



# Bridging the Gap with a Remote User

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# Agenda

- Criteria for choosing the remote usability tool
- Corporate remote usability infrastructure set up
- Remote usability evaluation of an enterprise portal application case study

# Remote Usability Studies

# What is a Remote Usability Study?

“A usability study where the test evaluator and user are separated by space and/or time”

# Types of Remote Usability Studies

- Real-time design walkthroughs and usability tests
- Surveys
- Automated Usage Tracking
- Handling of user-reported critical incidents

# Criteria to choose a Remote Usability Tool

# Tool selection criteria centers around

- Replication of data collection quality of a traditional usability evaluation
- Technical and financial feasibility of an organization

# Criteria Used

- Cost
- Client install
- Easy remote access (URL)
- Color
- Two-way control
- Operating system support
- Record sessions
- Accessible through a firewall
- Audio Integration \*

# Evaluation of Remote Usability Technologies\*

Criteria	Unicenter Remote Control 6.0	Microsoft NetMeeting 3.01	Microsoft Live Meeting 1.09 / Placeware	WebEx 7.0.10	GotoAssist 6.0
<b>Cost</b>	Available in the organization	Default with Windows XP Operating System	Available in organization	Either \$200 per month unlimited usage per seat per concurrent user OR 30 cents/minute	\$500 per seat
<b>Client Install Required</b>	Yes	Yes	Yes	Yes	Yes
<b>Access remotely via a URL</b>	No	No	Yes	Yes	Yes
<b>Color: Min 256</b>	Yes	Yes	Yes	Yes	Yes
<b>Two-Way Control</b>	Yes	Yes	No - turned off by organization	Yes	Yes
<b>Operating System Supported</b>	Windows only	Windows only	Windows only	Windows only	Windows only
<b>Records sessions</b>	Yes	No	Yes	Yes	Yes
<b>Accessible through firewall</b>	No	No	Yes	Yes	Yes

\* This table is specific to CA. This data was collected in February 2005

# Remote Usability Infrastructure

# Remote Usability Infrastructure

- Prototypes hosted on a server
- Server in the Demilitarized Zone (DMZ)
- Customers connect to the prototype using their SupportConnect credentials
- Customers are authenticated for a particular prototype using LDAP authentication
- Evaluator observes customers' desktops using GoToAssist
- Evaluator uses Live Meeting to record over the GoToAssist streaming video

# CA SupportConnect Portal – Pre-Test Activity

The screenshot displays the CA SupportConnect Portal interface. At the top, a blue navigation bar contains links for SOLUTIONS, SUPPORT, NEWS, EVENTS, ABOUT CA, INVESTORS, WORLDWIDE, and BUY. Below this is the CA logo and the text 'SupportConnect'. A secondary navigation bar includes 'SupportConnect Home' and 'AccountConnect', followed by a search box and a 'Search' button.

The main content area is divided into several sections:

- Knowledge:** Includes links for Knowledge Base, Compatibilities, and Product Home Pages.
- Downloads:** Includes links for Published Solutions, License Keys, Virus Signatures, and ToolBox.
- Subscriptions:** Includes a link for E-News.
- Contact:** Includes links for Support Services and CA User Groups.
- Support Resources and Contact Information...** (highlighted in green):
  - [Recent Site Improvements](#)
  - [Support Resources by Product](#)
  - [New - CANEXION Best Practice Library](#)
  - [CA Product Support Directory](#)
- Links to Related CA Sites...** (highlighted in green):
  - [Home and Home Office support](#)
  - [Support for Wily Technology Products](#)
  - [Support for CA Identity Manager and former Netegrity products SiteMinder, IdentityMinder, TransactionMinder](#)
  - [Support for Concord and Aprisma Products](#)
  - [Support for Niku Products](#)
  - [Support for iLumin Products - Customers, Partners](#)
  - [Support for Control-F1 Products](#)
  - [Important - Support for Ingres, OpenROAD, Enterprise Access, and EDBC](#)
- My Login:** A yellow box containing a login form with fields for 'Required', 'Email Address', and 'Password', a 'Login' button, and links for 'Forgot Password?', 'New User? Enroll Now', 'Need Technical Support?', and 'Digital Certificate Login'.
- TODAY'S ALERT:** A red banner with the following text:

**Important Announcement:**  
Saturday, April 08, 2006, from 08:00 p.m. until 12:00 Midnight ET (GMT-4), CA will be conducting maintenance updates on SupportConnect. SupportConnect will not be available during this time. We apologize for any inconvenience this may cause and thank you for your patience and continued support.
- CA World Highlights:** A blue banner with a photo of people and the text 'CA World Highlights'.
- CA Security Advisor:** A box showing 'Current Global Condition' with a 'WARNING' indicator.

