Using MicroArray Explorer with the NCI/CIT mAdb Web server

http://www.lecb.ncifcrf.gov/MAExplorer
http://nciarray.nci.nih.gov/

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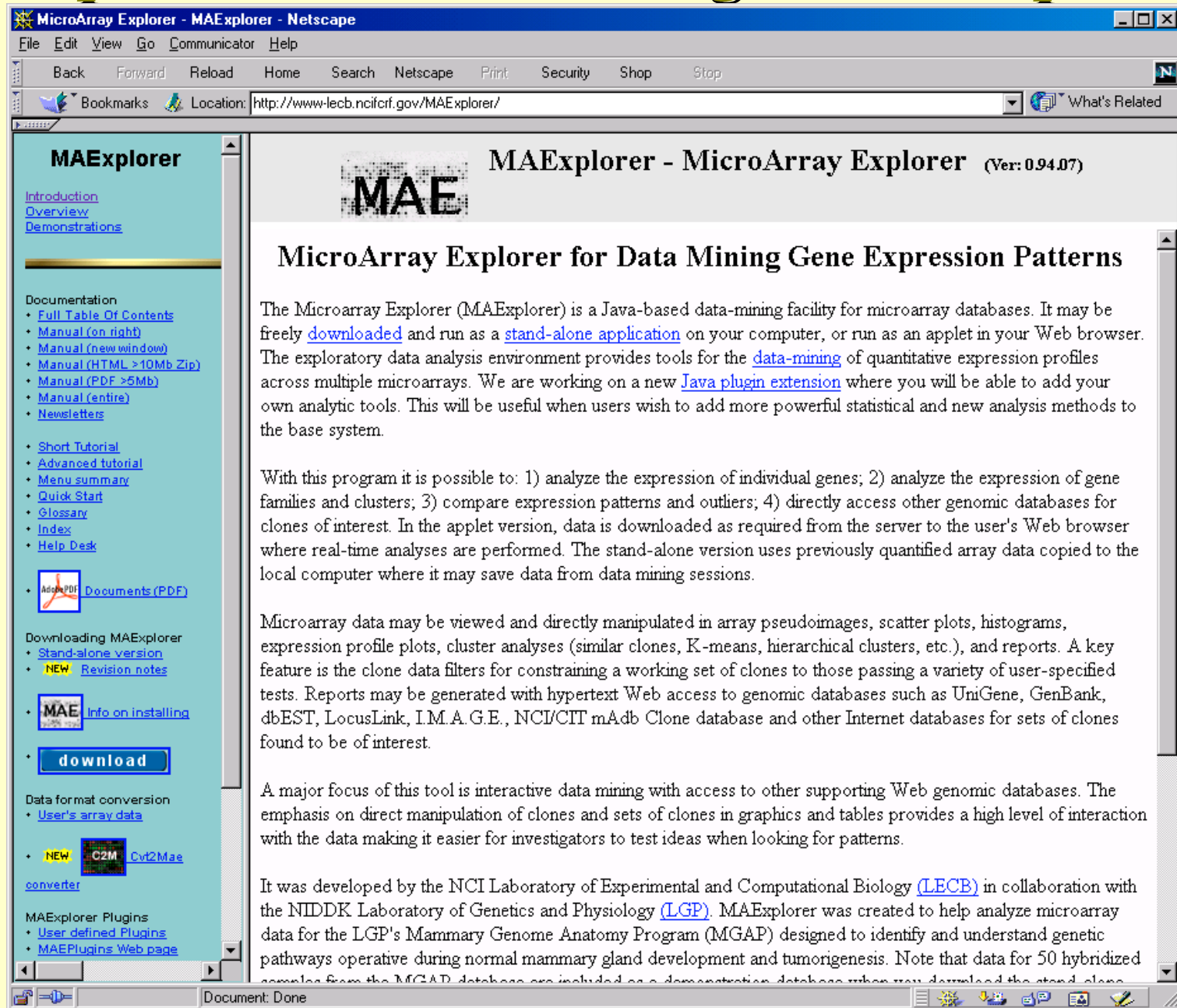Revised: 01-29-2002

Overview: MAExplorer and mAdb

- **MAExplorer** is a Java data-mining tool for analyzing microarrays running on a user's computer. It provides real time response required for data-mining, as well as connecting to Genomic databases such as UniGene, mAdb-clone DB, Genbank, etc. [http://www.lecb.ncifcrf.gov/MAExplorer]

- The NCI/CIT **mAdb** Web microarray database server is a data repository, publishing and analysis facility for microarrays created in conjunction with the NCI-ATC facility. [http://nciarray.nci.nih.gov/]

- MAExplorer may be used with mAdb data as a stand-alone application on the users computer (Windows 95/98/NT/2000/XP MacOS/-X, Solaris, Linux, Unix).

