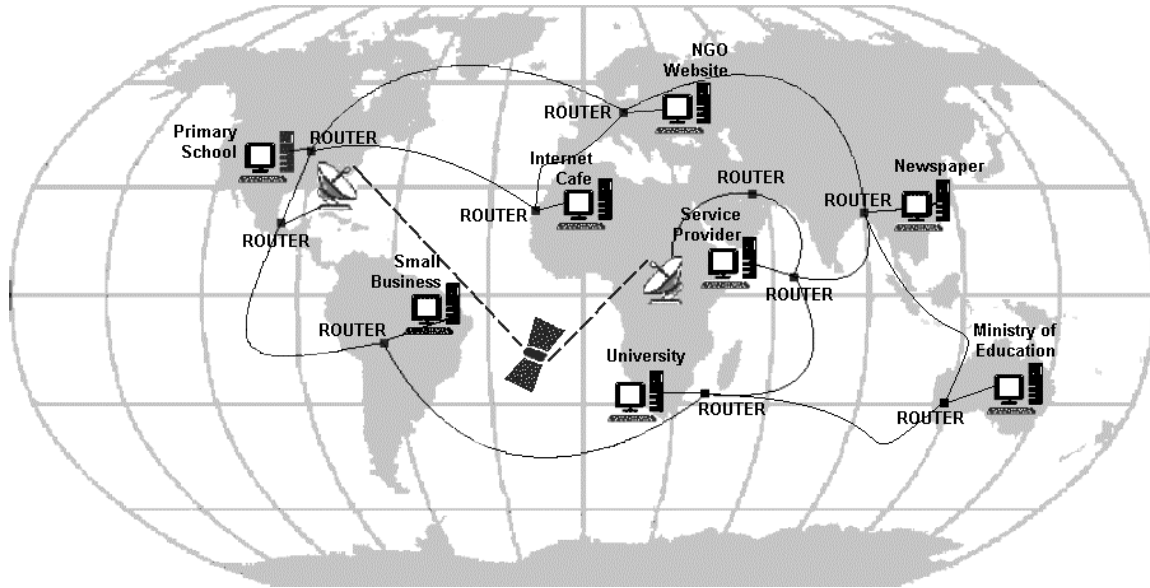
Step 2:

Explain that with the use of passwords and security software, networks can be kept private, allowing access only to those with permission.

Step 3:

Ask if there are any questions.

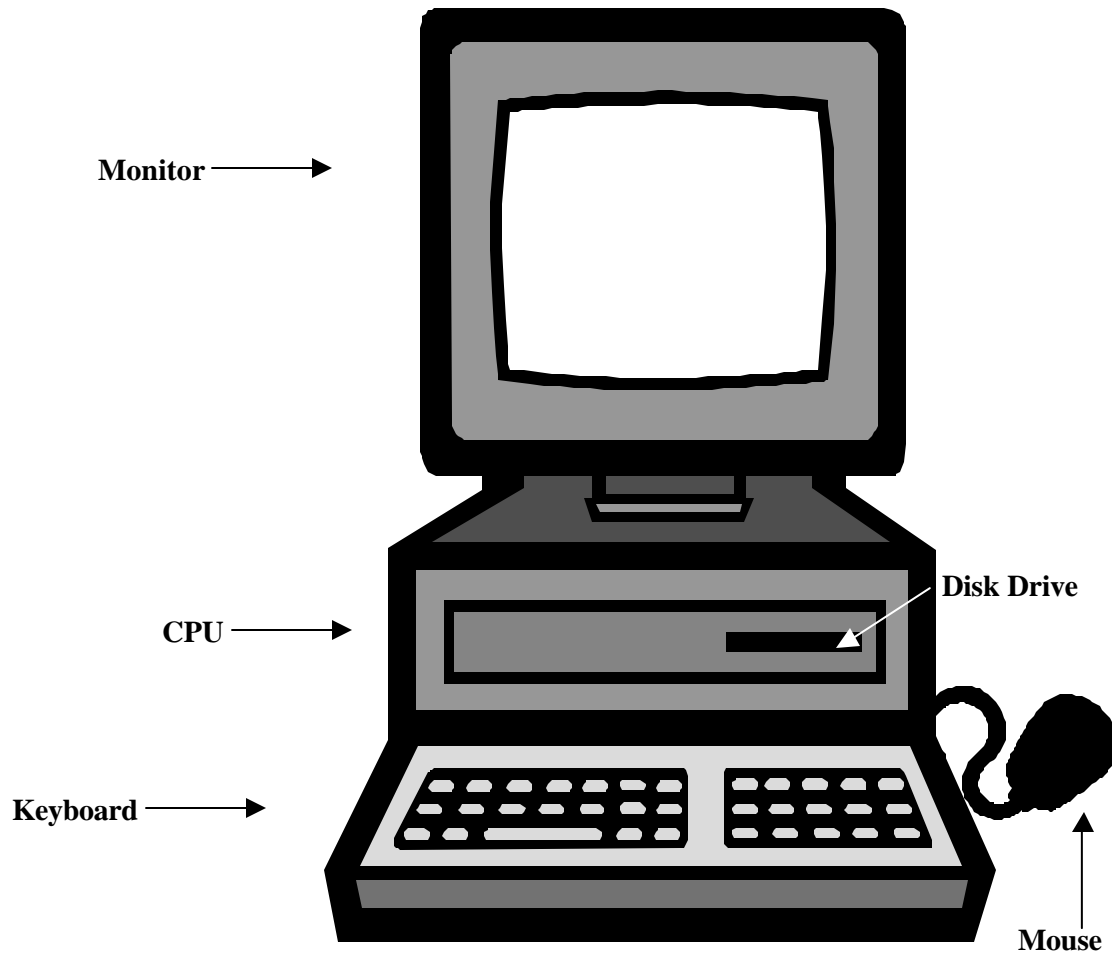
The Internet



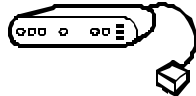
Reprinted with permission from Leland Initiative Team, *Making the Internet Connection Count: Effective Use of the Internet in Seven Steps* (page 80). Washington, D.C.: Academy for Educational Development, 1998. (Available at www.usaid.gov/leland/manual/manenglish/default.htm)



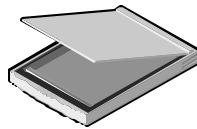
Picture of a Computer



CD Rom



Modem



Scanner

Joysticks



Earphones

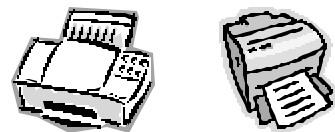


Digital Camera

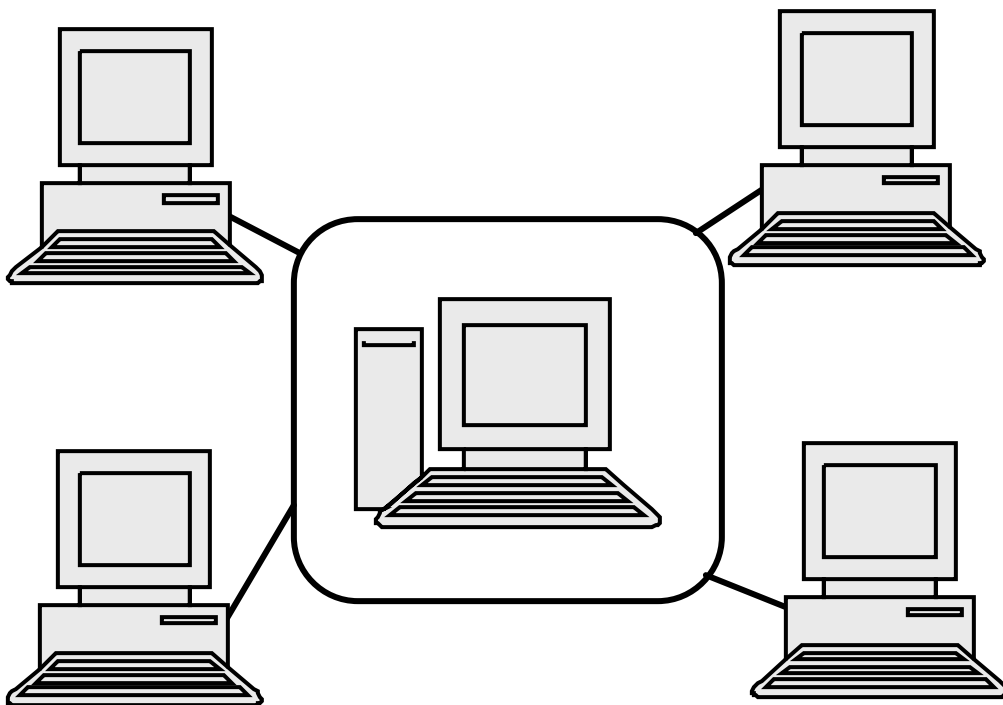
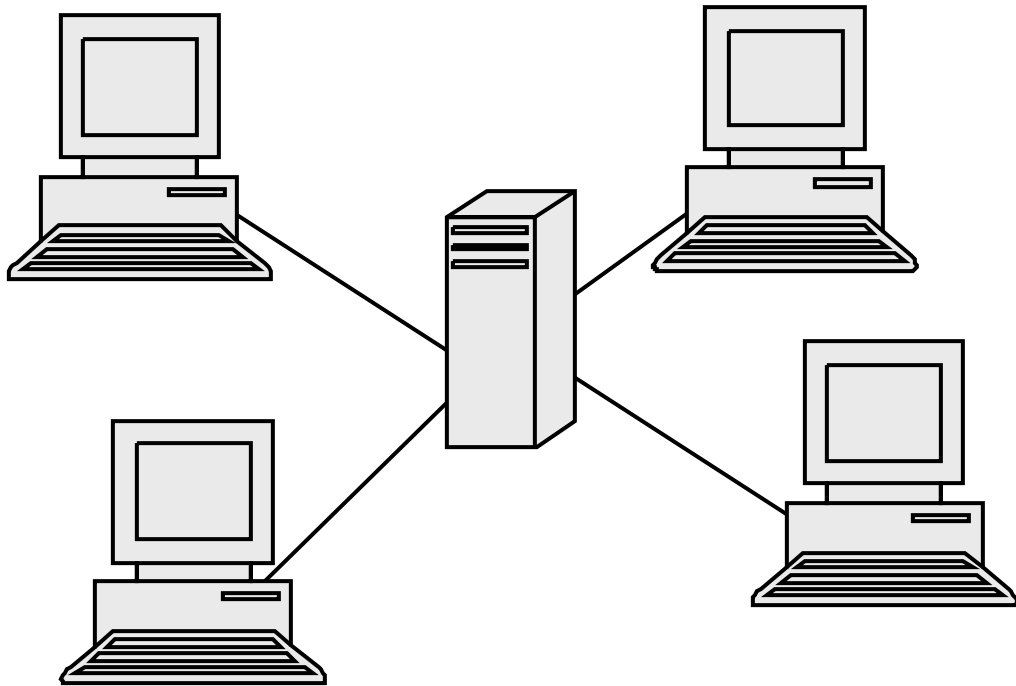


Speakers

Printers



Network of Computers



Module 3: Introducing the Internet

Learner Objectives

By the end of this session, participants will be able to:

- ✓ Describe the basic concept of the Internet and use some of the language associated with it.
- ✓ Name the basic Internet services, or tools, and describe what each is used for.
- ✓ Explain some of the benefits of Internet access for achieving development goals.

Time

35 minutes

Materials and Setup

- Overhead projector or LCD panel connected to computer and the Internet
- Internet slide show

Flip Charts or Transparencies

- “An Introduction to the Internet”
- “What is the Internet?”
- “A Country’s Internet Connection, Simplified”
- “How the Internet was Developed”
- “What Can You Do with the Internet?”
- “What Else Can You Do with the Internet?”
- Selected Home Pages

Handout

- “The Internet: A Tool for Empowering People in the Information Age”
- “Important ICT Terms”

Session Outline

- I. Introducing the Process (10 minutes)
- II. Experience With Internet Technology (5 minutes)
- III. The Internet: An Overview (15 minutes)
- IV. The National State of the Internet (5 minutes)

Delivery

I. Introducing the Process (10 minutes)

Step 1:

Distribute the “Seven Steps to Using the Internet Effectively” handout.

Step 2:

Briefly describe each phase of the process.

Step 3:

Refer participants to the workbook.

Step 4:

Emphasize that the process is a circle; there is a continual need for improvement. This is particularly relevant because of the speed of change associated with the Internet. Tools and resources are always evolving.

Step 5:

Stress that this process applies not only to the Internet but to the introduction of any new idea or technology as well.

Step 6:

Ask participants if they are familiar with this type of process. Ask them to volunteer any experiences they may have had in their respective organizations in which such a process was used. Highlight how these processes are similar to (or different from) the seven steps.

Step 7:

Make the connection between the training process and the overall process—each step corresponds to a training-related activity.

Step 8:

Ask if there are any questions and if they understand the direction they will be moving in.

II. Experience With Internet Technology (5 minutes)

Step 1:

Ask participants for a show of hands in answering the following questions. Alternatively, you might want to have participants write this information on a brief one-page survey. Either way, this information will help you gauge the experience level of your audience.

Step 2:

These questions should be tailored to elicit information that will be helpful in your training context. Sample questions follow:

- How many people use a computer regularly (many times per week or every day)?



- How many people use e-mail?
- How many people use the World Wide Web?
- How many people have seen the World Wide Web?

Step 3:

Mention that participants will have the opportunity to do all of these things during the training.

III. The Internet: An Overview (15 minutes)

Step 1:

Introduce the Internet. You may want to start with a brief history of the Internet. Some points to make follow:

- Created in the 1960s by the U.S. Department of Defense
- Came out of the Cold War
- Introduced a way that messages could be sent even if some electronic pathways were unusable
- After the Cold War, universities began using it
- Very useful way to exchange information
- Evolution with FTP and gopher
- HTML, a common language, was created in the 1990s
- World Wide Web and possibilities for multimedia
- Greatly expanded user base
- Utility for private sector and marketing/advertisements
- Continually evolving (targeted WWW, Web TV, etc.)

Step 2:

Use an example of what you can find on the Internet that would be exciting for that particular audience. Also, offer as an example a cost comparison of performing certain tasks using the Internet and doing them other ways.

Step 3:

Provide a personal example of how you have used or were amazed by the potential of the Internet. A potential example is a meaningful or productive exchange of e-mail with someone far away whom you did not know but with whom you have a mutual professional interest.

Step 4:

To discuss what the Internet is, an introductory slide show (either on overhead slides or in HTML format) can be used to fill in and elaborate on important points.

Step 5:

Expand on the slide show with some additional examples of websites. Go into more depth on a few sites and follow some links on the slides. Use websites tailored to the audience. The main point is to show the communication aspect of the Internet, as opposed to dazzling the audience with the mechanics.

Step 6:

Ask if there are any questions.

IV. The National State of the Internet (5 minutes)**Step 1:**

This section will vary by country. You might wish to have this information presented by a panel of computer hardware or software vendors and local Internet service providers.