# Authenticating a User for a Specific Prototype

## Pre-Test Activity

# Role-Based Security - LDAP

Roles Administration - Microsoft Internet Explorer provided by Computer Associates Intl.

File Edit View Favorites Tools Help

Address <http://ea/roles/admin/> Go Links »

**Roles Administration**

Welcome [vasom01@ca.com](#) ( [Logout](#) )

Home > User

**User Administration**

**LDAP User Search** Search

Enter at least one field.

User Id:

Last Name:

First Name:

Roles Administration - Microsoft Internet Explorer provided by Computer Associates Intl.

File Edit View Favorites Tools Help

Address <http://ea/roles/admin/LDAPUserSearch> Go Links »

**Roles Administration**

Welcome [vasom01@ca.com](#) ( [Logout](#) )

Home > User

**User Administration**

**LDAP User Search Result** Done Print CSV

Refine Search

Select and: [Modify Roles](#) 1-1 of 1

	User ID ^	First Name	Last Name
<input type="radio"/>	vasom01@ca.com	Omar	Vasnaik

# Establishing a GoToAssist Session

At Test Time

# Remote Support Using GoToAssist

SOLUTIONS SUPPORT NEWS EVENTS ABOUT CA INVESTORS WORLDWIDE BUY

**ca** SupportConnect

SupportConnect Homepage AccountConnect  Search

LOGIN

**Knowledge**  
Knowledge Base  
Compatibilities  
Product Home Pages


**Downloads**  
Published Solutions  
License Keys  
Virus Signatures  
ToolBox

**Subscriptions**  
E-News

**Contact**  
Support Services  
CA User Groups

Welcome to Computer Associates  
Remote Support Service via GoToAssist

**Do you need a quick solution to a technical problem? With our live remote-assistance tool, a member of our support team can view your desktop and share control of your mouse and keyboard to get you on your way to a solution.**



**HOW IT WORKS**

**Step 1** Once you are on the phone with a member of our support team, review the information below. Then select a [brand](#) from the list at the bottom of the page and click Continue.

**Step 2** On the next page you will enter your name, company name, and a unique connection code that your support technician will provide. You will then review the terms and conditions. After reading and accepting the terms and conditions you will initiate the screen-sharing session.

**Step 3** You will be prompted to download a small virus-free plug-in.

**Step 4** With your permission, your support representative will view your screen and share control of your mouse and keyboard.

**You will be in full control** of your computer at all times. You can always override control of your mouse and keyboard, and you can end the screen-sharing session at any time.

**SYSTEM AND NETWORK REQUIREMENTS**

For your support representative to view your screen, you will need:

- Either a modem (56K recommended) or high-speed internet connection
- Pentium-class PC running Windows 95, 98, 2000, 2003, Me, NT 4.0 or XP
- Recommended: Ability to make direct outgoing TCP connections, or availability of a SOCKS server or an HTTP proxy

For additional information regarding this service, including security and privacy information, [click here](#).

Having technical problems [click here](#).

To continue, select the brand of the product you are using:

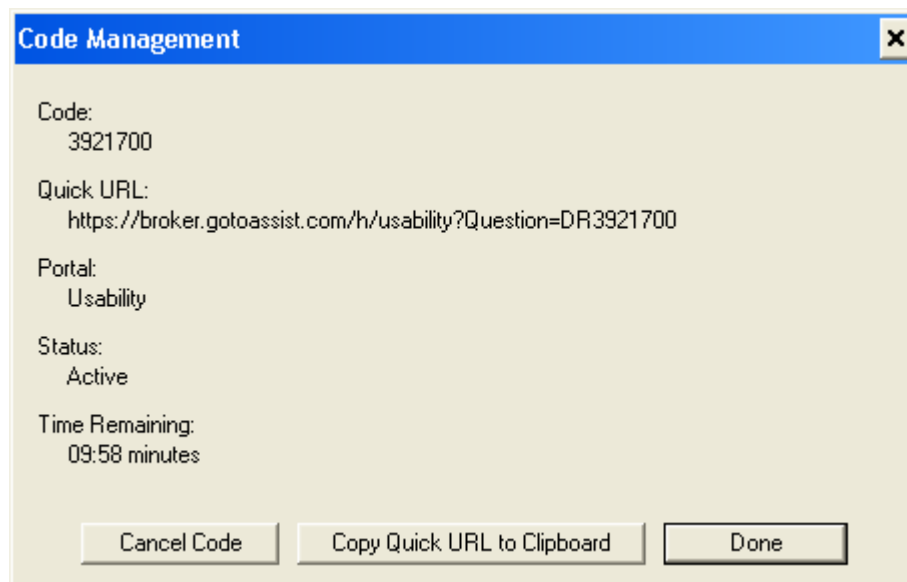
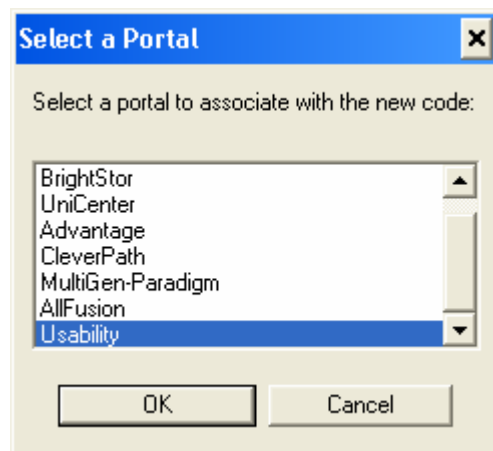
Advantage

- Advantage
- AllFusion
- BrightStor
- CleverPath
- eTrust
- Unicenter
- Usability

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# Test Facilitator generating a code



# Page for a user to enter their code

SupportConnect - Support Services - Usability - Microsoft Internet Explorer provided by Computer Associates Intl.

Address: http://supportconnectw.ca.com/ss/usability.asp