- It uses a set of data files downloaded, as a Zip file, from the mAdb Web server in a format compatible with MAExplorer.

- This document describes the procedures for downloading **1**) MAExplorer, **2**) a mAdb data set and **3**) starting MAExplorer with that data. MAExplorer is fully documented on its Web site including a reference manual, slide-shows, tutorials and demonstration databases.

1. <u>Procedure</u> to download & install MAExplorer

1. Go to **http://www.lecb.ncifcrf.gov/MAExplorer** with your Web browser.

2. Select **Download** to start the install process. It uses the InstallAnywhere™ program to install it on your computer. You have a choice of:

3.1 Allowing InstallAnywhere™ to install it in a standard default location (eg. in Windows this would be C:\Program Files\MAExplorer), or

3.2 You may download the installer file and select where you want to install it.

   A) Find your computer **Platform** in the list. Click on the corresponding **Download** word and save the installer on your computer.

   B) Go to **View** for your platform in the same download Web page to see how to finish the installation for your particular platform.

   C) Now install MAExplorer on your computer in the location you desire.

4. You are ready to use MAExplorer. Eg. in the Windows Start menu, click on MAExplorer. After it starts, select "Open file DB" in the File menu.

1.1 MAExplorer Home Page
http://www.lecb.ncifcrf.gov/MAExplorer

1.2 Download Stand-alone version Web page - find your "Platform", then select "Download"

InstallAnywhere Web Installer - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop Stop

Bookmarks Location: http://www-lecb.ncifcrf.gov/MAExplorer/Install/index.html What's Related

MAExplorer stand-alone application for data mining microarray data

Recommended Installation for Your Platform:

Download Installer for Windows...

Installer created with InstallAnywhere® by Zero G Software, Inc. Copyright 2001. www.ZeroG.com

Available Installers

Platform	includes Java VM	without Java VM	Instructions
> Windows	Download (9.5M)		View
Mac OS	Download (10.6M)		View
Mac OS X		Download (3.2M)	View
AIX	Download (24.8M)	Download (3.6M)	View
Solaris	Download (24.5M)	Download (3.6M)	View
Linux	Download (24.6M)	Download (3.6M)	View
HP-UX	Download (33.2M)	Download (3.6M)	View
UNIX_with_VM	Download (24.8M)	Download (3.6M)	View
Unix		Download (3.6M)	View
Other Java-enabled Platforms		Download (3.8M)	View