Some of the points you might make using country-specific information follow:

- The number of Internet service providers and their services
- The state of rural connectivity
- The status of Internet Society chapters
- The policies affecting computer and Internet purchase and use
- Costs of computer hardware, Internet services, and phone calls
- Taxes and customs procedures with regard to computer hardware and software

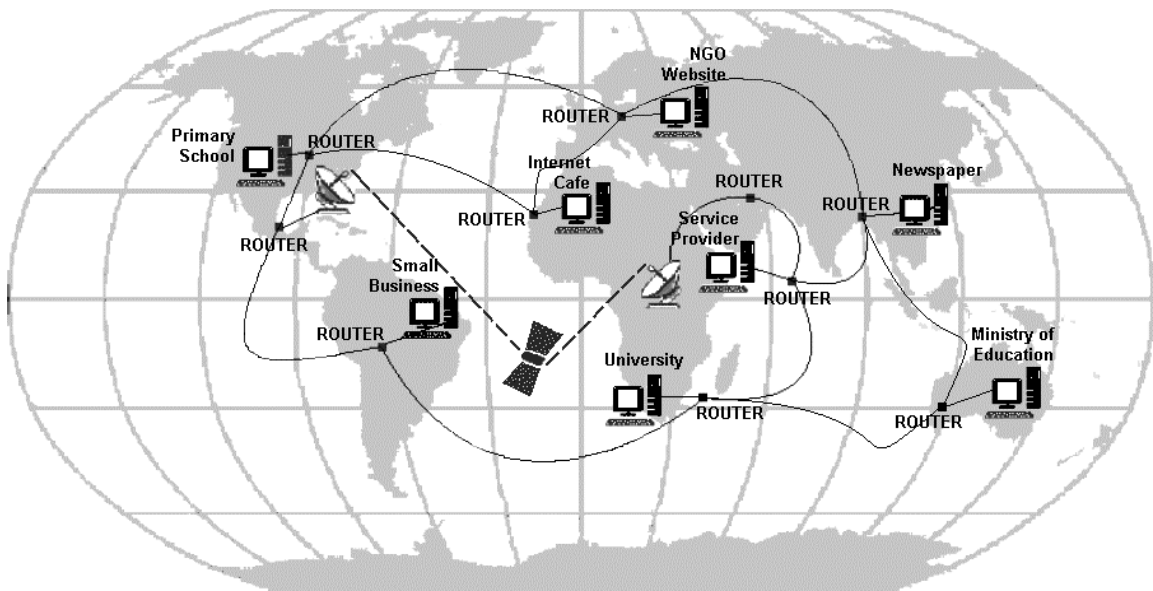
Step 2:

Ask if there are any questions.

Ask a participant to reread the objectives read at the beginning of the module. After each objective, ask the group if each was achieved.

Transparency 1

Introducing the Internet

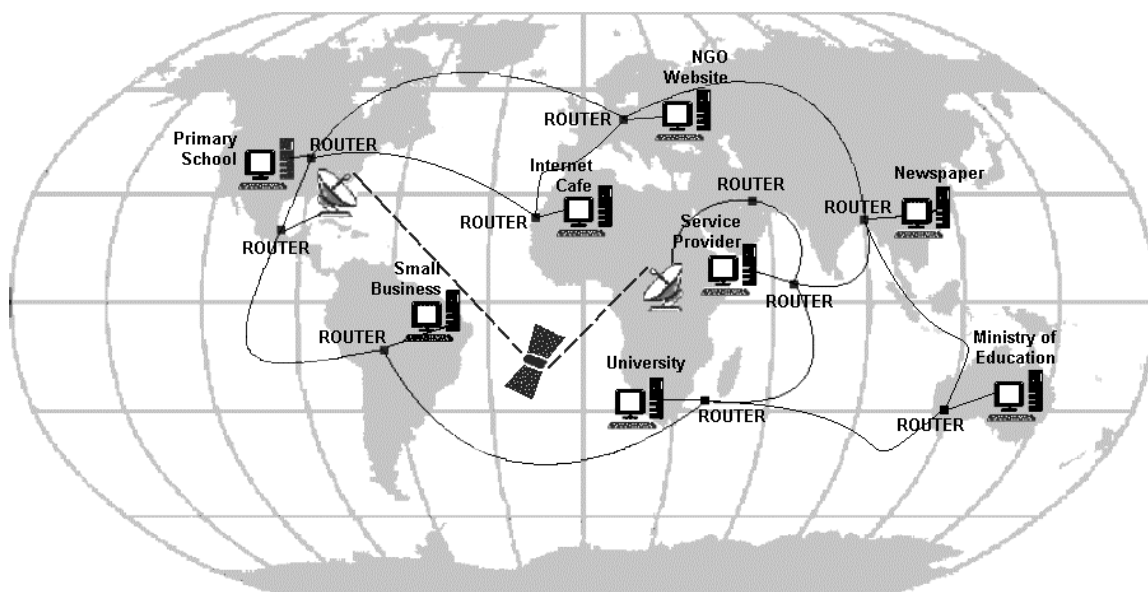


Transparency 2

What is the Internet?

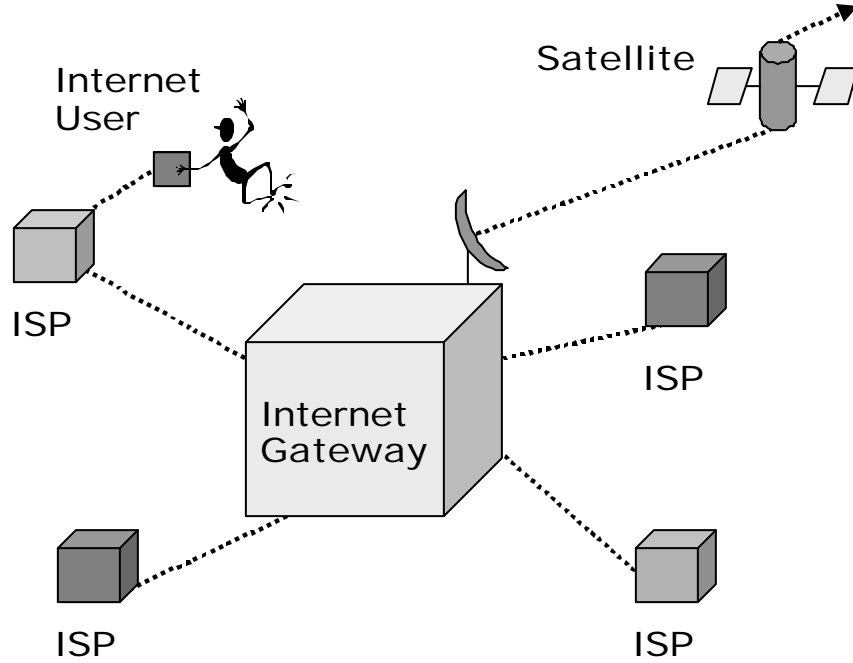
- ✓ The Internet is a worldwide network of computers that is often described as a “network of networks.”
- ✓ The two primary tools of the Internet are e-mail and the World Wide Web.
- ✓ TCP/IP, for Transmission Control Protocol/Internet Protocol, is the common language that allows the Internet to function globally.
- ✓ There are 153.5 million Internet users worldwide.

(Nua Survey, February 1999)



Transparency 3

A Country's Internet Connection, Simplified



Transparency 4

How the Internet was developed

- ✓ ARPANET (ARPA stands for the Defense Department's Advanced Research Projects Agency) developed by U.S. Department of Defense, 1969
- ✓ American universities networked, 1970
- ✓ NSFNET developed by the National Science Foundation, 1986
- ✓ World Wide Web developed by CERN (a French abbreviation for the European Laboratory for Particle Physics), 1989
- ✓ Internet Society (ISOC), a nonprofit organization dedicated to maintaining the Internet, established, 1992
- ✓ First Web browser created, 1993



Transparency 5

What can you do with the Internet?

- ✓ Exchange e-mail messages with other Internet users who have e-mail accounts
- ✓ Participate in discussions and have real-time conversations with others
- ✓ Do research using databases and other online resources
- ✓ Try new computer programs

Transparency 6

What else can you do with the Internet?

- ✓ Buy goods and services
- ✓ See and listen to video and audio files
- ✓ Share electronic documents
- ✓ Share information with a number of other people at once
- ✓ Find information on just about any subject imaginable

Why use the Internet?

- ✓ It is fast
- ✓ It contains an endless amount of information
- ✓ It is inexpensive
- ✓ It makes it easy to get information
- ✓ Freedom

Endless possibilities

- ✓ Communication
- ✓ Publishing
- ✓ Research
- ✓ Marketing
- ✓ Teaching and training
- ✓ Trade



Trainer's Note: At this point, show three or four home pages that will get your audience's attention and demonstrate the utility of the Internet as you just talked about. Find home pages that are easy to understand and relevant; include at least one page from the host country.

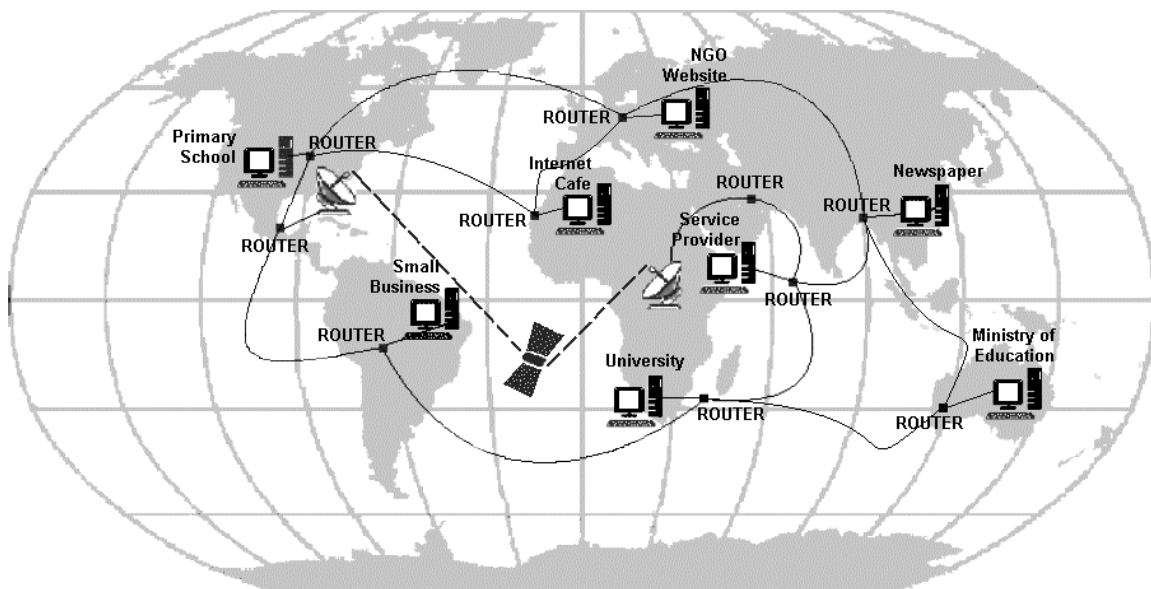
The Internet: A Tool for Empowering People in the Information Age*

The following introduction to the Internet is intended to give you just enough background to understand the Internet and what you might be able to do with it. Although you can refer to many detailed sources of information about the Internet, we hope that this introduction will spark your imagination so you can think of ways that the Internet can help achieve your organization's development objectives. Just as you do not need to know how a car works in order to understand its benefits, you do not need to know a great deal about how the Internet works, which buttons to push, or what software you need in order to begin thinking of what you can do with it. If you are aware of its possibilities, you can begin planning how it might help your organization.

What Is the Internet?

The Internet is a global network of computers. It is often described as a “network of networks,” because it first began through the linking of existing local computer networks used by universities and governmental organizations. The Internet is a constellation of computers around the world that “speak the same language,” so information travels seamlessly from one computer to another. When you connect to the Internet, your computer becomes part of this worldwide network of computers. The Internet is more than just a technological marvel. The pace is quick, with messages and information racing around the world in a few seconds, but the Internet is essentially about helping people communicate with each other. The diagram on the next page is a much simplified view of the Internet.

A Sample Internet Connection



Note: This illustration is simplified for reasons of space.

How Did the Internet Develop?

The Internet began in the 1960s when the U.S. Department of Defense began creating a computer network that would continue to function in the event of a major disaster. In 1969, four mainframe computers at U.S. universities were linked into a network that transferred data on dedicated high-speed transmission lines. Throughout the 1970s and 1980s, new, similar networks were created to link educational institutions, government offices, and military centers in the United States and other countries. In the 1990s, as the Internet has grown, private business and other regional network providers have taken over the operation of the major Internet arteries, and the development of much of the information available online. Private businesses, educational institutions, organizations, and individuals now develop much of the information content available online.

How Does the Internet Work?

The Internet is a worldwide complex of smaller regional networks. To understand it, picture a major road connecting large cities. Smaller roads link the cities to small towns, where residents travel on narrow residential streets. The high-speed Internet is the major road in this scenario. Connected to it are smaller computer networks (functioning like smaller, less traveled roads) that can share data at high speeds. In order to enable different types of computers to communicate with each other, a standard “protocol” has been established for transporting data. This Internet protocol (called Transmission Control Protocol/Internet Protocol, or TCP/IP) allows networks all over the world to communicate with each other on the Internet.

The Internet is a combination of computer hardware and software that allows computers to communicate with each other. If you have a telephone equipped with long distance service, you can call anyone in the world, provided you know the person’s telephone number. Likewise, if you have a computer connected to the Internet, you can exchange information with any other computer in the world that is connected.

What Can You Do With the Internet?

The Internet can transfer information in any digital form—text, sound, graphic images, and video. Over a mesh of dedicated data lines, telephone lines, satellite links, and computers, different software programs run that allow people to communicate. In some cases, such as when you use e-mail or participate in online discussion groups, you are actually communicating with a person. In other cases, such as when you visit websites, you are instead accessing information that is stored on another computer.

On the Internet you can—

- exchange electronic mail with other Internet users who have e-mail accounts,
- access and participate in discussion forums, which are real-time “conversations,”

- search databases,
- try different computer programs,
- purchase goods and services,
- watch video files,
- listen to audio files,
- exchange electronic documents,
- post information for other people to use, and
- find relevant information on almost any subject imaginable.

There are endless possibilities, all with a few clicks of a computer “mouse.” Many of the uses listed above are available free or at very low cost.

Why Use the Internet?

Speed. A letter or document that could take days to arrive by regular mail can be sent to the other side of the world in minutes or hours using Internet e-mail. Likewise, searching through a card catalog at a library can be a time-consuming, tedious process, but you can search an online version of the same catalog in a fraction of the time.

Breadth. The Internet gives you access to a vast (and growing) collection of databases, documents, computer software, and almost any other kind of information that can be stored electronically.

Cost saving. Exchanging information via the Internet is less expensive than using telephones or fax machines, especially where telephone access fees are high. Likewise, marketing your services or products on the Internet can be less expensive than using conventional printing and document-delivery methods.

Two-way communication. Audiences now have the means to respond directly to sources of information, research, and opinions.

Freedom. There are no bosses, no board of directors, no stockholders, and no political rules. Each group of people accessing the Internet is responsible for its own machine and operation of its own section of the network. The Internet belongs to everyone and no one.

Who's in Charge of the Internet?

No single authority controls the Internet, nor does one central computer power it. Whoever is in charge of, or operating, each computer connected to the Internet decides what information to make available on it. This design has reduced the costs for an individual or organization to get



onto the network. However, this complexity can also make it difficult to navigate the Internet and find the information you want—especially as computers may have different commands for accessing and organizing their resources. Recently developed navigational tools and “maps” will help people find what they need on the Internet.

The World Wide Web

The World Wide Web, or the Web, is one of the Internet’s most popular applications. It is a graphical, easy-to-use way to organize and present information, including text, images, movies, sounds, and more! The World Wide Web has generated tremendous popular interest in the Internet. In addition to an Internet connection, access to the Web requires a software program called a “browser.” Netscape Navigator and Microsoft Internet Explorer are currently the two most common Web browsers, but others are available, and they are all either free or very low-cost.

Future of the Internet

The Internet is getting bigger every day in terms of the number of users, the amount of information, and the number of services available. What seemed very novel only a few years ago has become more commonplace and widely available and less expensive.

In the future, computer networks worldwide may commonly feature three-dimensional animated graphics, radio and cellular phone links to portable computers, as well as fax, voice, movies, and high-definition television. Some of these services, such as three-dimensional navigation, wireless Internet connections, and Internet telephone service, are already commercially available. New, cost-effective ways to make Internet communication faster and cheaper are being developed every day. With these increases in connection speeds, you can expect to see an explosion of online commerce, publishing, database distribution, collaborative research projects, video-conferencing, and 3-D worlds. All of these applications are already being used in some form or are under development.

Many companies already have secure Internet payment systems. And although security remains an issue, an increasing number of companies will sell products and services over the Internet that allow consumers to conduct payment transactions using credit cards, debit cards, or electronic cash.