SOLUTIONS SUPPORT NEWS EVENTS ABOUT CA INVESTORS WORLDWIDE BUY

SupportConnect

SupportConnect Homepage AccountConnect

Search

LOGIN

## Support Services Usability

Please fill in the fields below, read the Terms and Conditions, and press "Accept" to proceed.

**Usability**

**Your Name:**

**Company Name:**

**Type the code you received from your Representative:**

**Terms and Conditions**

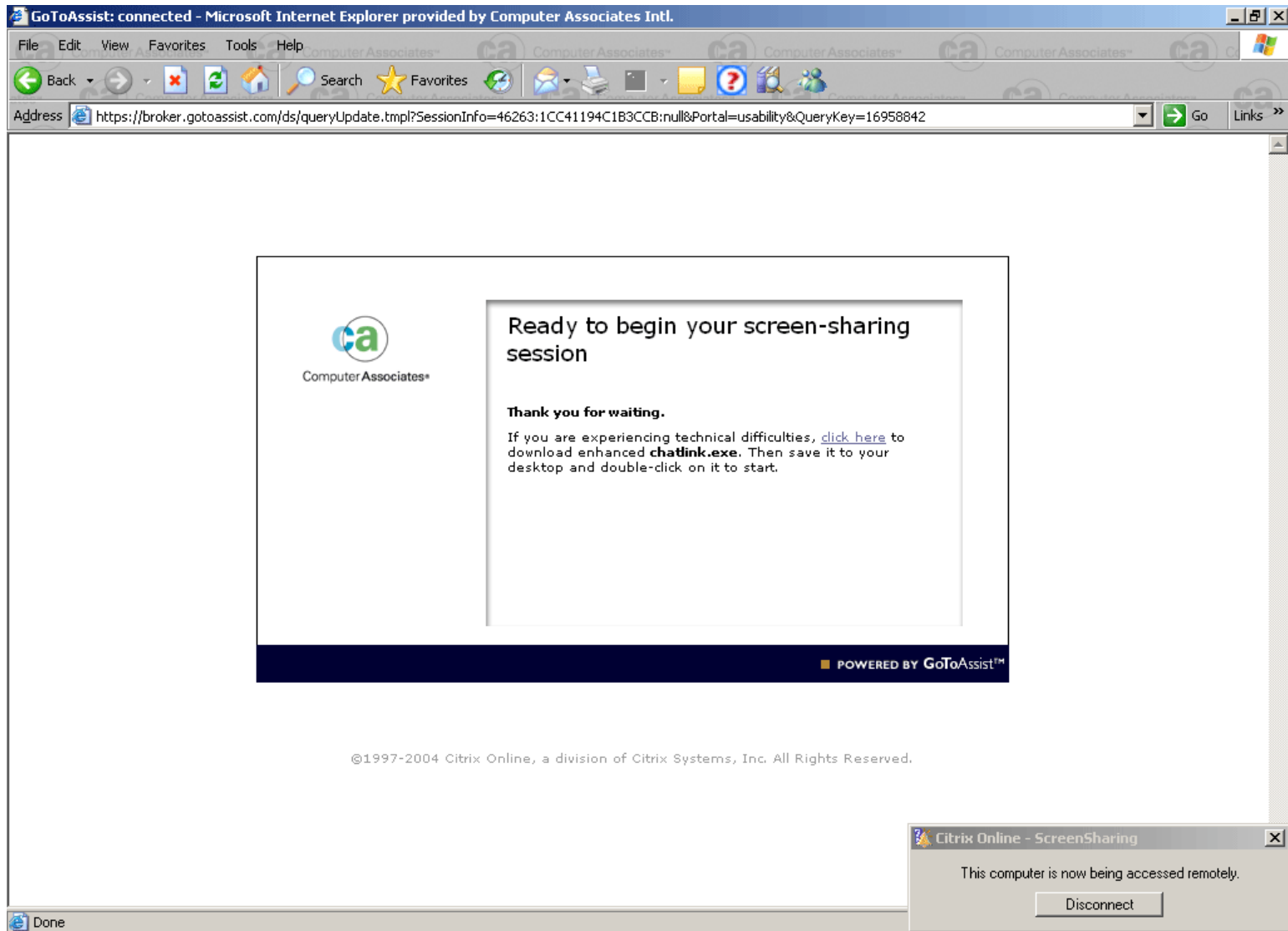
Remote Assistance Permission and Release Agreement