1.3 Save the installer on your local computer

InstallAnywhere Web Installer - Netscape

File Edit View Go Communicator Help
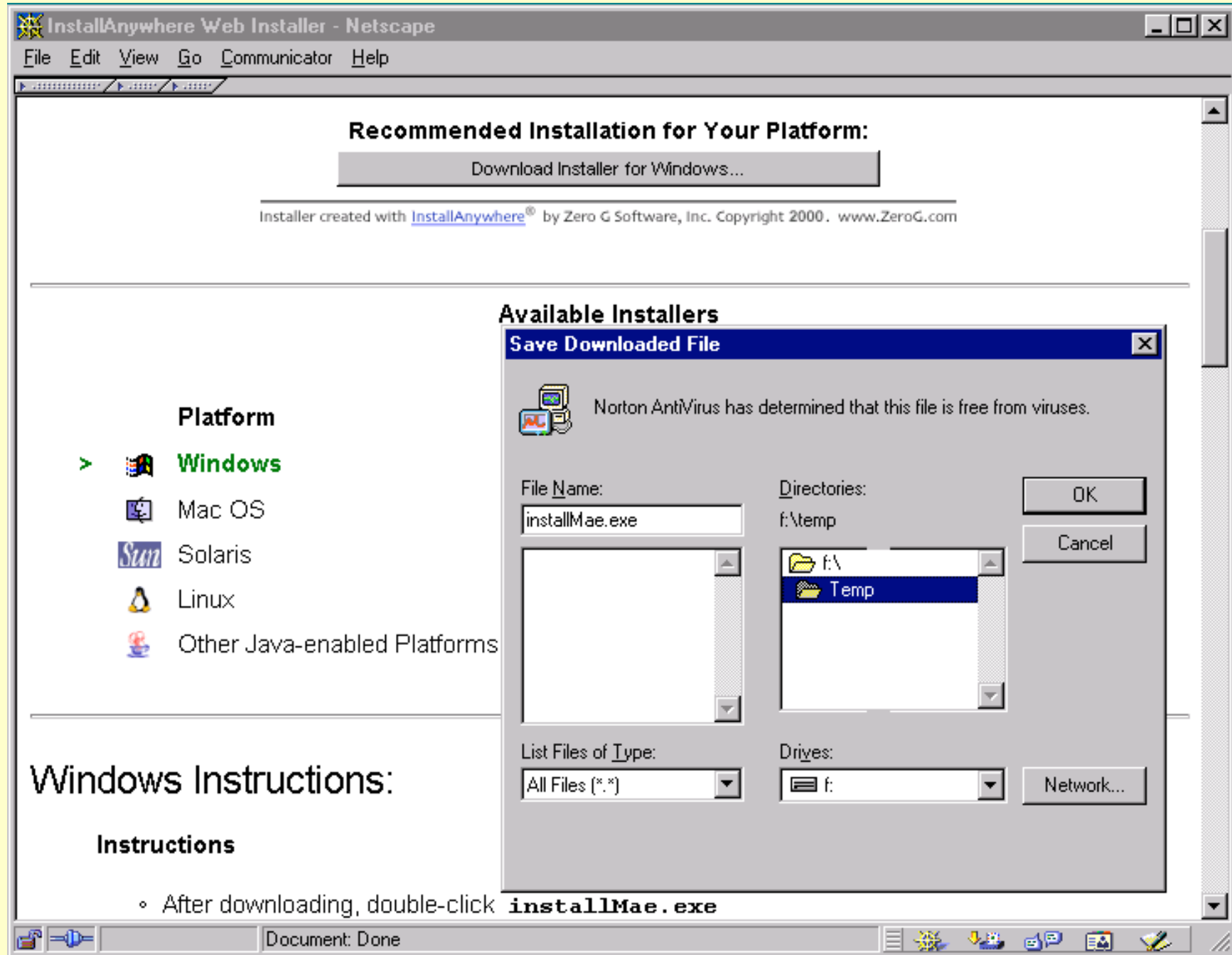
Recommended Installation for Your Platform:

Download Installer for Windows...

Installer created with InstallAnywhere® by Zero G Software, Inc. Copyright 2000. www.ZeroG.com

Available Installers

Platform

> Windows
  Mac OS
  Solaris
  Linux
  Other Java-enabled Platforms

Save Downloaded File

Norton AntiVirus has determined that this file is free from viruses.

File Name:
installMae.exe

Directories:
f:\temp

f:\
Temp

OK

Cancel

List Files of Type:
All Files (*.*)

Drives:
f:

Network...

Windows Instructions:

Instructions

○ After downloading, double-click **installMae.exe**

Document: Done

1.4 Start the installer – e.g. in Windows, click on installMAE.exe. Then answer questions, "OK" etc.

Temp

File   Edit   View   Go   Favorites   Help

Address   F:\Temp

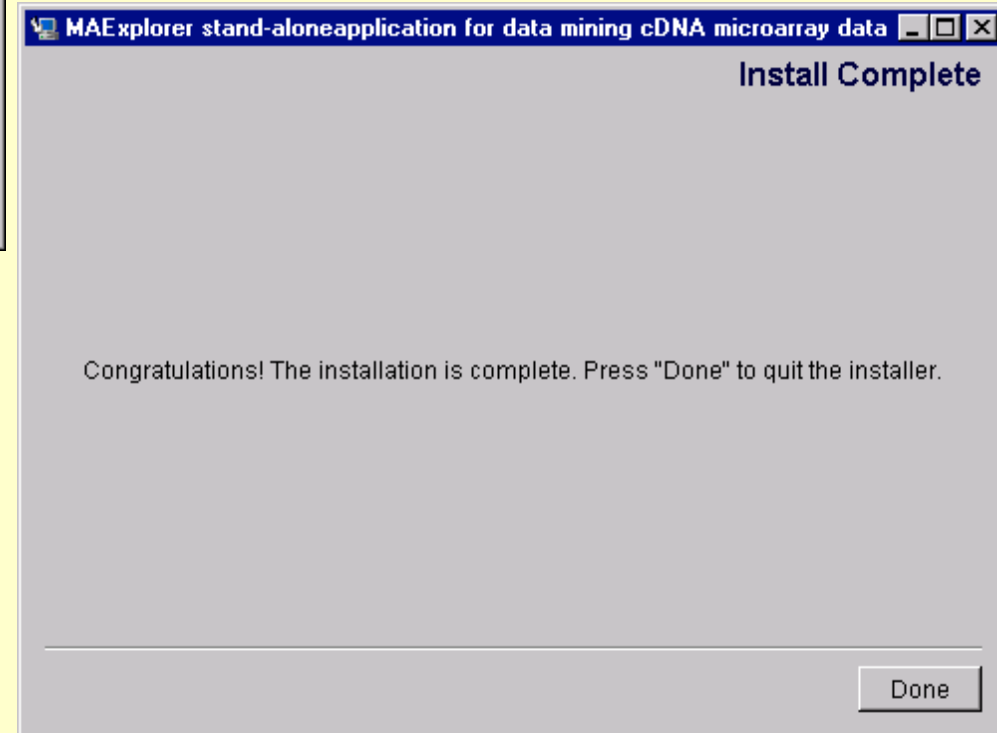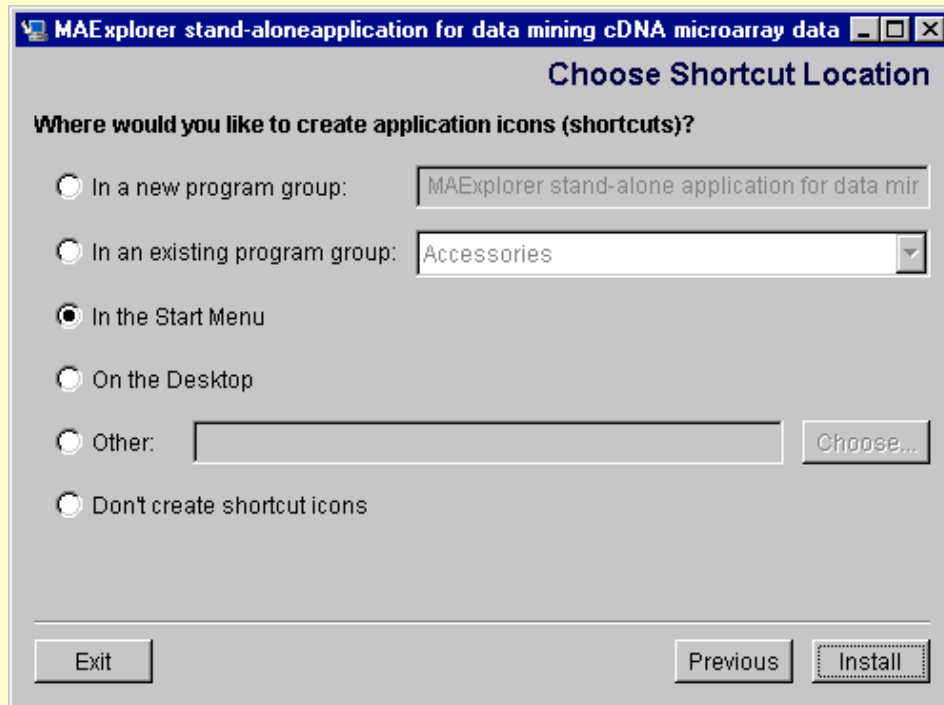| Name	T.	Size	Modified
installMae.exe	A..	5,353...	11/14/00 2:40 PM