There is no telling how far the Web will evolve, but the future looks promising. And as it becomes easier to use, more and more people will join this worldwide community called the Internet.

The Larger Picture

Most of the advances we hear regarding the Internet concern technical advances in computer hardware and new software programs developed for the Web. The biggest changes we will see, however, do not concern the machines and software programs that drive the Internet. Rather, the Internet’s lasting impact will be in how it will affect us as individuals and as a society.

The Internet allows us to participate in information exchanges, develop personal and professional relationships, and share our experiences with others—and of course help us achieve our personal, professional, and organizational goals.

Here are a few societal changes the Internet, particularly the World Wide Web, may make possible in coming years:

- With the Web used increasingly as an election and campaign tool, online voting may be coming. People will have the opportunity to discuss issues, vote anonymously, and increase their participation in the workings of their governments.
- Online education and distance learning are already here, but their use should greatly increase in the years to come. People will learn new skills and knowledge to enrich their lives, with more flexibility in terms of location, time commitment, etc. Instead of having to travel to attend a course or a training session, the education will “travel” to them.
- The Web can benefit the environment. Telecommuting and online shopping will increase, which could result in less urban congestion.

The Internet will not take the place of face-to-face personal contact, and it will never be the only way that we communicate with each other. However, it has defined and will continue to define new ways of meeting people, exchanging ideas, earning money, and many other things we do as part of our daily lives.

References and for More Information

Electronic Frontier Foundation. 1994. EFF's (Extended) Guide to the Internet. (www.eff.org)

Institute of Development Studies. 1995-1997. Introduction to the Internet. (www.ids.ac.uk/eldis/kid/kid5.html)

Internet Literacy Consultants. 1994-1997. ILC Glossary of Internet Terms. (www.matisse.net/files/glossary.html)

Learn the Net, Inc. 1996-1998. Internet Basics. (www.learnthenet.com)

*Pages 49 to 53 are reprinted with permission from Leland Initiative Team, *Making the Internet Connection Count: Effective Use of the Internet in Seven Steps*. Washington, D.C.: Academy for Educational Development, 1998.



Important ICT Terms

Bandwidth

A measure of the amount of data that can be sent over a particular medium at a particular time, whether it be a telephone line, a dedicated data line, a satellite link, or other method. The amount of bandwidth available determines the capacity of the Internet to move data anywhere in the world, as well as the speed with which data can be moved to an individual Internet user. Moving text takes a relatively small amount of bandwidth. Graphics, video, and sound require much larger amounts of bandwidth.

Browser

The software used to access and view sites on the World Wide Web. Netscape Navigator and Microsoft Internet Explorer are examples of Web browsers.

Button

A graphic that a user can “click on” to do something, such as download a program or go to another Web page.

Case Sensitive

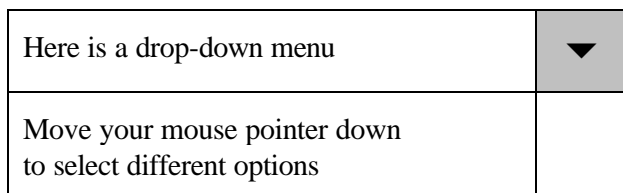
A term used to describe whether letters are typed in uppercase or lowercase. Some computer programs and network services are case sensitive, which means “XYZ” is considered different data than “xyz.” (Some Internet users are case sensitive too: It irritates them if they receive messages typed in all CAPITAL LETTERS, which is the visual equivalent of shouting.)

Desktop

Quite simply, your computer screen.

Drop-Down Menu

A list of options that drops down when you click on a down arrow button.



E-Mail (Electronic Mail)

Messages sent from one person to one or more other persons via a computer network. The same e-mail can easily be sent to many addresses at once. E-mail is still the most commonly used Internet tool.

File Transfer Protocol (FTP)

FTP is the most commonly used method for transferring files on the Internet without viewing them as they are transferring. It is fairly simple to set up and run an FTP server, and there are many FTP servers available for public use. Thus, FTP is a very easy way to “publish” information on the Internet. Many institutions maintain publicly accessible archives of information that they want to share with others.

Gopher

A method of making text-only material available over the Internet so it can be viewed online. Gopher servers were used widely before the advent of the World Wide Web, and there are still many in operation. They can be accessed through a Web browser, so many people think of them as a part of the Web.

Home Page

Originally this referred to the Web page that your Web browser is set to view when it first opens. It now also refers to the main Web page of a business, organization, or person or the main page of a collection of Web pages.

Hot Spot

An area on a picture on the computer screen that you can click to move to another page or location.

Hypertext/Hyperlink

A word or phrase in a document that has been set up to link to other sections of the document or to other documents that give more information about the subject. One usually follows such links by clicking on them with a computer mouse. Links can also be made to graphic images, to music, or to any other digitized document. For example, a document about health might link you to definitions of specific terms, to audio files to hear the pronunciation of a word, and to the Web page of an organization works in a specific area.

Hypertext Markup Language (HTML)

This is the language that is used to create hypertext. It consists of various “tags” that indicate to a Web browser how specific text is to be displayed on the computer screen, as well as where in the document or where on the Internet to find a link.

Icon

Images located on your computer desktop or Web browser that you click on in order to activate a program or link. As in “Double click on the Recycle Bin icon on your desktop so you can retrieve a message that may have been accidentally deleted.”



Internet Conference

This refers to several techniques that are used to allow people to discuss topics of mutual interest. A conference can be as simple as sending the same e-mail to many people or as complex as arranging to have people in 25 cities see images of each other and hear each other talk in real time. The technology becomes more complex and the speed of the connection becomes more important as one goes from text only to transmitting sound and video in real time.

Internet Connectivity

Several levels of Internet connectivity are possible. The type of connection you have determines which features of the Internet you can use most easily. A *direct connection* to the Internet means that you have full, complete, real-time access to all Internet services. An *indirect connection* to the Internet means that you are really getting a remote view of all your Internet services through the hardware and software of another computer. Some indirect connections are good for e-mail only, while others, known as *shell* accounts, make available a full range of Internet services. With an indirect connection, you will probably not be able to use graphics or customize the way you interact with the Internet as much as you can with a direct connection. Your local Internet service providers can tell you what kind of connections they offer.

Internet Fax

A service that takes a special type of e-mail message and sends it to a fax machine specified in the message. With Internet fax service, you are not charged for a long-distance call.

Internet Service Provider (ISP)

A company or organization that provides an access point to the Internet, usually for a fee. In order to connect to the Internet, an individual, business, or organization must go through an ISP.

Internet Telephony

A service that enables use of the Internet as a voice telephone line. In some cases, both you and the person you are calling must have an Internet connection and be online at the same time in order to talk. Some of these services are free or inexpensive, but they have varying degrees of reliability. Some companies also offer Internet-to-phone services whereby you can call any telephone in the world from your computer. If your organization spends a lot of money on long-distance telephone calls, this might be a good option. A growing number of companies provide Internet telephony services.

Listservs (E-mail Distribution Lists)

E-mail distribution lists (frequently called “listservs” after the name of a popular software program called ListServ) are an Internet application that allows subscribers to send one e-mail message to all the people who subscribe to (or have signed up for) the list. Subscribing to the list and all other transactions are handled through e-mail. Lists are a powerful and inexpensive way for people with shared interests to communicate quickly and cheaply. Sending an announcement to a list is like immediately publishing or broadcasting your remarks.

Many universities and nonprofit organizations with computer facilities are happy to host lists that conform to their interests. There are a number of different listserv software programs, including ListServ, ListProc, Majordomo, and Yahoo! Groups.

Log In and Log Out

Every computer network must have some way to identify the people who are online at any given moment to make sure that they are all legitimate users. For that reason, you must *log in* to a computer system before you use it. This is usually simply a matter of giving the computer your assigned name and a password that you have chosen. You must also *log out* of the system when you are finished.

Maximize

Increasing the size of a window to occupy the entire computer screen.

Menu

A list of options that activate computer functions.

Minimize

Decreasing the size of a window to a small rectangle that sits at the bottom of your computer screen.

Modem

A modem (from MODulator/DEModulator) is a device that converts the digital signals of a computer into analog signals (sound) that can be transmitted over an ordinary telephone line.

Navigation

To move around on the World Wide Web by following hypertext paths from document to document on different computers.

Newsgroups

Newsgroups are one of the original ways that people with common interests shared information or sought advice over the Internet. Newsgroups do not operate by sending messages directly to an e-mail address but by sending a *feed* to specific servers around the world. These feeds happen at specific times of the day, not immediately after a new message is posted to the newsgroup. The institution that provides your computer with access to the Internet, whether a university or an ISP, selects the newsgroups it wishes to subscribe to, and these are the only newsgroups you can get.

Packet

The basic unit of data that is transmitted over the Internet. Every file, whether it is an e-mail message or a musical recording, is broken down into numerous packets of a specific size that follow a protocol appropriate to the application being used. Each packet contains information



about its point of origin, its destination, its size and type, and data needed to verify correct receipt. The Internet is a *packet switched network*, and it uses all this information to ensure that each packet arrives at its destination as intended.

Password

A secret combinations of letters and other symbols needed to log in to a computer

Real Time

Simultaneous transmission and reception by the intended parties. In contrast to e-mail, where the receiver may read the e-mail many hours or days after it was written, a telephone conversation or a face-to-face meeting takes place in real time.

Right-Clicking a Mouse

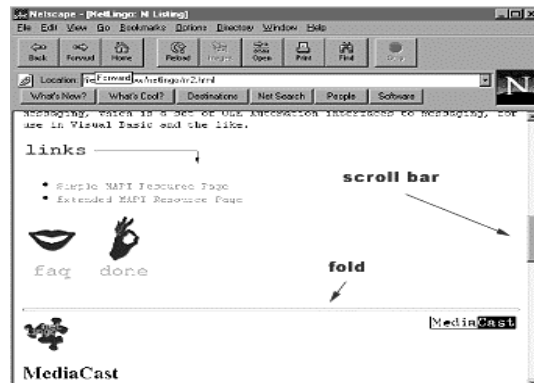
Clicking the right button of your mouse to access shortcuts for performing certain tasks (in Windows operating systems).

Router

A special-purpose computer that handles the connection between two or more networks. Routers examine the destination address of all packets going through them and determine where to send the packets next to get them to their destination.

Scrolling

Scrolling is the act of moving a browser's scroll bar. This allows a user to see what else is on a Web page other than what appears in the initial screen. The content on the initial screen is called "above the fold," and what you see when you scroll down is called "below the fold."



Server

A special-purpose computer that distributes data to other computers, either when requested to or when it has been programmed to. Examples include World Wide Web and FTP servers.

Task Bar

On Windows machines, this is the default bar or border at the bottom of your screen. It shows the Start button, all of the applications that are open or active, and the time (among other things).



Uninterruptible Power Supply (UPS)

If the electricity goes out or there is a power surge while you are using a computer, many bad things can happen, including damage to your software or equipment. At the very least, you can lose data that has not been saved. A UPS provides you with some degree of protection from this by smoothing the flow of power to your computer or system and storing a limited amount of electricity. When the power goes down, most computers give a warning sound, and you know that you have a few minutes to shut down your equipment properly, thus avoiding any damage to or loss of data. It is also a good idea to have a device that protects your computer from power surges and lightning strikes.

User ID

The name (also called a screen name) by which you or someone else is known on the Internet. It is used when logging in to a computer system or when entering a members-only area on the Web.

Telnet

An Internet service that allows you to connect to a remote computer to use specific databases or other applications available on that computer. Telnet is one of the first applications widely used on the Internet. Many telnet applications are now available on the World Wide Web, where they are easier to use.

Transmission Control Protocol/Internet Protocol (TCP/IP)

The suite of protocols that defines how the Internet works. Much as diplomats follow certain protocols in communicating with ambassadors and other foreign officials, a network protocol lays the groundwork for how different devices on the network communicate with each other. The Internet uses many different protocols.

Uniform Resource Locator (URL)

The standard way to give the address of any resource on the Internet. This is the address you enter into the “go to” line of a Web browser in order to visit that site.

The URL <http://www.peacecorps.gov/about/index.htm/> represents the following:

http:// indicates the type of protocol for the computer and network to use in requesting and receiving data from the server. In this case it is hypertext transfer protocol.

www.peacecorps.gov is the name of the actual server (computer) that you are contacting.



/about/ is the name of the directory (or folder), the place on the computer where the file you are requesting can be found. There may be several subdirectories, each separated by a slash (/).

index.htm/ is the name of the actual file, or page, that you are requesting.

Uninterruptible Power Supply (UPS)

If the electricity goes out or there is a power surge while you are using a computer, many bad things can happen, including damage to your software or equipment. At the very least, you can lose data that has not been saved. A UPS provides you with some degree of protection from this by smoothing the flow of power to your computer or system and storing a limited amount of electricity. When the power goes down, most computers give a warning sound, and you know that you have a few minutes to shut down your equipment properly, thus avoiding any damage to or loss of data. It is also a good idea to have a device that protects your computer from power surges and lightning strikes.

User ID

The name (also called a screen name) by which you or someone else is known on the Internet. It is used when logging in to a computer system or when entering a members-only area on the Web.

Window

A rectangular area that you open to access information, and can then close or temporarily hide. You can open more than one window at the same time.

World Wide Web

The World Wide Web (WWW or the Web) is by far the most popular application on the Internet, and with good reason. The Web integrates text in any format, sound, video, and virtually any other kind of information that can be put in a digital format. The basic language of the Web is hypertext markup language (HTML), which is used to indicate what the information on a Web page should look like. The Web makes it easy to use the resources of the Internet without knowing a lot about computers. Modern Web browsers, such as Netscape Navigator and Microsoft's Internet Explorer, can request and display the information from a Web server in exactly the way that the originator intended. As information on the Web gets easier to find, it is becoming more useful as a tool for conducting everyday business.

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Module 4: Connecting to the Internet

Learner Objectives

By the end of this session, participants will be able to:

- ✓ Describe their equipment needs.
- ✓ Engage in a dialogue with their Internet service provider about their Internet needs.

Time

60 minutes

Materials and Setup

- Role play costume for client
- Role play costume for ISP representatives

Handouts

- Diagrams (two) of Internet connection
- “Preparing for Connectivity” table
- List of ISPs in the country
- “Finding and Getting Connected to Your Internet Service Provider”

Session Outline

- I. What You Need to Get Connected (20 minutes)
- II. How to Evaluate an ISP (20 minutes)
- III. Internet Theater (20 minutes)

Delivery

I. What You Need to Get Connected (20 minutes)

Step 1:

Begin this session by stating that the Internet may seem complicated but knowing some of the basics will help participants get connected.

Step 2:

Distribute the handouts and tell the participants that you will go through each one of the concepts and list everything that is required to obtain Internet service.

Step 3:

Go through the first step of connection—hardware. List each item and describe it using the information that follows. Bring an actual computer, modem, surge protector, and telephone to the session to serve as visual aids and to demonstrate how these hardware items are connected.



Computer

- Faster is generally better, with a 486 or Pentium needed to use the Web.
- Get as much hard disk capacity and RAM (random access memory) on your computer as you can afford.
- Budget for equipment maintenance and repair costs as well as initial purchase.
- Modem
- Modems connect the computer to the telephone line.
- Modems convert the digital signals computers use for creation and storage of information to analog signals.
- External modems connect by cable to your computer. They are often easier to install and simpler to repair than internal modems.
- Internal modems are small cards with circuitry and computer chips that are placed inside your computer.
- Faster modems generally run better than slower modems. They can adjust their speed downward to communicate with slower modems.
- Speed should be at least 14,000 bytes per second to connect to the graphical portion of the Internet, the World Wide Web.
- Ask your ISP or telecommunications authority about any rules or regulations governing the type of modems that can be used in electronic communications.
- Find out what modem speeds the local ISPs support.
- Find out from the telephone company about possible transmission speeds over the telephone.

Surge protector

- A surge protector protects a computer and modem from electrical surges over telephone lines.
- Consider getting an uninterruptible power supply (UPS) that includes surge protection.