The undersigned (hereinafter referred to as "you" or "your") has requested that Computer Associates International, Inc. (hereinafter referred to as "CA") remotely connect to your computer systems via the internet to assist with resolving a computer system problem. Due to the urgency of your request, CA has

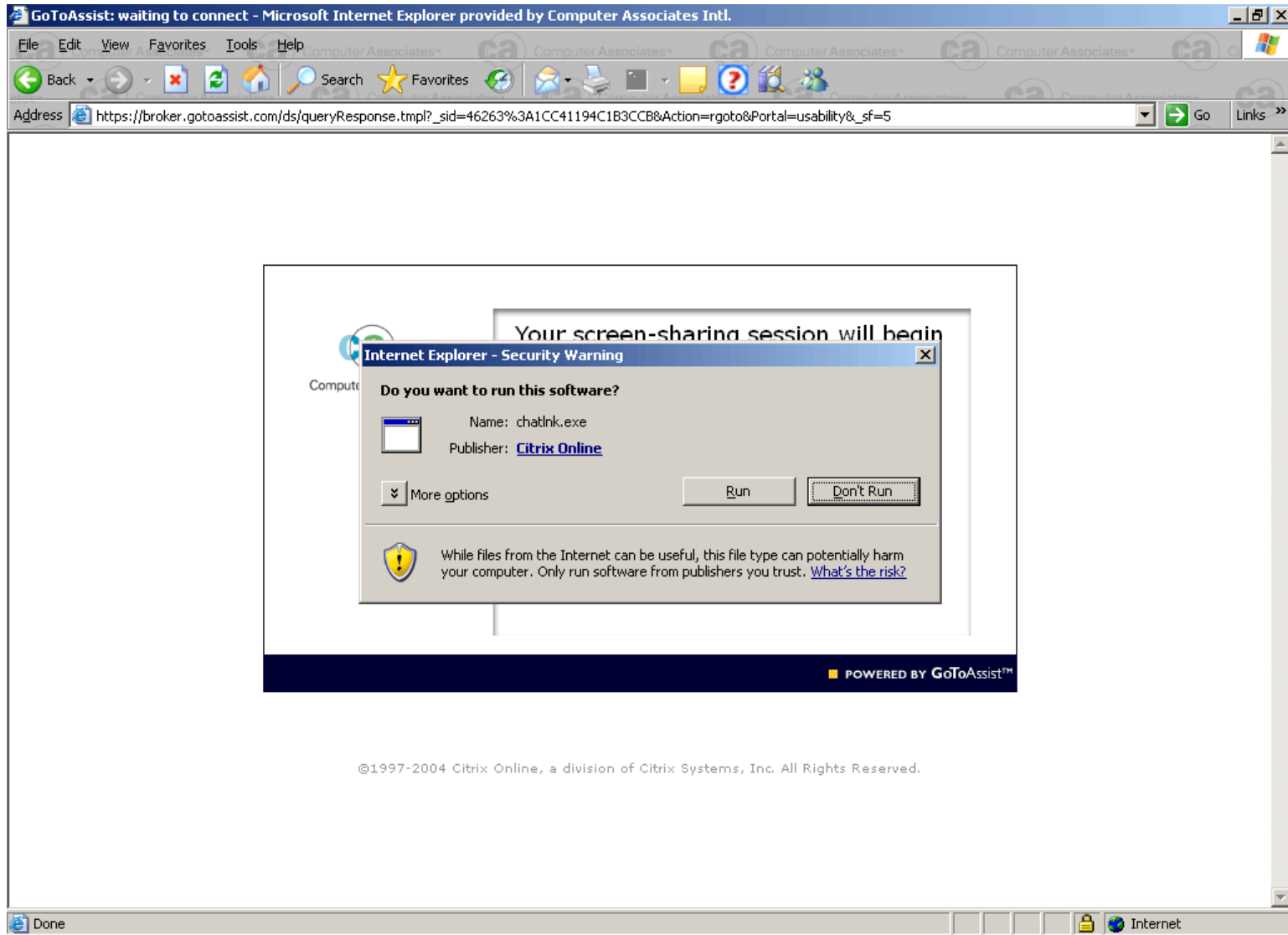
Accept Reject

Done Local intranet

# Screen Sharing Starting



# User prompted to download a plug-in



# Type of Access



# User Accessing the Product Prototypes

At Test Time

# CA User-Centered Design (UCD) Site

**Design Partnership Program - Microsoft Internet Explorer provided by Computer Associates Intl.**

File Edit View Favorites Tools Help

Address <https://connectprimary.ca.com/webac/wac/usabilitylogin.asp>

## ca User-Centered Design

### Welcome to the Design Partnership Program

Quality is at the heart of the Computer Associates philosophy. As part of our on-going efforts to put customers first, we created the Design Partnership Program.

The Design Partnership Program lets our customers provide feedback directly into the product design process. This feedback is a vital part of our user-centered design methodology and lets us better understand the needs of our customers so that we can make our products easier to use.

**User-Centered Design Process:**

```
graph TD; A[Understand Customer/User Needs] --> B[Define Requirements]; B --> C[Develop StoryBoards/ Design Prototypes]; C --> D[Gather Feedback/ Usability Testing]; D --> E[Iterate Designs]; E --> A; E --> B; E --> C; E --> D; E --> F[Implement];
```

**Login**

Email Address

Password (case-sensitive)

[Login >>](#)

[Forgot your password?](#)

**Testimonials**

"Overall, it was excellent!"

"I'm very happy CA is involving customers like this."