Telephone connection

- When the computer is connected to the Internet, the telephone line is busy.
- Consider installing one or more dedicated telephone lines.
- It might be possible to use satellite or radio. Note that it is important to have a clear connection, since noise in the telephone line will disrupt data transmission.

Step 4:

Go through the next step of connection—software. List each item and describe it using the information that follows. State that the last three items are methods of getting connected, not necessarily requirements for getting connected.

Communications software

- Find out what connections your Internet service provider offers, since the type of communications software you need will depend on the type of connection you have.

Step 5:

Go back over everything participants need to get connected:

- Computer
- Modem
- Telephone line/number
- Password (provided by ISP)
- E-mail address (provided by ISP)

If planning to access the World Wide Web, they will also need to configure the following:

- Internet Protocol (IP) address (provided by ISP)
- IP address of the ISP's domain name server (DNS) (provided by ISP)

II. How to Evaluate an ISP (20 minutes)**Step 1:**

Begin by noting that with any purchase, it is important to be an informed and savvy customer. Tell participants not to be afraid to negotiate. When ISPs launch, they sometimes offer promotions and may be willing to cut certain prices to win business.

Step 2:

Emphasize that many considerations need to be made when choosing an ISP. Some will depend on the type of services that the participants' organizations require.

Step 3:

Some of these considerations are:

- Service costs
- Telephone charges
- Modem speed
- Equipment costs
- Software required
- Technical support
- Training
- Reputation of ISP for good service

Service costs

- Determine connection costs as well as recurrent costs.



- Consider usage needs of your institution.
- Ask ISPs about different pricing plans.
- Be aware of common fees imposed by ISPs. Find out if you can change from one fee structure to another without a penalty if your needs change. The standard fees follow:
 - Registration or subscription fee: one-time charge when account is established
 - Flat monthly fee: a good choice if your institution anticipates high Internet use
 - Time-based fee: based on number of hours of actual use; good for lower-volume users (fewer than 30 or 40 hours a month)
 - Traffic-based fee: based on the number or size of the messages sent and received; difficult to control messages received
- Do not overlook training costs for staff to install, update, and maintain system.
- Consider costs for training users of the system.

Telephone charges

- You will always incur some telephone charges, since Internet connections use telephone lines.
- Consider whether you will use a local or long-distance call to reach your ISP.
- Find out if you will be charged by the minute or by the call.
- Find out if you will need an additional telephone line for an Internet connection.

Modem speed

- Find out what modem speeds the ISP can support.
- Find out how many dial-in ports (modem lines) the ISP has.
- Find out how many users are currently signed up to use these lines.
- Find out what the ISP's projection is for usage in the next six months/year.

Equipment

- Find out if your current computer hardware is sufficient or if you will need to upgrade it to use the ISP's services.
- Consider whether you will need to purchase a new modem.

Software required

- Find out if the ISP offers communications software as part of its service.
- If it does, find out how much it costs (it may be free).
- Find out from other customers whether or not it is reliable.
- If it does not provide software, either buy software or obtain freeware from the Internet.

- In any case, find out from the ISP if the software you plan to use is compatible with its system.

Technical support

- Find out if the ISP provides technical support.
- Find out the average response time.
- Find out how comprehensive the technical support is.
- Find out how many people the ISP has assigned to do this work.
- Find out if it provides installation support.
- Ask if there are additional costs for this service.
- Many ISPs provide basic installation support and training as part of the initial fee.
- If support is not provided, consider whether anyone on your staff can provide these services or whether there are other ISPs in the area.

Training

- Find out if the ISP provides training.
- Find out what types of classes it offers.
- Find out where and when the training sessions are held.
- Find out how much the courses cost.
- Some ISPs provide training to technical staff as part of the initial fee. If they do not, or if the training is expensive or of poor quality, find out if other options exist in the area through universities, computer companies, or user groups.

Experience and reputation

- Ask the ISP what its level of experience is.
- Ask what evidence it has of a good reputation. Does the ISP have a list of satisfied clients whom you may contact?
- Perhaps the most important consideration is the experience of others with the ISP. Current customers are more likely to give honest answers. Because the ISP is trying to sell you a service, it might overstate its capabilities and offerings.
- Try to find out if the ISP's connections are often busy or out of service. Keep in mind that poor telephone lines may be a contributing factor if this is the case. However, these problems may also be related to the ISP's system or software.

III. Internet Theater (20 minutes)**Step 1:**

A fun and engaging way to put forth all of the concepts from sessions 1 and 2 is through a short theater presentation. The trainers will portray three characters. If this session is done on the second day, then you can solicit a trainee to participate and coach him or her on the role.



Step 2:

Choose a fictitious name for the Internet service provider and common local names for all of the characters. The characters follow:

- An Internet service provider
- An NGO representative who is charged with establishing Internet service
- A friend of the NGO representative who has already subscribed to the ISP

Step 3:

Assemble a simple costume that indicates to the participants that you have changed character. You may want to use a hat or jacket for this. It is best if the articles are recognizable as being from the country. If possible, all three actors should exit the room and reenter in character.

Step 4:

The example that follows is a skit performed during a training in Mali. The fictitious ISP name was InterMali. The trainers used a mud-cloth sash and mud-cloth jacket as their costumes.

Scene 1:

Madame Keita—the Internet service provider (InterMali)

Madame Coulibaly—the NGO representative

Use traditional Malian greetings (four kisses and greetings in Bambara)

Coulibaly: Am I in the right place, InterMali? Are you an ISP?

Keita: Yes, you are in the right place.

Coulibaly: I am interested in getting connected to the Internet. What do I have to do?

Keita: Well, first you need certain equipment. Do you have a computer? A 486 or Pentium is ideal, the faster the better. A modem?

Coulibaly: What is a modem?

Keita: It is used to connect the computer to the telephone line—a translator that allows computer data to be converted so that it can pass over the telephone line.

Coulibaly: I am not sure. What do they look like?

Keita: A modem can be either internal or external. A technician will be able to visit and tell what type of modem you have. If you do not have an internal one, they can be purchased from InterMali.

Coulibaly: Will a technician be able to come to my house and connect me?

Keita: Definitely. She will make sure that you have all of the other equipment that is necessary—a surge protector, a telephone line—and we will provide you with the communications software you will need for access to e-mail and the World Wide Web.

Coulibaly: Do I have to have both of these services?

Keita: No, we provide many service options—e-mail only, full access, unlimited access, or pay per use.

Coulibaly: How much does Internet access cost?

Keita: There is a one-time subscription fee; then, depending on the plan you choose, a flat monthly fee, a time-based fee, or a traffic-based fee.

Coulibaly: Once I pay these costs, is everything included, including my phone calls?

Keita: No, you will still have to pay the cost of the local telephone call to connect with InterMali through SOTELMA.

Coulibaly: Internet service seems like it will be very expensive.

Keita: It might seem expensive, but when you consider the current costs of faxes, letters, and international telephone calls, you will quickly see that using the Internet will save you money.

Coulibaly: This all seems a little bit overwhelming. I am somewhat familiar with the technology because I went through a training at work, but do you offer any training?

Keita: For a small fee, there are weekly sessions where a key concept is reviewed and any user's questions or problems are addressed. We also have more advanced training in Web publishing.

Coulibaly: Well, I am very interested. I will fill in the information sheet and get it back to you along with my subscriber's fee. Thank you for all of your time.

Keita: Please call me if you have any additional questions.

Scene 2:

Madame Coulibaly—the NGO representative

Fanta—her friend who has subscribed to InterMali

Again, use traditional Malian greetings.

Fanta: How have you been? I am surprised to see you in this neighborhood. I thought your office was across town.

Coulibaly: It is. I was just leaving InterMali. You have Internet access through them, right?

Fanta: Yes, I do; it is really great.

Coulibaly: What do you think of InterMali's service?

Fanta: They do a good job with the initial training when you subscribe, but when I have problems now, they take about three or four days to get back to me.

Coulibaly: Do they have good service support? Do you have to pay for it?

Fanta: Only after the first few times does InterMali begin to charge you. Like everything else, their fees are negotiable. Make sure that you try to negotiate with

them before you connect. Also, look at the other Internet service providers and make sure that InterMali has comparable prices.

Coulibaly: Do you ever have any trouble getting through?

Fanta: There are some times of the day where the lines are almost always busy and the connection is slow, so I usually use the service at night.

Coulibaly: So do you think it is worth the investment?

Fanta: Definitely. I have learned a lot and have found very valuable resources that I never had access to before.

Coulibaly: Thanks for your help and insight, Fanta. See you soon!

Step 5:

Stay in character as Madame Keita and Madame Coulibaly.

Madame Coulibaly, turn and ask participants, “My friends, is there anything I did not ask my Internet service provider?”

Madame Keita can respond to questions as an ISP.

Step 6:

Encourage participants to think of other important issues to bring up with the ISP.

Examples include:

- Do you host Web pages?
- Can you help me publish my own site on the Web?
- What if I do not have a computer at home? Are there public access terminals at your office?
- Can I use a cellular phone?

Step 7:

After a few minutes, go out of character and ask why the scene with Fanta was included. Emphasize the importance of speaking with others about ISPs and their services. The reputation of the provider is as important as what the ISP says.

Step 8:

Ask if there are any questions.

Ask a participant to reread the objectives read at the beginning of the module. After each objective, ask the group if each was achieved.

Finding and Getting Connected to Your ISP

What You Need to Get Connected

- Computer
- Modem
- Surge protector
- Telephone connection
- Communications software
- Password
- E-mail address (provided by ISP)
- Web browser
- Internet Protocol (IP) address (provided by ISP)

How to Evaluate an ISP

- Service costs
- Telephone charges
- Modem speed
- Equipment costs
- Software
- Service support
- Training
- Experience and reputation

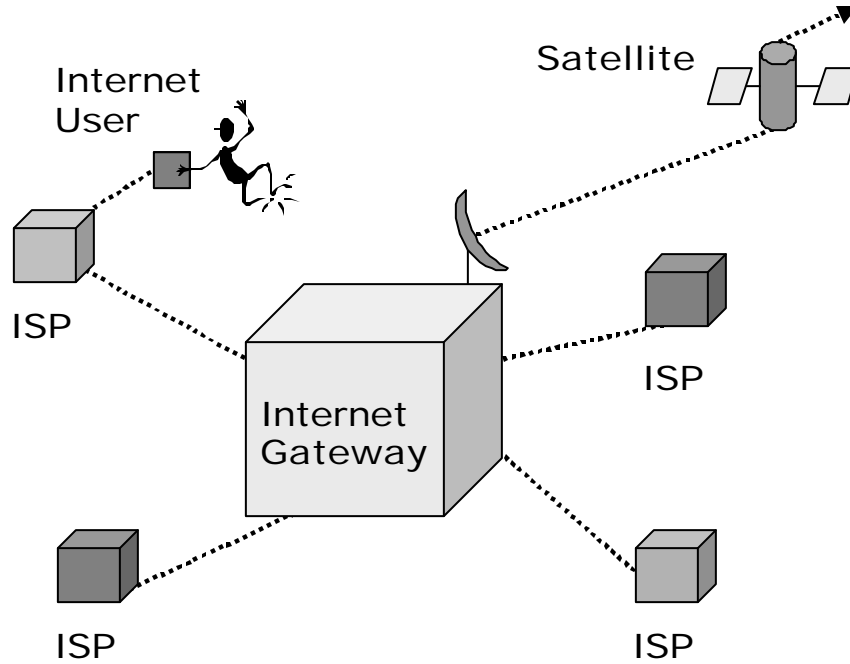


Preparing for Connectivity			
	Minimum	Preferred	Cost
Computer	386 processor	486 or better	
Modem (and any connectors needed)	14.4 Kbps (kilobits per second)	28.8 KBPS or better	
Software (other than operating software and software for your normal work)	<ul style="list-style-type: none"> • Telephone dialer and TCP/IP software • E-mail client software • Web browser software 	Minimum software generally provided by ISP. Once you have an Internet connection, you can download additional software.	
Telephone line	With a dial-in connection, you can use the same line you use for telephone and fax.	Separate dedicated line	(annual cost)
Internet access	Provided through an ISP	Provided through an ISP	
Account start-up fee	Some ISPs charge a one-time fee to start a new account.		
Computer maintenance	Cost per repair visit	Ongoing maintenance	(annual cost)
Total			

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Transparency 1

A Country's Internet Connection, Simplified



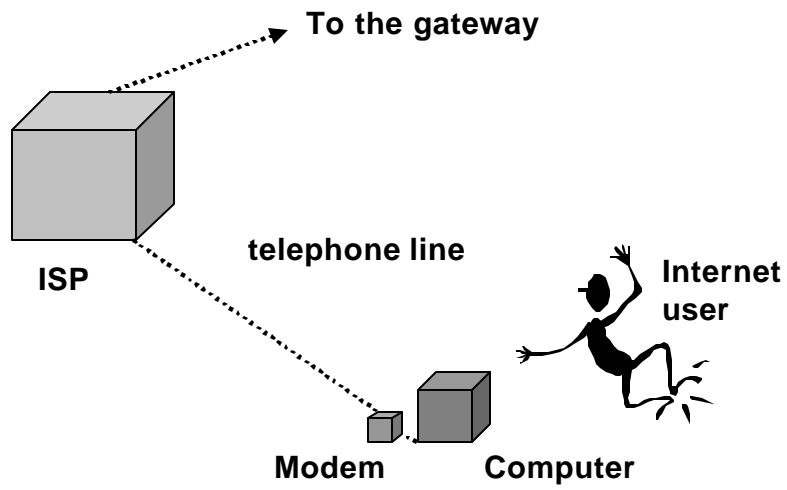
Note: These illustrations are simplified and do not represent the situation in every country. Local variations exist.

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Transparency 2

Internet Connectivity, a Close-up



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Module 5: E-mail and Mailing Lists

Learner Objectives

By the end of this session, participants will be able to:

- ✓ Compose, send, and receive messages via e-mail.
- ✓ Understand the purpose of mass mail distribution programs such as listservs.

Time

50 minutes

Materials and Setup

- Overhead projector or LCD panel connected to a computer and the Internet
- Temporary e-mail addresses set up for each participant

Flip Charts or Transparencies

- Sample e-mail addresses and Internet domain name list
- Mailing list diagram

Handouts

- “ ‘Netiquette’ Commandments for List Participation”
- “21 Tips for Subscribing to a Mailing List”
- List of common mailing lists (to be prepared by facilitator)
- Basic glossary of mailing list commands (to be prepared by facilitator)
- “How does a mailing list work?”

Session Outline

- I. Description of E-mail as a Communication Tool (15 minutes)
- II. E-mail Addresses, Messages, and Attachments (15 minutes)
- III. Mailing Lists and Subscriptions (20 minutes)

Delivery

I. Description of E-Mail as a Communication Tool (15 minutes)

Step 1:

Begin either by asking for a volunteer to explain what e-mail is and adjusting this definition as needed or by providing your own description of e-mail. Some of the features that should be mentioned follow:

- A message is like a memo.
- It can be sent to people anywhere (if they have e-mail).



- Copies can be sent out to many people at one time.
- It is instantaneous.

Step 2:

If there is a good understanding of what e-mail is, and participants are familiar with the tool, continue by asking participants what they can do with e-mail. Some functions follow:

- Compose messages
- Send messages
- Open messages
- Reply to messages
- Forward messages
- Delete messages
- File messages
- Attach files or documents to messages

Step 3:

Describe e-mail as an efficient and less expensive means of communicating compared with other communication tools like fax and telephone.

Step 4:

Emphasize that e-mail is one of the most widely used Internet tools. It can be used even if other tools on the Internet, such as the Web, are not accessible. Understanding e-mail is critical to understanding the rest of the Internet.

Step 5:

Detail the resources required for using e-mail: a computer, e-mail software, and an e-mail account. It is also possible to use e-mail through the World Wide Web but Web access is needed.

Step 6:

Explain e-mail addresses. It will be helpful to have a flip chart prepared with some sample addresses. Use examples that are pertinent to the country.

Trainer's Note: The description might progress as follows:

You may have already seen an e-mail address like `addis@peacecorps.gov` (point to the flip chart). Now, let us examine the different parts of an e-mail address. The symbol in every e-mail address (@) is called the "at" symbol (point to symbol). To pronounce the e-mail address, one would say, "addis at peace corps dot gov." This means that the user addis is *at* the Internet location called "peacecorps.gov." The part of the address before the @ is the user and the part after the @ is the user's Internet domain name.

Domain names

What does the “gov” represent? It is called the top-level domain and identifies the broadest category of the user’s Internet address. The domain name gives you an idea of the type of organization in which the user is based. There are six commonly used top-level domains in the United States:

com—commercial	For example, cnn.com (Cable News Network)
edu—educational	For example, upenn.edu (University of Pennsylvania)
gov—government	For example, peacecorps.gov (Peace Corps)
mil—military	For example, osd.mil (Office of the Secretary of Defense)
net—network	For example, att.net (AT&T)
org—organization	For example, worldbank.org (World Bank)

Outside the United States, shorter top-level domain names are common: for example, .co for commercial entities, .or for organizations, and .ac for educational.

The Internet Corporation for Assigned Names and Numbers (ICANN), which governs the assignment of names, has recently created several new top-level domain names:

aero—air transport industry
biz—business
coop—cooperatives
info—unrestricted use
museum—museum
name—individuals
pro—accountants, lawyers, and physicians

Additional top-level domain names will be approved in the future.

Other countries have their own domain names that can be added after the standard top-level domain names or used instead of them. These are too numerous to list here, but some examples follow:

ca—Canada
uk—United Kingdom
et—Ethiopia
ml—Mali

A sample e-mail address outside the United States is abc@telecom.net.et.

No two e-mail addresses are the same; every user connected to e-mail has a unique address. The letters and numbers in an address must be entered exactly, with no spaces between characters.



Interpretation of an Internet address moves from right to left, with each segment narrowing down the path to the user. Let us examine an example:

abc@telecom.net.et

Starting with the far-right segment, the *et* domain refers to Ethiopia. The next level down is *net*, which refers to a network in Ethiopia. This is called the second-level domain. The next level, *telecom*, represents the Ethiopian Telecommunication Corporation's server. Finally, *abc* points to an individual user at *telecom.net.et*.

This process of addressing is similar to a filing system. The first-level domain is like a filing cabinet, the second-level domain is like a filing drawer, the server name indicates a specific file folder, and the user is like a unique sheet of paper in the folder.

Step 7:

Ask if there are any questions.

II. E-mail Addresses, Messages, and Attachments (15 minutes)

Step 1:

Introduce this activity by stating that you will explain and demonstrate how to compose, send, and read e-mail messages, attach files, and create an address group.

Trainer's Note: The explanation might progress as follows:

Once you are connected to the Internet, there are many different programs that can help you send and receive e-mails. Nearly all e-mail applications provide the same basic functions, though they may look different. [Insert name of e-mail program] is the example we will use to cover the following parts of an e-mail message: to, from, cc, subject, message header, and message body. You will learn what is supposed to be entered in each of these spaces. As I describe each of the parts, I will demonstrate how to use them (on the overhead projector or LCD panel).

Composing a message

When a computer is configured specifically for you, the "from" space may already be filled in automatically. You type the address of the recipient in the "to" space. You might also want to put addresses in the "cc" and "bcc" spaces. Remember, an e-mail message is like a memo. Can anyone give an example of when to use "cc"? It stands for carbon copy and is often used to send a copy of a message to a supervisor or to a colleague who might be interested in the topic. When you do this, the recipient knows that you have sent a copy of the message to other people; their addresses show up in the message. You use "bcc" (which stands for blind carbon copy) when you do not want the recipient to know that you have sent a copy of the message to another person. Can anyone give an example of when you might want to use "bcc"?

In the "subject" area, you give a brief title summarizing what the message is about. This informs the recipient of the message's content now and serves as a reminder later. The to, from, cc, bcc, and subject areas are all part of the message header. The message body is the open space, or field, under the header where you type the content of your message.

Editing a message

You can easily edit your message at any time before you send it. Use the normal editing commands and keystrokes that you use with a word processor. You might want to save a draft version of the message if it will not be sent right away.

Sending a message

Once the message has been composed and edited, sending it is just a matter of clicking a button. Depending upon the e-mail program you use, you either select “Send” from the menu bar or click on the “Send” button on the tool bar. The message then finds its way through the Internet to the recipient’s e-mail address. This process can take anywhere from a few seconds to a few hours, depending on the traffic on the server that hosts your computer and the traffic on the recipient’s server.

Reading a message

You can read new or stored messages at any time and then perform follow-up actions such as replying to and forwarding messages.

Replying to a message

Almost all e-mail programs simplify the task of replying to a message by automatically addressing the reply to the sender and entering your address. They also include the original subject title and add “Re:” in front of it. The “Re:” lets the original sender know that the new message is a reply to a previous message. You can set up the program to automatically display the original message at the top of the message field, making it easier for the sender to read your reply in context with the original message. You can also delete the entire original message, or just parts of it, leaving the specific points to which you are responding.

Forwarding a message

You can transfer an entire message or parts of it to another person who might be interested in it. You can also edit or add your own comments to the forwarded message, just as you would when replying to a message.

Attachments

Any computer file (ASCII or binary) can be sent along with an e-mail message as an attachment. These include word-processing files, spreadsheet files, database files, graphics files, and simple text files. When the message is received, the e-mail itself arrives in the recipient’s normal in-box, but the attachment is stored in a separate folder. You indicate that you want to send an attachment by clicking an “Attach” button. A directory of your computer files then appears, allowing you to select the specific file you wish to send. This file can be of any size, but the larger the file, the longer it takes for the computer to send and receive the attachment.

You should be sensitive to the format you choose when sending an attachment. You want to make sure the recipient will be able to read your attachment even if he or she does not have the same software. You might want to save the file in a more universal format, such as text (.txt) or rich text (.rtf), which preserves the style of the document.

Address book

An address book is a place to store e-mail addresses and a tool that speeds the handling of e-mail.

IV. Mailing Lists and Subscriptions (20 minutes)**Step 1:**

Begin by explaining that a mailing list is an Internet application, like software, that automatically sends electronic messages to a stored database of Internet user addresses. Mailing lists are invaluable tools for maintaining discussion groups. Most mailing lists let users subscribe and unsubscribe automatically, rather than requiring anyone at the server location to personally handle the transactions.

Step 2:

Explain that a mailing list is an e-mail-based discussion group. Sending an e-mail message to a specific address at the mailing list's server sends the message to all other members of the group. Users join a mailing list by subscribing. Subscribers to a mailing list receive messages from all other members. Users have to unsubscribe from a mailing list to stop receiving messages forwarded from the group's members. Specified procedures or commands enable a user to subscribe or unsubscribe to a list.

Step 3:

Display the flip chart with the diagram of a mailing list to further explain how the technology works. Messages can be sent to the entire group of subscribers or to a selected individual (or individuals). Sending a message to an individual is an option when responding to a specific comment. However, most information is useful for everyone who is subscribed. If there has not already been an extensive discussion on the topic, and if the entire group seems engaged in the conversation, send messages to the group.

Step 4:

Continue by noting that lists usually focus on a specific subject of interest and that the individuals who subscribe share information and experiences, and give advice, free of charge.

Step 5:

Unlike magazines, subscriptions to mailing lists do not cost anything. All that is required is an e-mail account.

Mailing lists vary in size—from as few as two or three list subscribers to as many as 5,000 or 10,000. There are norms for communication and behavior, called "netiquette." For example, it is not acceptable to send an "unsubscribe" message to the entire group; there is a specific procedure for this function.

Provide practical examples of how to make use of a mailing list to learn from the experiences of others. For example:

An agricultural extension worker in Ethiopia might subscribe to a mailing list to get information and learn from experiences of extension workers elsewhere. If the extension worker needs specific information, like how to educate farmers on the use of modern

farming techniques with limited resources, he or she could send a message to the entire group, soliciting a response.

Step 6:

Explain that in some cases, an individual can be a list owner. This person takes responsibility for logistics. Sometimes the owner starts the list, and sometimes he or she just dedicates time to watch over it. When a list is started, the owner makes the decision about whether subscriptions will be automatic or if they must be verified. If they must be verified, then the owner decides who is allowed to subscribe. In some cases, this is done to keep the list small and limited to a single topic. The owner also decides whether the list will be mediated or messages will be sent automatically.

Step 7:

Explain that there are thousands of mailing lists on the Internet. You can locate them using mailing list directories on the Web. Discuss how to search for relevant lists by sending a message to the addresses listed on the handout or by going to a specific website.

Step 8:

Hand out a sheet of sample mailing lists with commands. You might also include a welcome message to a specific list. Briefly review the procedures for subscribing and unsubscribing. Encourage participants to subscribe using their own e-mail accounts. If the training center is equipped with individual accounts, you can walk them through this process. If not, have them subscribe when they return to their offices.

Step 9:

Ask participants first about the advantages of e-mail and mailing lists. Examples of responses follow:

- Quick
- Low-cost
- Saves time
- International networks
- Exchange valuable information

Then ask participants for disadvantages of e-mail and mailing lists. Examples of responses follow:

- Inundation of messages
- No personal contact

Step 10:

Have a group discussion about e-mail and mailing lists, encouraging participants to talk about specific occasions when they have used these tools. If most participants have never used the technology before, have them imagine when they could put the technology to use. Also,

challenge the participants to think about instances when they might choose to use another communication tool instead of e-mail.

Step 11:

Ask the participants to think about how they would use this feature of the Internet in their organizations.

Step 12:

Ask if there are any questions or comments.

Ask a participant to reread the objectives read at the beginning of the module. After each objective, ask the group if each was achieved.

“Netiquette” Commandments for List Participation

1. Thou shalt not “flame” (for example, make personal comments or attacks or use intemperate language).
2. Thou shalt not post trivial or off-subject messages (“I agree!” or “How ’bout them Wizards!”—unless it is a Wizards list).
3. Thou shalt not send listserv commands to the list address.
4. Thou shalt suspend thy subscription when absent, especially if thou leaveth behind a cute message on an automatic responder.
5. Thou shalt use extreme caution with the “Reply” button; thou shalt reply to the list only if thy response is of interest to the entire list readership, and if not, thou shalt reply directly to an individual.
6. Thou shalt delete the message to which thou art responding, or keep (in quotation marks) only that part to which thou art responding.
7. Thou shalt not SHOUT.
8. Thou shalt not forget to sign thy messages to a list with thy name and thy contact information.
9. Thou shalt not advertise or proselytize unless the list permits it.
10. Thou shalt put brief but clear “subject:” statements in thy messages to the list.



21 Tips for Subscribing to a Mailing List

1. Researching a List Appropriate for You

To find out if a particular mailing list serves your needs, send an e-mail message before subscribing with the word “info” and the name of the list in the first line of the body. You will receive a general overview of the list.

Example (for ListServ):

```
Address: IT_PCVs@peacecorps.gov  
info IT_PCVs
```

2. Reading the Information Document

When you receive the information, be sure to read it all the way through. You may discover that the list is storing your mail somewhere or that there is a fee to subscribe.

3. Getting Help

If you are confused about how a list works, send an e-mail message to the main mailing list address and include the word “help” in the first line of the body. Soon, you will receive a reply detailing a few commands that make control over the list easier. Keep that document in a special folder.

Example (for ListServ):

```
Address: IT_PCVs@peacecorps.gov  
help
```

4. Confirming a Subscription

If you get an e-mail saying that your subscription request was unsuccessful, be sure to keep it so that you can refer back to it when you try again. Confirming your subscription sometimes requires another step beyond the first request. The instructions may be buried somewhere in the first reply you receive.

5. Receiving the Digest Version

To find a digest of the mailing list, look back at the information document you got when your subscription request was successfully received and check whether the list offers such a version. If it does, follow the instructions to begin receiving the list in digest form (usually daily).

Example (for ListServ):

```
Address: IT_PCVs@peacecorps.gov  
set IT_PCVs digest
```


6. Knowing Other Subscribers

To find out who else subscribes to a particular mailing list, often you can send a message to the correct address with the word “review” or “rev” or “recipients” (depending on the mailing list software) in the first line of the document’s body. A list of e-mail addresses will be mailed back to you, unless the list restricts access to the subscriber list.

Example (for ListServ):

Address: IT_PCVs@peacecorps.gov

review IT_PCVs

7. Removing Your Name

If, on the other hand, you want to avoid being available on the subscriber list, send an e-mail message with the words (for ListServ) “set name-of-list conceal” in the first line of the body.

Example:

Address: IT_PCVs@peacecorps.gov

set IT_PCVs conceal

8. Archiving Welcome Letters

Create a special folder to hold all information documents pertaining to the mailing lists you subscribe to. When you need information about any of them, you can instantly search there.

9. Organizing Your Lists

To organize multiple mailing lists you subscribe to, create a special archive folder for each and save all messages there. You can then go back to that folder when you want to search for something specific. If your e-mail program allows you to create “agents” or “filters” (Lotus Notes, for example, does this), create one for each list. The agent will automatically filter the mail and put it in the correct folder.

10. Separating Personal E-mail

To keep your mailing list mail separate from your personal correspondence, get another e-mail address and use it only to subscribe to mailing lists. A good suggestion is to use a fairly generic name to maintain anonymity. You may have another alternative if your e-mail software allows you to filter e-mail messages. In this case, you can create a folder or in-box for each list to which the filtering feature can direct list messages.

11. Saving Special Mail

If particular e-mail messages hold special significance to you, mark those messages as “priority” and delete the others.



12. Identifying Your E-mail

To help others quickly identify a specific message, put the name of the mailing list at the beginning of the subject line and then include the topic heading. It is the polite thing to do. (The mailing list may already do this for you, in which case a descriptive but brief subject line is all that is required.)

13. Keeping It Short

To cut down the size of a message when you are replying, delete everything in the original message except the part you need to refer to.

14. Replying Privately

If you want to reply to someone individually, do not send your reply to the entire mailing list. Send it to that person's own e-mail address, which is included in the header of his or her message. This cuts down on spam for everyone.

15. Keeping Out Unwanted Mail

To filter out junk e-mail or even messages from certain people, assign a filter within your e-mail application (if it has that capability) and have those messages sent to a specific folder. Before you delete anything, check whether any important messages went into that folder by mistake.

16. Finding Older Postings

To see a particular thread of messages on a mailing list, check the information document to find out whether the list offers an archive within a newsgroup or on a Web page somewhere. You can then search more easily within that archive.

17. Stopping a List From Sending You Mail

To temporarily prevent a list from sending you mail (for example, if you are going on vacation), send an e-mail message to the appropriate address and include "set mailing-list-name nomail" in the first line of the body. To resume receiving mail, send a message that includes the words "set mailing-list-name mail" in the first line of the body.

18. Ending a Command Process

To terminate a command process you have set in motion, send a message to the appropriate e-mail address and put the word "end" in the first line of the body.

19. Griping About Junk E-mail

To complain about junk e-mail, write to one of the following addresses:

admin@domainname.com,

postmaster@domainname.com

abuse@domainname.com.

Be courteous but specific about your complaint, and indicate that you wish to be removed from the mailing list. If this does not work, complain to your Internet service provider, which can block that domain name altogether. In any message, include a portion of the junk e-mail you received.

20. Avoiding Junk E-mail

To avoid being inundated with spam (some promoters look for mailing list e-mail archived on the Web or in a newsgroup), add the words “nosspam” or “nojunkmail” to your e-mail address before you post a message to the list. Then mention in your signature (if you use one) that any person who wishes to e-mail you must first remove “nosspam” from your address. This should sufficiently fool the spammers’ programs.