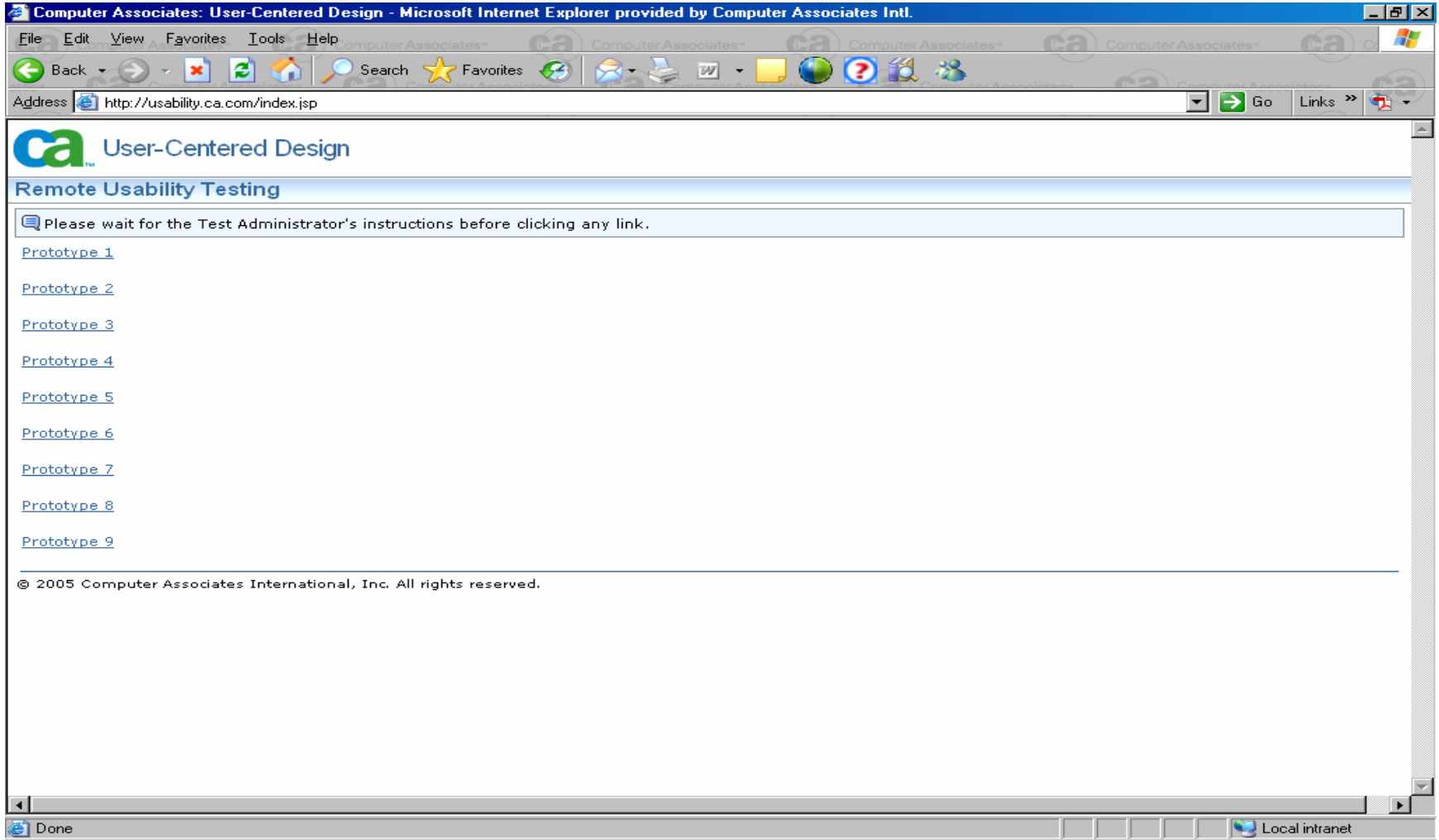
"Usability testing is cool!"

**Who can participate?**  
All Computer Associates customers around the world can participate. We are interested in all levels of computer experience from new users to experts.

**How is the usability testing done?**  
Participation may include phone interviews and online surveys as well as on-site and remote usability testing. Typically, participation takes about an hour, scheduled at your convenience.

Done Local intranet

# CA UCD Prototypes Home Page



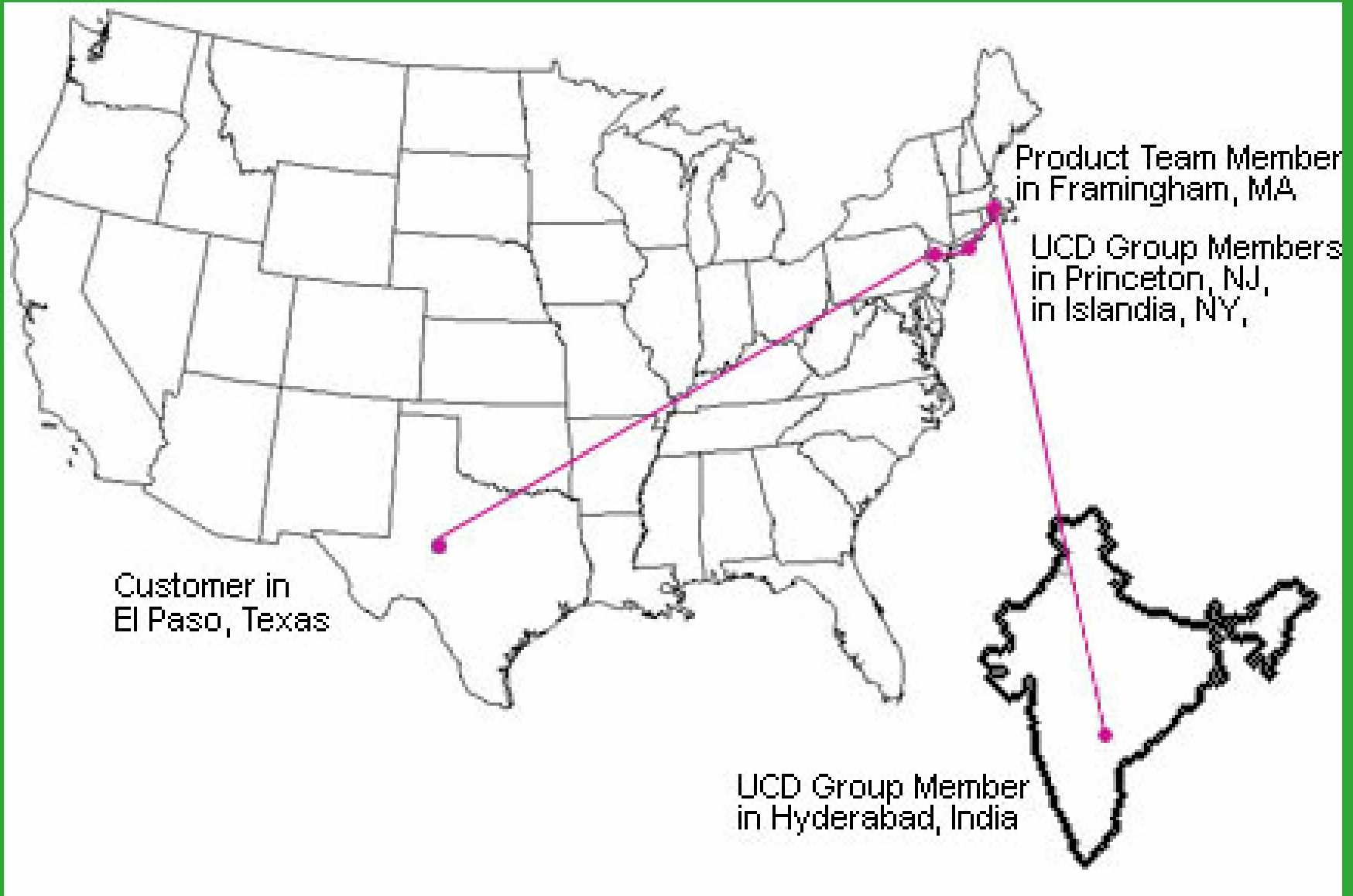
# Case Study

## Remote Usability Evaluation of an Enterprise Portal Application

# Overview

- 16 users from 7 customer sites in 4 different continents participated
- Role based prototypes were evaluated
- One Test facilitator and 2 UCD team members participated
- The Product Manager was an observer
- Developers were invited to observe some tests
- Three test iterations were conducted

# Geographical Distribution of Team



# Pre-test preparation work

- Instructions emailed prior to the test
- Made sure user had the required set up
- Requested that the Informed Consent Form be signed and faxed prior to the evaluation
- Requested that the NDA be signed and faxed prior to the evaluation
- Emailed tasks a few minutes before the test
- Included the URL to post-test surveys in the instruction email

# Portal Dashboard – Evaluator's Desktop

kh - GoToAssist Viewer

File View Tools Help

Manage: My Pages - Microsoft Internet Explorer provided by Computer Associates Intl.

File Edit View Favorites Tools Help

Address http://tau/ui/prototypes/Portal\_10/producer/home.htm

Portal

Search: [ ] Go Advanced Home Manage Pages Library Help

Logged in as: Joe (Log Out) Updated: Tuesday, March 22, 2005 9:07 AM

Business Process Travel Help Desk Sales Marketing Finance HR

**Solution Information**

**Industry Solutions**

Each industry has its own special concerns and needs — including regulatory compliance. CA has solutions specifically targeted to help your financial services, government, education, healthcare, manufacturing or retail organizations meet its unique goals. [Learn more...](#)

**Business Solutions**

Some concerns are unique to small- or medium-sized businesses. Some concerns — including regulatory compliance and business continuity — are common to most any organization. CA's business solutions address the needs of any business, helping you gain competitive advantage. [Learn more...](#)

**Partner Information**

**Mainframe Solutions**

What's the best way to leverage your IBM mainframes now and in the future? CA's mainframe solutions provide web-based access to legacy data, integrate mainframe applications and manage the mainframe as part of your overall enterprise. [Learn More...](#)

**Partner Solutions**

Through partnerships with top solution and service providers, we help our customers get the most from their investments in CA software. We help resellers and channel distributors grow their businesses, and bridge the gap between corporate and educational institutions around the world. [Learn more...](#)

**Stock Information**

CA (Common Stock)

Price	\$27.62
Exchange	NYSE (US Dollar)
Change (%)	▼ 0.11 (0.39%)
Volume	476,400
Today's Open	\$27.90
Previous Close	\$27.93
Intraday High	\$27.96
Intraday Low	\$27.64
S2 Week High	\$31.71
S2 Week Low	\$22.37
Bid	\$N/A