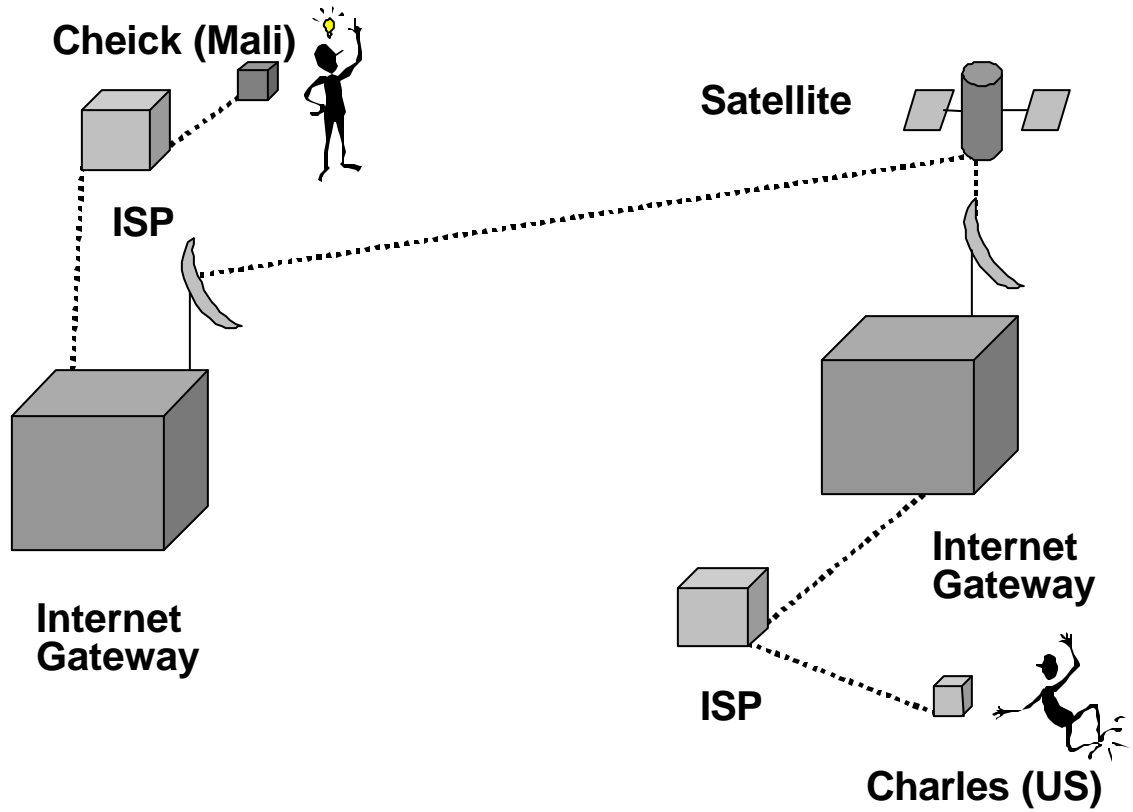
21. Avoiding Junk E-mail Big Time

To find information on how to prevent receipt of junk mail, visit the Internet Email Marketing Council’s website at www.iwmmc.org. The council’s universal filtration system can be used to keep unsolicited commercial e-mail out of your mailbox. The Direct Marketing Association (www.dmaconsumers.org/pffmailing.list.html) offers a similar service.

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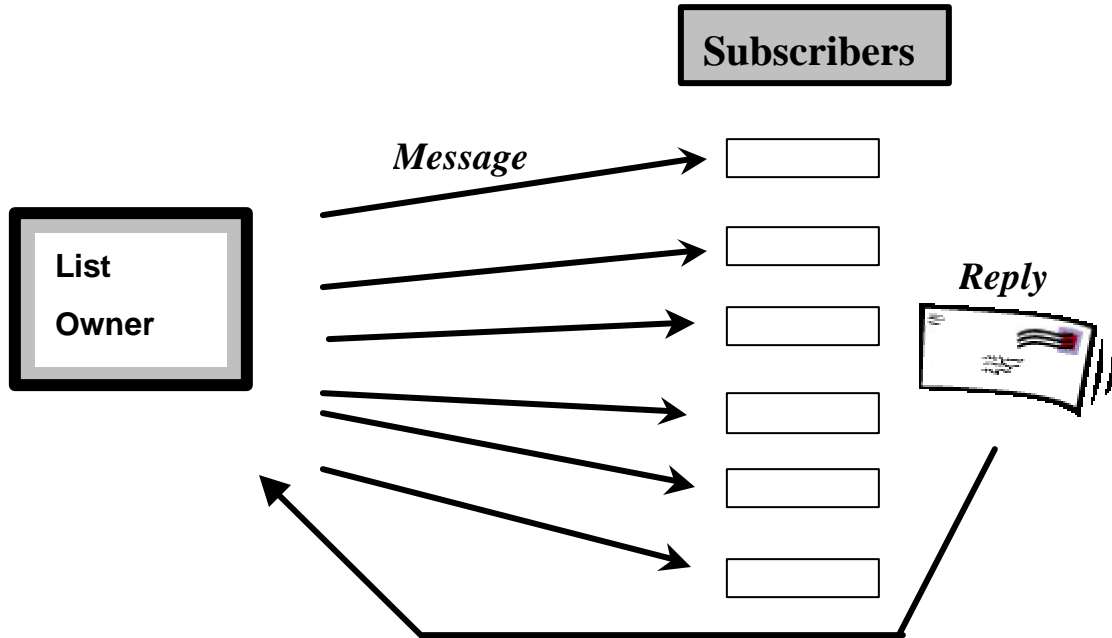
How E-mail Works, Simplified



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Handout/Transparency

How Does a Mailing List Work?



Note that separate commands are used for subscribing to the mailing list and sending messages to the mailing list.

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Module 6: The World Wide Web

Learner Objectives

By the end of this session, participants will be able to:

- ✓ Describe what the World Wide Web is.
- ✓ Use a browser to go to specific sites on the Web.
- ✓ Understand and use the basic features of a browser.

Time

80 minutes

Materials and Setup

- Overhead projector or LCD panel connected to a computer and the Internet
- Take browser through a few sites so that it can go “back” in demonstration

Flip Charts or Transparencies

- Sample of sector-specific website addresses (prepared by facilitator)
- Selected Web terms

Handouts

- Websites (see compilation of sites by sector on the Leland Initiative resource page, www.info.usaid.gov/leland/resource.htm)

Session Outline

- I. Understanding the Web (10 minutes)
- II. Web Use and Demonstration (30 minutes)
- III. Surfing the Web (40 minutes)

Delivery

I. Understanding the Web (10 minutes)

Step 1:

Explain the basic idea of what the World Wide Web is, how it works, and why it is currently the most popular part of the Internet. Some points to emphasize are that it uses multimedia, contains a “web” of information, and makes connections via hyperlinks.

Step 2:

Explain that certain basic operations of the browser are similar to those of most other applications (word processors, spreadsheets, etc.). The operation of the mouse and basic file functions (opening, closing, saving) are the same. Basic editing operations (cutting, pasting, copying) are also similar. This will help people feel more comfortable with using the browser.

Step 3:

Use a flip chart on the wall or handouts to list vocabulary terms participants may need to refer to again.

Step 4:

Read each vocabulary term on the flip chart. After you read the definition, go over to the LCD panel, which should already be at a good website, and demonstrate how each of the terms applies to the Internet. A list of terms and definitions follows.

World Wide Web

- A tool based in HTTP that allows text, graphics, sound, and video to be communicated over the Internet

Browser

- An application program that provides a way to look at and interact with all the information on the World Wide Web
- There are only two widely available choices (Internet Explorer and Netscape Navigator)

Hypertext

- What do you think of when you hear the word “hyper”? (Bigger, more than, supertext)
- Is often underlined or in a different color, signifying a link to another URL

URL (location, address)

- Never any spaces within an address
- No two addresses are the same
- Example: 55 rue Mohammed V could be in Bamako, Dakar, or Paris
- Must be typed in exactly
- Example: not like a postman, who knows a person and where he or she lives, even if the name is misspelled

Home page

- Show that you are on a home page

Step 5:

Ask if there are any questions.

II. Web Use and Demonstration (30 minutes)**Step 1:**

Now that participants have seen the operation of a Web browser, show them some of the other basic features of the browser screen. As you go through each feature, show what each

button does. Give an example of when to use each one. Also show the scroll bar, the title area, the text area, and the status area.

The main buttons on the screen are:

- Home
- Back
- Forward
- Reload (or refresh)
- Images
- Open
- Print
- Find
- Security
- Stop

Step 2:

Quickly tour some of the browser's extra features (optional) with a description of each if you have time and the participants are interested:

- What's New!
- What's Cool!
- Handbook
- Net Search
- Net Directory
- Software

Step 3:

Demonstrate the way the Web works. Begin with the browser's home page, as this is often the first site that a participant will see when he or she begins using the Web. Go from there to another site by typing a URL that everyone will be interested in.

Step 4:

Explain that you are going to go to a website. Tell people the URL for the site and relate terms such as HTTP and URL to the vocabulary they learned in the first activity.

Step 5:

Type the URL in the address space. If there are groups at functioning workstations, you might want to have people do the steps along with you. This may take additional time, so be sure to go slowly and make sure that everyone is keeping up.

Step 6:

Show the images moving at the top right and the bottom of the screen when the browser is searching for an address. Emphasize that this indicates that the software is functioning. Note that the process often takes time and is not instantaneous. While waiting for the browser to find the requested website, there is no need to continue clicking.

Step 7:

Describe what is happening while the requested page is loading: The browser (client) is requesting a specific Web page from the Web server specified in the URL. The contacted server then sends the requested page. Explain that many people may be accessing the server at the same time and that the server stays connected only as long as it takes to send one part of the particular document requested. If the document consists of multiple parts, such as text and graphic files, these are processed as separate requests, which is why it sometimes seems to take a long time to open certain Web pages.

Step 8:

If something goes wrong—the server cannot be located, the access point or the Internet as a whole is slow, a particular file cannot be found—take advantage of the extra time to describe what is happening and correct any typing errors you may have made. Select a different site to visit if necessary.

Step 9:

Follow several links of interest to the participants. Have the participants follow along with you. When you follow a link, show that the URL changes, even if only slightly. At each link, stop and explain where you are, what the site is, who manages it, and other types of information you find there.

Step 10:

You may also want to explain where the site is physically located. Tie in the lesson with information about the URL, quickly reviewing the concepts of domains and Internet addresses from the e-mail session. When explaining addresses, emphasize that a user knows where he or she is on the Web by looking at the URL, which also tells the server where the requested information is located.

Step 11:

During this demonstration, mention that it is not necessary to close a Web page as one would close a word-processing document. The browser moves freely from page to page. Show the difference between text and hypertext on selected pages. Point out that the cursor arrow becomes a hand (or other object) to signify a link. Tell participants that images can also contain hyperlinks, which can be activated by clicking on the images.

Step 12:

Ask if there are any questions.



III. Surfing the Web (40 minutes)**Step 1:**

Explain that you will give people the opportunity to “surf” the Web and look at sites of their choice.

Step 2:

Walk through the steps of how to enter a URL and follow several links:

- Erase what is in the URL window
- Type new address
- Press “enter”
- Remember that each address must be typed exactly as written, without any spaces

Step 3:

Give participants the opportunity to do what they have learned immediately. Tell them to go to a specific URL and follow certain links. Refer them to the lists of sector-specific sites on flip charts and handouts. Do not demonstrate on the screen this time.

Step 4:

You might want to give them a good starting point of particular interest, such as a country-specific site. Tell participants that you are available to answer questions or help with problems they experience in surfing the Internet.

Step 5:

Walk around the room and watch what the participants are doing. Help out if they get stuck. If there are any common problems, ask the group to pause while you describe the problem and its solution to the entire group.

Step 6:

After participants have had sufficient time to surf, get the group’s attention. Ask them to share some of the sites they visited. Ask if they discovered any sites that were particularly interesting or that they think might be useful for their work.

Step 7:

Ask the participants to think about how they would use this feature of the Internet in their organizations.

Step 8:

Ask if there are any questions.

Ask a participant to reread the objectives read at the beginning of the module. After each objective, ask the group if each was achieved.

Flip chart

Selected Web terms

World Wide Web

A tool based in HTTP that allows text, graphics, sound, and video to be communicated over the Internet

Browser

An application program that provides a way to look at and interact with all the information on the World Wide Web

There are only two widely available choices (Internet Explorer and Netscape Navigator)

Hypertext

What do you think of when you hear the word “hyper”?

Bigger, more than, supertext

Is often underlined or in a different color, signifying a link to another URL

URL (location, address)

Never any spaces within an address

No two addresses are the same

Example: 55 rue Mohammed V could be in Bamako, Dakar, or Paris

Must be typed in exactly

Example: not like a postman, who knows a person and where he or she lives, even if the name is misspelled

Home page

Show that you are on a home page



Module 7: Searching the World Wide Web

Learner Objectives

By the end of this session, participants will be able to:

- ✓ Use an Internet search engine to identify and retrieve specific information that supports their institution's work.
- ✓ Bookmark files for later use.

Time

75 minutes

Materials and Setup

- Overhead projector/LCD panel connected to computer and the Internet

Flip Charts or Transparencies

- Addresses of search engines
- Boolean terms

Handout

- "Search Engine Guide"

Session Outline

- I. Internet Search Engines (30 minutes)
- II. Bookmarks (30 minutes)
- III. Saving Pages From the Internet (15 minutes)

Delivery

I. Internet Search Engines (30 minutes)

Trainer's Note: When working with participants who have just begun using the Internet, it is a good idea to introduce and demonstrate only one search engine. This allows participants to understand the concept without becoming confused by the details. If the participants are ready and time permits, the trainer may wish to explain the types of search engines (those that do keyword searches, those that organize sites into categories, those that use both) and demonstrate one more.

Step 1:

Introduce this session by stating that so far all of the sites on the Web have been easy to find because the group knew their addresses or URLs. Ask the participants what they think they should do if they do not have a specific address for information they want. Answer: Use search engines.

Step 2:

Begin by describing search engines. Mention that each search engine is different and that the engines are available at certain sites; they are not software that needs to be installed on your computer. The search service is provided free to users in exchange for the advertising done at each site. Search engines sometimes specialize. As the Internet evolves, more and more engines are being offered.

Step 3:

Demonstrate one search engine that uses keyword searching (and Boolean terms for Step 10). Type the address for the engine as you would any other URL. Show participants that there are two windows on the engine's home page, one at the top for URLs and another one for keywords and search terms.

Step 4:

Begin a sample search for information on the host country. For information about Mali, type the word "Mali" and "enter" or click the "Search" button. Explain that search engines work primarily with the letter sequence; they do not know that Mali refers to a country.

Step 5:

Explain the search results. The search engine indicates the exact number of sites it finds that contain the word being searched. There is a description of each site in the results, which usually consists of the first words or sentences of a particular website. These words can be very descriptive or not all that helpful. The engine also gives you the size of the document. The more complex and detailed the site, the larger the size will be. Sites with video and sounds will be larger than those with plain text. The date indicated signifies the last time the site was updated, in other words, how current the information is.

Step 6:

Mention that each result has the same basic information about the sites. When the cursor turns into an arrow on the subject or the address, that indicates a link. Go directly to the site by clicking on that link.

Step 7:

At the resulting site, show that the URL has changed and the browser is no longer within the search engine. Suggest that the participants look at the contents of the site to determine whether it is pertinent. If so, read it and follow its links. If not, return to the search result index by using the "Back" button. At the index, show that the site visited has become a different color.

Step 8:

When back at the index, show that there are several more pages with lists of sites to choose from. Go to the second page or skip to the seventh and look at the results.

Step 9:

Introduce the concept of Boolean terms (named after English mathematician George Boole), a deductive logical system that is the basis of algebra and is used to mix and match keywords



so the computer can execute more advanced searches. Use the flip chart to illustrate Boolean logic. The three key terms are “and,” “or,” and “not.” For example:

Mali AND women

biscuits OR cake OR cookie

Guinea NOT Bissau

Step 10:

These terms, along with certain punctuation marks, allow one to execute advanced searches on the Internet. Each engine has its own method of executing searches. Some searching tips:

- Look for the detailed information on advanced searches on the search engines’ home pages.
- Use a combination of engines for searching.
- Select deliberate and well-thought-out keywords.
- Remember that if you do not find it, it may not exist on the Web.

Step 11:

Ask the participants to think about how they would use this feature of the Internet in their organizations. Ask if there are any questions.

Step 12:

Mention that as participants search they might want to experiment with several engines. After extensive experience and experimentation, most researchers choose a favorite engine based on its appearance, its functions, and the search strategies used. Show the flip chart list of search engines. You might want to show that the Web browser also has a button that provides links for searching.

Notes for training in other languages:

- If available, the trainer should use search engines in the local language for the initial demonstration.
- In French the three Boolean terms are “et,” “ou,” and “non.”

II. Bookmarks (30 minutes)

Step 1:

Begin by explaining that bookmarks (or favorites) are a feature of browser software. Remind participants that it is time-consuming to type the exact URL of an interesting site each time one wants to access it. With bookmarks, the computer saves the address for you. Bookmarks are saved as files. They can be saved on the computer’s hard drive or, like word-processing files, on a floppy disk. The computer does not save the actual Web pages, just the addresses where they can be found.

Step 2:

Demonstrate the process of using a bookmark. Go to a page as an example and click the “Bookmark” button. Go to “Edit bookmarks” (or “Organize favorites”) and verify that the page you added is there.

Step 3:

Show the bookmark folders. Point out that when there is a plus sign, there are bookmarks within folders. Keep clicking on the layers of folders until you see a minus sign. This signifies that all of the contents are displayed. Show that bookmarks and bookmark folders can be sorted, rearranged, and renamed.

Step 4:

Go to a bookmark of interest on the list. Show that when the cursor is on the bookmark title, the address appears in the bookmark window. You could use this as an opportunity to review domains. Double clicking on one of these bookmarks takes the user directly to the corresponding site.

Step 5:

Emphasize that because bookmarks save the address, each time a user visits a site he or she sees the most up-to-date version. Show the Peace Corps website (www.peacecorps.gov) as an example, telling participants that it is updated several times a week. The bookmark will always lead to the updated version.

Step 6:

Explain that the browser software saves the bookmarks on the C: drive of the computer. When participants work on their own computers, they will have their own lists of resources for reference.

Step 7:

Allow participants to continue surfing and encourage them to try using the bookmark function. Remind the group that they should be looking for information that is relevant to their work.

Step 8:

Ask the participants to think about how they would use this Internet feature in their organizations.

Step 9:

Ask if there are any questions. Walk around the room and answer individual questions.

IV. Saving Pages From the Internet (15 minutes)**Step 1:**

If time permits, explain step by step how to save pages from the World Wide Web to a floppy disk in both text and HTML formats. Discuss why this is useful and how these pages might be used. Provide a demonstration.



Step 2:

Ask a participant to reread the objectives read at the beginning of the module. After each objective, ask the group if each was achieved.

Search Engine Guide

(Note: The following search engines are presented solely as examples and do not imply endorsement of any particular search engine by the Peace Corps.)

Search Engine Name and URL	Description of Search Engine	Search Techniques
<p>Google</p> <p>www.google.com</p>	<p>Google has particular advantages for Web users in countries that do not have the best Internet connections, for example, low bandwidth and/or high costs. The reason is that Google uses only a few small graphic illustrations and does not have resource-consuming banner advertisements. Google prioritizes the sites where it finds your keyword(s) in a unique way, including factoring in how many sites are linked to the site and how important and reliable those other sites are.</p>	<p>Type your keyword(s) or phrase into the Google search box. Click on the “Google Search” button or press the “Enter” key. It is not necessary to use any additional signs or punctuation marks.</p>

<p>AltaVista</p> <p>www.altavista.com</p>	<p>AltaVista has a very large databases but requires use of searching techniques to limit the number of hits to a manageable number.</p> <p>Options include searching the Web or Usenet newsgroups. You can also limit your search to sites written in a certain language (e.g., French).</p>	<p>Click on “Advanced” and apply the following techniques:</p> <p>Put phrases in quotations and use lowercase letters when seeking a case-insensitive match.</p> <p>Use the “+” (plus) sign before words that your results must contain, or use the “-” (minus) sign before words that your results should not contain.</p> <p>Use Boolean expressions (see below) in the box provided to narrow the search.</p> <p>Use the expression “near” between two search terms to find documents where the terms are within 10 words of each other.</p> <p>Restrict searches to certain portions of documents, e.g., title, text, link, image, URL, host, or domain. Type the field name followed by a colon and the search phrase, e.g., “url: usaid.gov” or “domain:*.za”</p> <p>Limit the dates in the boxes provided. Note that the date refers to the date when the Web page was published on the Internet.</p>
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<p>Excite</p> <p><u>www.excite.com</u></p>	<p>Excite has a large database and uses a concept-based approach by searching both for exact words and for ideas closely linked to words in the query.</p> <p>Options include searching by keyword or topic.</p> <p>You can select “list by website” to compress your results to prevent the listing of multiple hits from the same site.</p>	<p>Capitalize first letters of names and places.</p> <p>Use the “+” (plus) sign before words that your results must contain, or use the “-” (minus) sign before words that your results should not contain.</p> <p>Use Boolean expressions (see below) to narrow the search, but they must be in “all caps” with a space before and after.</p> <p>Select “More like this” next to a result to conduct a new search to retrieve more sites similar to the one selected.</p>
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<p>HotBot</p> <p>http://hotbot.lycos.com/</p>	<p>HotBot has a very large search engine database.</p> <p>Allows user-friendly searches, but occasionally returns duplicate hits.</p>	<p>The interface allows you to limit your search by searching in one of the following ways: for pages that contain <i>all the words</i>, for pages that contain <i>any of the words</i>, for pages that contain <i>the exact phrase</i>, for <i>a person</i>, for <i>a URL</i>, for <i>a title</i>, or for <i>a Boolean expression</i>.</p> <p>By clicking the appropriate boxes, and selecting from the pull-down menus, one can also limit the search by date of publication and domain. In addition, one can limit the number of hits and the amount of detail in the description.</p> <p>To search using multiple criteria, click on “More Search Items” and filter by keywords, date, specified media types and technologies, location, domain, page depth, and number of results.</p>
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<p>Go.com</p> <p><u>www.go.com</u></p>	<p>Go.com has a medium-sized database and allows you to search by both keyword and topic.</p> <p>Go provides extended services, including searches of news wires, premier news, e-mail addresses, company profiles, and Usenet newsgroups.</p>	<p>Capitalize first letters of names and titles; separate items in a list of names with commas.</p> <p>Use quotation marks around or hyphenate words that must appear in order, e.g., “Washington Post” or Washington-Post.</p> <p>Use the “+” (plus) sign before words (without a space) that your results must contain.</p> <p>Use the “-” (minus) sign before words (without a space) that your results should not contain.</p> <p>Use a pipe () to search for a certain set of results only, e.g., dog Dalmatian.</p> <p>To restrict the search to certain parts of documents, (e.g., URL, title, link, or site), type the part followed by a colon and the search phrase: “url: usaid.gov” finds sites that contain usaid.gov in the URL, and “title: Nigeria” finds sites with the word “Nigeria” in their title.</p> <p>If you are not satisfied with your results, insert terms that add more detail to what you’re looking for and click on “Search these results for.” Infoseek will search again inside the results you already have.</p>
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<p>Lycos www.lycos.com</p>	<p>Lycos has a medium-sized database and allows searches by both keyword and topic.</p> <p>It searches both titles and content of pages and returns lists of detailed abstracts ranked by relevance.</p>	<p>For advanced searches, click on “Lycos Pro Advanced Search.” From this interface, one can select “all the words,” “any of the words,” “natural language,” or “exact phrase.” One can also choose to search by media types and technologies, by title or URL, and by sites in a specified language.</p>
<p>Metacrawler and Mamma www.metacrawler.com and www.mamma.com</p>	<p>Metacrawler and Mamma are meta-search engines. Instead of maintaining their own databases of websites, they search the databases of various other search engines.</p> <p>You can select to search the Web or for computer products, newsgroups, files, or stock quotes.</p>	<p>For basic searches, you can use the “any words,” “all words,” or “phrase” options.</p> <p>For advanced searches, click on “Power Search” in the left-hand column. This interface allows you to search by “any” keywords, by “all” keywords, and by phrase. In addition, you can narrow the search by domain (edu, com, gov) and by host continent.</p>

<p>Yahoo www.yahoo.com</p>	<p>Yahoo contains a “directory” consisting of 40,000 websites organized by category. In addition to searching by category, Yahoo also searches Yahoo websites, recent news articles, and Yahoo Net events and chats. If it turns up no matches, it automatically performs a full-text document search of the Web using AltaVista. Results are ranked by relevance.</p>	<p>Use quotation marks around words that are part of a phrase, e.g., <i>United Nations</i>.</p> <p>Use a “+” sign in front of words that must appear in the results: e.g., <i>Guinea + Bissau</i>.</p> <p>Use a “-” sign in front of words that must not appear in the results, e.g., <i>bank – river</i>.</p> <p>Attach a * to the right side of a word to return left-side partial matches (e.g., <i>educat*</i> will return <i>educate, education, and educational</i>).</p> <p>Use <i>t:</i> before a keyword to restrict the search to document titles only. Use <i>u:</i> to restrict the searches to URLs only.</p> <p>Yahoo allows searches in many languages.</p>
<p>EnterpriseSearch www.enterpriseworks.org</p>	<p>The search engine at the EnterpriseWorks website is one of a new breed of “deep” search engines that search a specialized database, in this case more than 8,500 sources on poverty reduction and sustainable development.</p>	<p>The search engine is located in the upper right-hand corner of the home page. Choose whether to search the site or the Web. Enter keyword(s) and click on “Go.”</p>

Aardvark www.aardvark.co.za	This search engine, powered by Google, finds websites created in Africa.	Click the radio button at the top of the page that says "African." Enter your search phrase in the search window. and click "Search." When you click on a search result link, a separate window opens to that website, allowing you to return to the search result list as needed.
Ecila www.ecila.fr	This search engine allows searches in French.	
1Buscador www.1buscador.com	This search engine allows searches in Spanish.	

Module 8: The Web Challenge

Learner Objectives

By the end of this session, participants will be able to:

- ✓ Quickly locate relevant resources on the Internet using a search engine.
- ✓ Discover Internet resources relevant to their work.

Time

60 minutes

Materials and Setup

- Overhead projector or LCD panel connected to a computer and the Internet
- Prizes for each team
- Grand prize for the Web Challenge winner

Flip Charts or Transparencies

- Search engine addresses

Handout

- “Search for the stars” questions (ideas for questions supplied in this session)

Session Outline

- I. The Logic and the Rules for the Web Challenge (10 minutes)
- II. Playing the Web Challenge (50 minutes)

Delivery

I. The Logic and the Rules for the Web Challenge (10 minutes)

Step 1:

Explain that you are going to play a game that involves finding the answers on the Internet to simulated real-life questions. The goal is to learn how to find useful information on the Internet.

Step 2:

Divide participants into three groups or have them work in pairs. Groups will work together to find the answers. This should be seen as an intellectual challenge, not a computer problem. Groups can strategize or divide up the questions any way they want.

Step 3:

Pass out the list of questions to each participant. No cheating!

Step 4:

When a group finds the answer to one question, they must let the facilitator know about it.



Step 5:

Explain that you will check to see that they have found a reasonable answer to the question and then write the question or question number on the board or flip chart. Announce that this question has been answered and that all groups should stop researching the question because it has been eliminated from the question pool.

Step 6:

Announce that a grand prize will be given to the group that answers the most questions, but small prizes will be given to everyone as incentives.

Step 7:

Wish everyone good luck in the Web Challenge.

II. Playing the Web Challenge (50 minutes)**Step 1:**

The questions used for the Web Challenge can be drawn from the sample questions listed below. After handing out the question sheets, give participants at least 30 minutes to play the game. Continue until all questions are answered or until there is about 10 or 15 minutes left in the session. Use this time to go through the process and to have a discussion.

Step 2:

Ask the groups to discuss the information and how they found it. Use the following questions to lead this discussion:

- What was the answer?
- Where did they find it?
- What was their search strategy?
- Engine or other technique used?
- Search words chosen?
- Special search techniques used?
- How do they know the information is good? (Evaluation)
- Anything else that they learned from this?
- Did any other group find the information in a different way?

Step 3:

Hand out the grand prize and the individual prizes.

Step 4:

Ask if there are any questions.

Questions for the Game

Try your hand at finding the answers to these questions. Remember, the most important thing is how you look for the answers. For each question, be sure to note the path that you took to find the answer, as well as the specific address (URL) where you found the information.

Sample questions

1. What is the current price of wheat on the world market?
2. Where is there a street map of Addis Ababa, Ethiopia?
3. What is the world coffee price today?
4. How many Kenyan shillings can I get for \$1 U.S.?
5. Where did bananas originally come from?
6. What is the gross domestic product of Ethiopia?
7. What is the proper way to run cable for a computer network in a school?
8. How many bones are in the human body?
9. What were the factors leading up to the Mexican peso devaluation in December 1994?
10. Who is the current prime minister of Italy?
11. What is the average year-round temperature of Beijing, China?
12. What are two mailing lists related to HIV/AIDS?
13. What does the acronym LAAD (as related to agricultural development) stand for?



14. Can you find a photo of Salif Keita the singer?
15. Can you find an online demonstration of a frog dissection?
16. Where can I find an electronic sound recording of the Mambila tribe of Nigeria?
17. Where can I find out about U.S. educational scholarships and research grants?
18. When was World Health Day this year?
19. Where can you find a URL for an image of the planet Mercury?
20. Where can I get information on the experiences of countries demobilizing military service personnel and reintegrating them into civilian society?
21. How is food security defined by various organizations?
22. What has been the volume of food aid to Ethiopia for the last 10 years, and who are the major donors?
23. Are there any models for a national agricultural policy or an organizational structure of an agricultural ministry in a federal government?
24. What colleges in the United States offer correspondence courses to people from other countries?
25. Where can I find the specifications for manufacturing hard disk drives?
26. Where can I find some descriptions of experiences in designing and implementing AIDS projects?
27. What are the regulations concerning the import of agricultural products into France?
28. What is the cost of one ounce or gram of gold (for today or yesterday)?

29. Where can I find a photo of the new bridge in Bamako, Mali?
30. How can I buy a modem on the Internet?
31. Where can I find a recipe for a West African dish?
32. What is the address of the Malian Embassy in Washington, D.C.?



Module 9: Closing Session

Learner Objectives

By the end of this session, participants will be able to:

- ✓ Express what new skills they gained during the training.
- ✓ Develop “next steps” for making practical use of their new skills in their work.
- ✓ Establish a means of staying in touch with other participants electronically.
- ✓ Evaluate their training experience.

Time

40 minutes

Materials and Setup

- Certificates for each participant

Flip Charts or Transparencies

- Words for the Internet (from participant introductions in the opening session)
- “Seven Steps to Using the Internet Effectively”

Handouts

- Certificates
- Evaluation forms
- Copies of sign-in sheet

Session Outline

- I. Review of the Process (10 minutes)
- II. Internet Society and Participant Mailing List (5 minutes)
- III. Review of Goals and Expectations (10 minutes)
- IV. Workshop Evaluation (10 minutes)
- V. Certificate Presentation and Remarks (5 minutes)

Delivery

I. Review of the Process (10 minutes)

Step 1:

Project the “Seven Steps” overhead. Review briefly the seven-step process and reiterate that the integration of the Internet is continuous. Have participants briefly identify their next steps. Select a volunteer to talk about how the cycle might continue once through (assuming they are currently in the training phase, talk about the rest of the circle and then how awareness building, etc. might begin again).

Step 2:

Segue into the next activity by talking about the importance of establishing concrete next steps.

II. Internet Society and Participant Mailing List (5 minutes)**Step 1:**

Introduce the Internet Society. If there is already a chapter in the country, ask for a representative to come to the training and speak for a few minutes about the organization.

Step 2:

Encourage participants to join the society and become part of an international network of Internet users. State the importance of having representation in the society from countries outside of the United States and Europe.

Step 3:

Lead a short discussion about how the participants might organize themselves into a more sustainable network so they can continue to support the progression of one another's work. A good way to facilitate these interchanges is through a mailing list. Distribute copies of the sign-in sheet so participants have one another's contact information.