**Product and Services**

**Product Solutions**

CA's product solutions are designed to meet your business challenges. Our products allows you to integrate IT with your business — and they grow as your business grows. [Learn more...](#)

**Service Solutions**

Sometimes you need more than software — you need expertise. CA's service solutions can help you identify which products can best meet your particular needs. We can install and

**Business Solutions**

**Industry Solutions**

Each industry has its own special concerns and needs — including regulatory compliance. CA has solutions specifically targeted to help your financial services, government, education, healthcare, manufacturing or retail organizations meet its unique goals. [Learn more...](#)

**Business Solutions**

Some concerns are unique to small- or medium-sized businesses. Some concerns — including regulatory compliance and business

**Stock Charts**

CHART

COMPUTER ASSOC INTL INC  
as of 3/9/2005

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Citrix Online - ScreenSharing

# Portal Pages - Evaluator's Desktop

kh - GoT Assist Viewer

File View Tools Help

Manage: My Pages - Microsoft Internet Explorer provided by Computer Associates Intl.

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites

Address http://tau/ui/prototypes/Portal\_10/producer/my\_portal.htm

Go Links

Portal

Search: [ ] Go Advanced Home Manage Pages Library Help

Logged in as: Joe (Log Out) Updated: Tuesday, March 22, 2005 9:07 AM

My Pages

Home > My Pages

My Pages **Producer Pages**

Save Reset

<input type="checkbox"/>	Page Name	Description	Distributed	Preview
<input type="checkbox"/>	Business Process	Provides information to business process in the organization.	yes	
<input type="checkbox"/>	Caching	Customer relationship organization information	no	
<input type="checkbox"/>	Facilities	Facilities information for all North American offices	no	
<input type="checkbox"/>	Finance	Finance data for North America	no	
<input type="checkbox"/>	Global Security	Global Security for European offices	yes	
<input type="checkbox"/>	Help Desk	Global Help Desk information	yes	
<input type="checkbox"/>	HR	Global Human Resources	no	
<input type="checkbox"/>	IT	Global IT information	no	
<input type="checkbox"/>	Marketing	North East marketing information	no	
<input type="checkbox"/>	Payroll_2004	Employee Payroll data for 2004	no	
<input type="checkbox"/>	Personnel	Employee information	no	
<input type="checkbox"/>	Sales	North American sales information for 2004	no	
<input type="checkbox"/>	Travel	Employee travel information	yes	
<input type="checkbox"/>	xxxx	data	no	
<input type="checkbox"/>	xxxx	data	no	
<input type="checkbox"/>	xxxx	data	no	

Move page:

Displayed Pages

Required Pages:

- Business Process
- Travel
- Help Desk

Selected Pages:

- Sales
- Marketing
- Finance
- HR

Citrix Online - ScreenSharing

This computer is now being accessed remotely.

# Cost Analysis

Type of test	Customer sites visited	User participation	Overseas Customer participation	No of Test Iterations	Product Management Participation	Travel Costs	Time spent (including travel)
Traditional Usability Evaluation	2	8 users	No (due to prohibitive travel costs)	1	No (due to prohibitive travel costs)	Approx \$5000	80 hours
Remote Usability Evaluation	7	16 users	Yes	3	One Product Manager observed the tests	\$0	32 hours

- If the enterprise portal application was tested traditionally, travel costs would have been about \$75,000

# Advantages of This Method

- Significant reduction in cost
  - No travel costs
  - Project times are reduced
- Multiple team members can observe from different locations
- Removes the unnatural setting of a lab environment
- Ensures a diverse global test audience, which removes cultural bias in test data
- Easier to test role-based enterprise solutions because of quick and easy user access

# Disadvantages of This Method

- Data not as pure as a traditional evaluation
- More prep work required by a test evaluator
- Viewing some customers' desktops perceived as a security threat
- Difficulty for some users in accessing remote usability tools due to different operating systems
- Difficulty in controlling external noise
- Difficulty in preventing users from reading tasks beforehand
- Problems with system and connection issues
- Proven for web-based prototypes only
- Loss of quality when recording data

# More Research Needed....

- To build a remote usability infrastructure for live thick client applications
  - Virtualize solutions using an ESX server
- To solve recording challenges
  - 24-bit color support necessary
  - Loss of quality with streaming data
- To create and distribute highlight videos easily

# Questions?

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# References

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