Step 4:

Ask if there are any volunteers to act as the list owner and organize the mailing list of participants. Try to solicit a small group to work on this project. It would be most helpful if there is at least one mission representative so that you can remain in contact and secure resources to put it together.

III. Review of Goals and Expectations (10 minutes)**Step 1:**

Refer to the list compiled at the beginning of training of participants and their goals. If there is time, ask each person if he or she achieved his or her goal. If there is not much time, choose a few to highlight.

Step 2:

You might also want to have people volunteer to share their original training goals and tell the group how well they have been met.

Step 3:

Now refer to the flip chart sheet that lists the words used to describe the Internet at the start of training. Ask the participants if anything should be added or eliminated now that they are more familiar with the Internet.

Step 4:

Highlight the differences between the original perceptions of the Internet as mysterious, scary, difficult, etc. and new adjectives such as incredible, expansive, and useful.



IV. Workshop Evaluation (10 minutes)**Step 1:**

Review the overall training objectives. Refer to the flip chart, which should still be posted somewhere in the room.

- You will receive a basic introduction to the Internet and electronic communication.
- You will learn how to use the Internet effectively for work-related tasks.
- You will feel comfortable with the use and concept of the Internet.
- You will be able to locate relevant development information on the Internet.
- You will acquire the tools to share the training concepts and information with co-workers.
- You will develop an action plan for the introduction of the Internet into your organization.

Step 2:

Ask participants if each of these training objectives was achieved.

Step 3:

Hand out the evaluation sheets. Ask that everyone take sufficient time to complete each and every question. Especially encourage them to write their impressions in answering the open-ended questions.

Step 4:

While they are filling out the forms, present participants with the business cards of each trainer. Tell them not to hesitate to send an e-mail or call if they have questions or want to follow up.

V. Certificate Presentation and Remarks (5 minutes)**Step 1:**

Ask a mission official to make some closing remarks. He or she should emphasize any follow-up steps planned to keep the momentum going. The official should also discuss how happy he or she was to have all of the participants take part in the training.

Step 2:

Present each participant with an official certificate. Applause is always in order at these moments.

Step 3:

Thank everyone for attending and escort the participants to the exit.

Note: Trainers must modify this form for their particular workshop.

Information and Communication Technology Workshop

Evaluation and Feedback Form

To help us better prepare for future trainings, we need your valuable opinions. Your responses and comments today will help us improve content for future training sessions. Please answer all questions that apply.

How useful were the training sessions in terms of your personal needs and work activities?

Training Sessions

Session: _____

Extremely Useful Sufficiently Useful Not at All Useful N/A – did not attend

Session: _____

Extremely Useful Sufficiently Useful Not at All Useful N/A – did not attend

Session: _____

Extremely Useful Sufficiently Useful Not at All Useful N/A – did not attend

Session: _____

Extremely Useful Sufficiently Useful Not at All Useful N/A – did not attend

Session: _____

Extremely Useful Sufficiently Useful Not at All Useful N/A – did not attend

Session: _____

Extremely Useful Sufficiently Useful Not at All Useful N/A – did not attend

Session: _____

Extremely Useful Sufficiently Useful Not at All Useful N/A – did not attend

Session: _____

Extremely Useful Sufficiently Useful Not at All Useful N/A – did not attend

Session: _____

Extremely Useful Sufficiently Useful Not at All Useful N/A – did not attend

Session: _____

Extremely Useful Sufficiently Useful Not at All Useful N/A – did not attend



Overall Training

The material was presented clearly and in an interesting manner.

high medium low

The objectives of each session were achieved.

high medium low

I felt comfortable asking questions.

high medium low

I will be able to apply the material to my activities and projects.

high medium low

Resources and Materials

The *Participant Handbook* and handouts were helpful and easy to use.

strongly agree agree disagree strongly disagree

The workshop facilitators were well prepared.

strongly agree agree disagree strongly disagree

There was enough time given for hands-on practice.

strongly agree agree disagree strongly disagree

The facilities used for training were suitable.

strongly agree agree disagree strongly disagree

Please write additional comments about your current perceptions of computer technology, the Internet, and this training.

What were the most successful and useful activities/topics/outcomes for you?

What specifically was not successful or useful for you?

Please list here any specific topics not covered that you would have liked.

What changes do you recommend to make the workshops more effective?



Appendices

Training Module Format

Session Title

Session Purpose

Learner Objectives

(By the end of this session, trainees will be able to ...)

Session Location

Total Session Time

Materials and Equipment Needed

(Include flip charts or overhead slides and handouts, listed by title.)

Session Outline and Timing for Each Activity

Delivery

(List steps for delivering each outlined topic above.)

Behavioral Objectives

What is a behavioral objective?

A behavioral objective is a way of describing the training course in terms of what the participants *should be able to do at the end of training.*

A behavioral objective must be stated clearly and precisely so that anyone who reads it will know exactly what the desired outcome of the training session is. By ensuring this precision, at the end of the training program everyone can easily agree on whether or not the objectives have been achieved.

Behavioral objectives are action-oriented, people-oriented, and responsibility-oriented. Action-oriented means that activities can be measured or observed for performance and achievement. People-oriented means that it is focused on trainer preparation with constant evaluations/assessments being noted for ongoing improvement of sessions. Responsibility-oriented means that behavioral objectives are described in such clearly expressed terms that both the trainer and the participant must take responsibility for achieving outcomes stated in the objectives.

How should behavioral objectives be written?

A behavioral objective must be written in terms that describe what **the participant will be able to do at the end of the training session and/or training program in observable, measurable terms.**

Incorrect: “To discuss the technology problems in their schools, communities.”

Correct: “After the session, participants will be able to **explain** the state of technology in their schools, communities and **list** three steps needed to prepare for more effective use of technology.”

Incorrect: “Participant will be given the opportunity to have actual practice in doing field work related to classroom theories presented in week three of PST.”

Correct: “After completing the training of trainers course, participants will **demonstrate** a session on a technology topic with a group of students.”

There should be a verb that describes exactly what the instructor wants the participant to be able to do.

ACTION VERBS

Demonstrate	Show	Write
Answer	Describe	Choose
Organize	List	Walk
Conduct	Draw	Run
Explain		

VAGUE VERBS

Know	Understand
Have	Comprehend
Be aware	Feel
Accept	Believe
Appreciate	



Feedback

Feedback is the discussion about how a trainer's session was received. It may be a private discussion between the trainer and a specific observer, or a broader discussion with participants and the trainer. The purpose of feedback is to help the trainer identify his or her strengths during the presentation, and the areas that need to be improved.

Feedback is only useful if the trainer is receptive to hearing it and the giver(s) provide it in a way that is helpful. Several guidelines provide structure to both giving and receiving feedback.

Giving Feedback

Feedback is most useful to others if it is

1. Descriptive of the trainer's behavior: what he or she actually said or did.
2. Owned by the speaker. Statements should begin with "I thought" or "I felt."
3. Specific: identifying actions or statements that are recognizable by both trainer and feedback provider.
4. Relevant to the present situation: focus on what the trainer was trying to do, such as trying a new technique, organizing a session in a particular way, getting more participation.
5. Timely for the trainer's development. Balance the positive statements and the ones suggesting improvement. Give only a few suggestions for improvement at one time, choosing the most important ones first.

Receiving feedback

Feedback is most useful to you if you

1. Specify what you want to know. Are you concerned about sequencing of topics, how you use the overhead projector, or if your voice is strong enough to be heard in the back?
2. Do not become defensive. Explaining away the critique will stop the conversation; seek more information and suggestions.
3. Ask for examples. If feedback is too general, ask for clarification.
4. Assume the person providing feedback wants to help, not simply criticize your work.
5. Treat feedback as a suggestion from one person. If you question it or are not sure, check it out with others to see if the perception is generally held.

Case Studies

Assume you have been asked to help with one of the following situations. How would you respond? What resources would you use to resolve the issue?

NGO-Provided Telecommunication Center

A small NGO with three full-time employees is running a telecommunication center in a medium-sized town. They have five computers available to the public that are located in a small room adjacent to their offices. Public users are charged \$3 per hour; students are charged \$1.50 per hour. Each computer has its own phone line and dial-up Internet connection. The NGO director's friend, who is a technician, maintains the computers and stops by when the center is having problems. The center is full of clients from the time it opens until it closes, and the clients really appreciate the service. However, the NGO is not sure if it can continue maintaining the center because it is not generating enough money to support itself.

Nurse With Apprehensions About Using Technology

A nurse who works at a small clinic outside the capital city has a son who is a star student in a private secondary school in the city. Lately he has gotten very excited about the Internet, encouraging his mother to go into the city to see it herself. He has even brought home printouts of current medical resources available on the Internet to show his mother. Though the nurse is excited about the potential of this technology, she has never used a computer and does not know if the doctor in her clinic has either. They do not have a computer in the clinic and cannot afford one, since it is community funded.

Rice Researcher Excited About Technology

A rice researcher finally got the opportunity to go to a regional conference for agricultural researchers and was introduced to the power of the Internet in a daylong seminar. Though he uses a computer for data analysis, he had never seen the Internet prior to the conference. He is located far away from the capital and phone charges are expensive. And his boss refuses to touch the computer, insisting that people at his level have no use for it.

Secondary School Computer Laboratory

A secondary school in a major city has a 30-computer laboratory that it rotates all of its classes through at least once every two weeks. The school has a leased line from an Internet service provider that is funded by the PTA. All this is due to one very dynamic computer teacher who was able to demonstrate the need for this technology for the students' education and exposure. He is also the one who maintains and upgrades the computers. He has just put into place some night classes for adults who want to become computer literate, hoping to make the school's computer center self-sustainable.



Ministry of Environmental Conservation

The Ministry of Environmental Conservation has created very effective materials to inform the public about the environmental issues affecting the country (they are published in the 12 main languages). After having spent four years creating these materials and having distributed the booklets widely throughout the country, the ministry is almost out of money for this project and feels it no longer needs to be involved in the production and distribution process of future materials. The point person for these materials is very proud of them, having worked hard to pull the human and financial resources together to make this project a success. He knows nothing about computers or the Internet.

Women's Association Financial Management

An association of women basket weavers recently received help from a European volunteer to begin selling their baskets internationally. They are now aware of the export laws, and have gotten to know many of the businesspeople in the country. Though they can produce enough items to fill their orders and are doing a great business via the local telecommunication center's fax machine, they are starting to feel that they need to get control of their finances. Several of the members' husbands work in offices on computers, but they say they do not have time to help.

Radio Stations With Large Number of E-mail Requests

The biggest pop radio station (located in the capital) in the country now has its station online, so it can be listened to from anywhere in the world. Many of its staff members find news and information to broadcast from the Internet. They are a model for communications pairing: radio and Internet. Lately, their public e-mail account has been getting bombarded with requests for information about rural areas, and that is something that the station has never reported on. They would like to serve their listeners but do not know where to start.

Web-Based Tourist Site and Ministry Control

The minister of your region heard about your project in which you were marketing the tourist sites on the coast. Though there are no results yet on the effects of your website, the minister wants to speak with you. He is anxious about the technology and though he suspects your project is a good thing, he is concerned about the free flow of information on one of his biggest industries without his control. You and your host country Counterpart have an appointment to see him next week.

Kenya TOT Technology Applied Case Studies

Volunteers in Kenya were asked to review the preceding case studies, including the teacher version, and report on which ones were relevant and, if they were not relevant, to modify them or write new ones so that they would be more applicable to Volunteers. They were asked to think about the type of training and steps that would take place. Several groups were formed to discuss the case studies.

Case Study #1 (modified to use a college setting)

A college is running a computer center that does typesetting as an income generation project. It wants to expand its offering to include access to the Internet and charge for e-mail and Internet surfing. The principal's brother, who is a technician, maintains the computers. He stops by when the principal calls him. The college is not sure how to make it a viable business.

Case Study #4 (developed into two case studies based on Volunteer experiences)

1. A school has seven computers and offers training to 60 students. It wants to have some income-generating services and training to maintain and improve the equipment. There is an idea among the staff members to open the lab at night to provide computer services and training to the community for a fee. The students want more computer time and feel that because they have paid fees they deserve access to the computers at night. The administrators see the reasoning behind the feelings of staff and students. At present there are only two instructors to meet the school's needs. What should the school do?

2. An entrepreneur has set up a business to provide equipment and a teacher to primary and secondary schools. The charge is 1,500 shillings a term for primary students and 2,000 shillings a term for secondary students, with a minimum enrollment of 10 students for one session daily. The equipment will be available to the school during off-hours. The staff and the students recognize the benefits of the program and appreciate the costs involved in providing the service. Still, the costs present a burden to the families of the students, and they want to reduce the fees by creating an income-generating project using the computer equipment in an appropriate way. The school is in a semirural area. What are some options?

Two Community-Based Case Studies

1. The community has computers. They were donated by the previous Volunteer to the newly constructed community library. The library committee has recently turned over administrative responsibilities to the National Library Services, which is a government organization. The head librarian, a National Library Services employee, has control of computers used within the library. As the library is new, there are no electricity or phone lines, but they are possible to obtain. What is the best method for obtaining electricity and a phone (for example, solar, generator, satellite phone)? How will the hardware be maintained?

2. Ten computers have been donated to a community-based project associated with a progressive primary school in a small, rural market village. The school provided the funds to construct a building to house the computers. The headmaster of the school wants to come up with a plan to do the following:

- Begin teaching students
- Begin teaching student leavers (secondary school graduates)
- Open the computers to community use
- Ensure that the computers are secure from theft and protected from damage
- Finance the project



Working With Government Bureaucracy

A Volunteer knows many people who want to send donated computers to the developing country where she is working. The problem is that the Volunteer would have to pay huge and extortionate import taxes on the computers once they were received in-country. The taxes are often more than the computers are worth. No one in authority seems to know any legal way around this problem. The Volunteer has been told to contact many ministry departments and agencies, but each one declines to take the responsibility when approached.

Ghana TOT Technology Applied Case Studies (developed by Volunteers in Ghana)

1. The headmaster of the school buys a secondhand computer and does not know how to use a computer. The headmaster is constantly requesting assistance and training from the Volunteer, who already has many other obligations and commitments at the school.
2. The technician who has a contract to maintain the computers has been taking parts out of the computers and selling them. The Volunteer notices there are constant problems with the computers, especially after the technician comes to make repairs, and determines the problem lies with the technician.
3. A donation of several computers is made to a school. The headmaster wants to have one of these donated computers put in his office even though he does not know how to use a computer.
4. The computer center at a school is run by a private company. It is compulsory that students take computer classes and pay the company for the classes. Students have limited time on the computers and are learning few computer literacy skills.
5. After teaching computer skills to several teachers, the teachers begin looking for jobs in the private sector that require computer literacy. Out of the five teachers the Volunteer trained in their first year of teaching, only one is left at the beginning of their second year.

Cape Verde Case Study

Volunteers suggested a case study to handle the situation in which an office or school wants to use computers but does not have any. What would be the process for obtaining computers and instructors, setting up trainings, and best using the computers? Another suggestion was a case study on how to train people who are at different learning levels but in the same class.

Case Studies for Teachers

1. You and some of the other teachers in your school know about the Internet and see many ways you could use it at school. Unfortunately, your school has only four computers that can be used by students and two more for teachers.
2. Some outside volunteers came in and set up plenty of computers last year, and lots of teachers and students got trained and excited about using the Internet. Over time, though, some of the computers have acquired viruses or have started to malfunction. No one in the school knows how to fix them.
3. You are excited to help other teachers learn to use the Internet for their own benefit and for use in their classes, but they all say that they do not have time, that they have other things to do that are more important than learning that skill.
4. Several months ago, you had a great training session with a number of teachers and students. Since then, none of the teachers has used the Internet for anything besides email, despite some really good ideas they had at the time. They say that it takes too much time to change their classes to require the use of the Internet.
5. Many students are now using school computers to look at pornographic Web sites during the school day.
6. Since training some other teachers, you have become the resident “expert” on the Internet, and are deluged with questions from other teachers. You do not have enough time to help them and get your own work done.

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