1 object(s) selected

English   OK
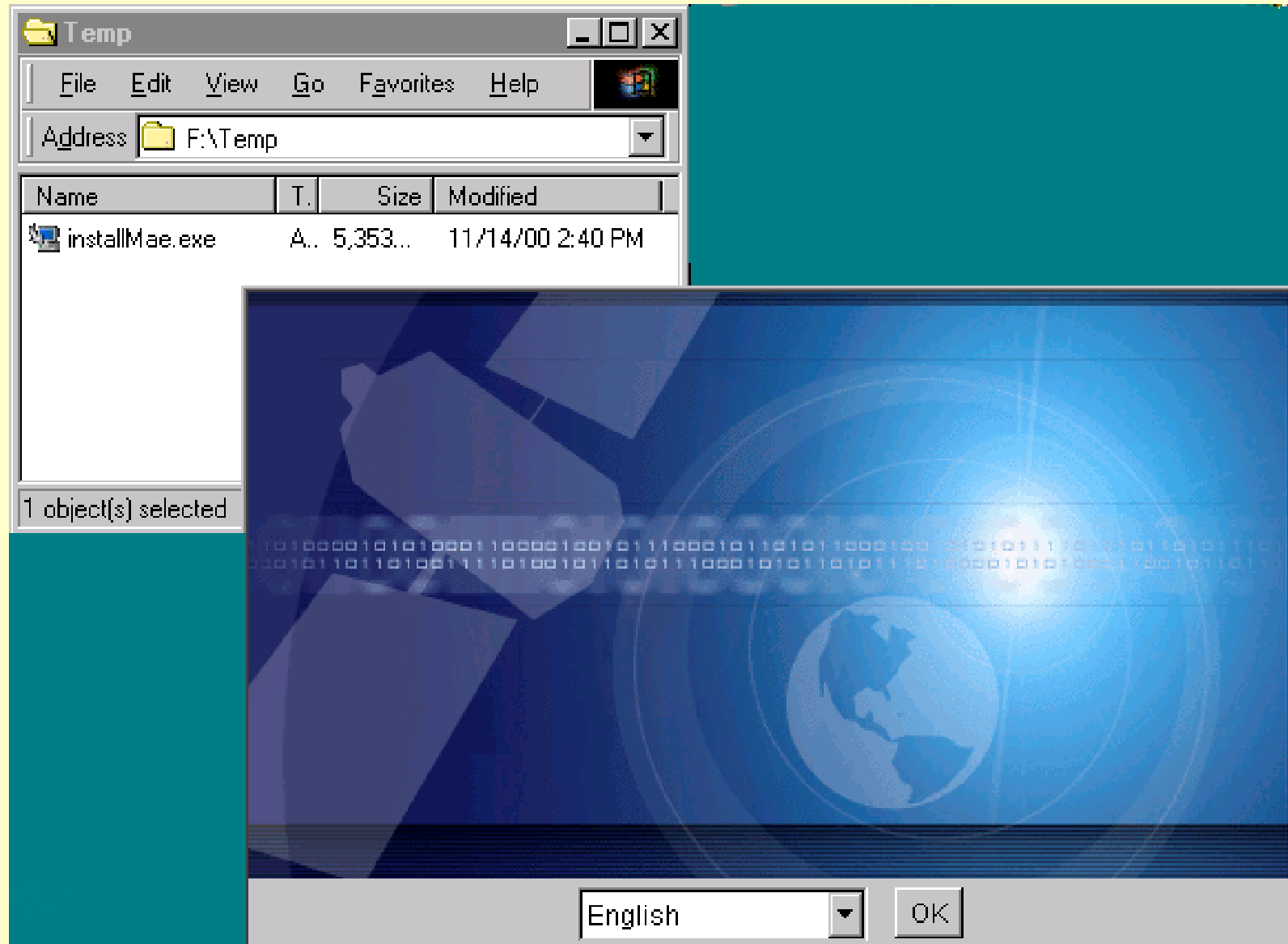
1.5 Sucessive steps during installation of MAExplorer
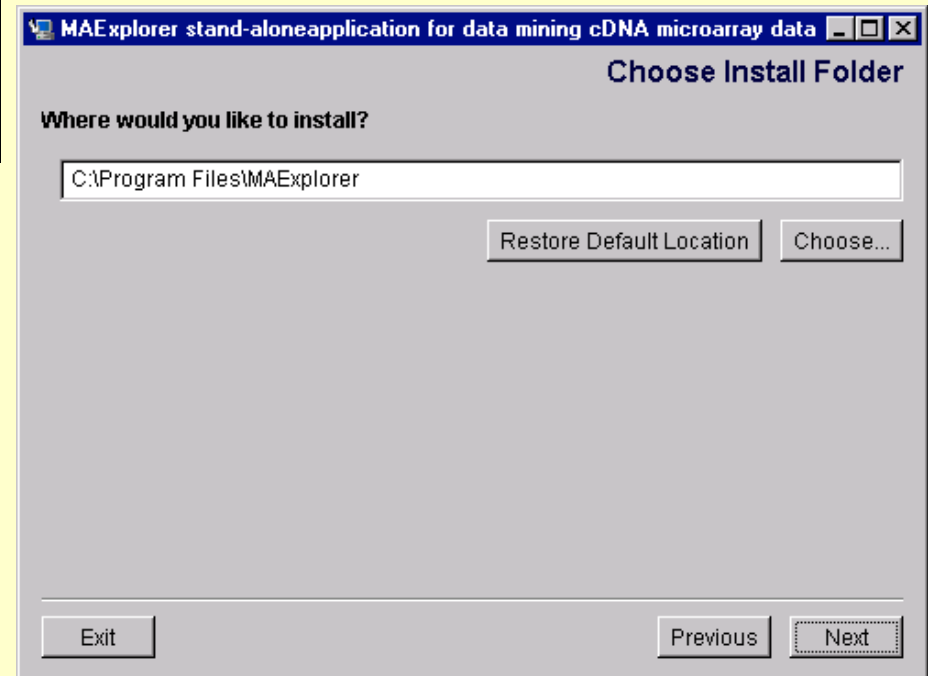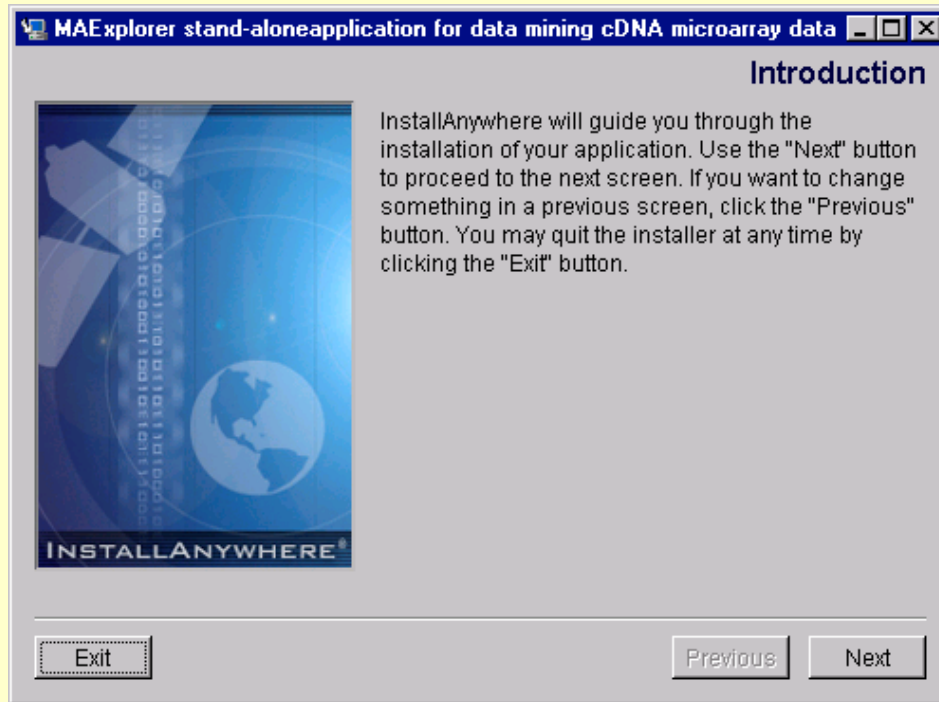
1.6 Finish installation of MAExplorer:
A) press "Install", B) press "Done"

MAExplorer stand-aloneapplication for data mining cDNA microarray data

Choose Shortcut Location

Where would you like to create application icons (shortcuts)?

○ In a new program group: MAExplorer stand-alone application for data mir

○ In an existing program group: Accessories

◉ In the Start Menu

○ On the Desktop

○ Other: Choose...

○ Don't create shortcut icons

Exit   Previous   Install

MAExplorer stand-aloneapplication for data mining cDNA microarray data

Install Complete

Congratulations! The installation is complete. Press "Done" to quit the installer.
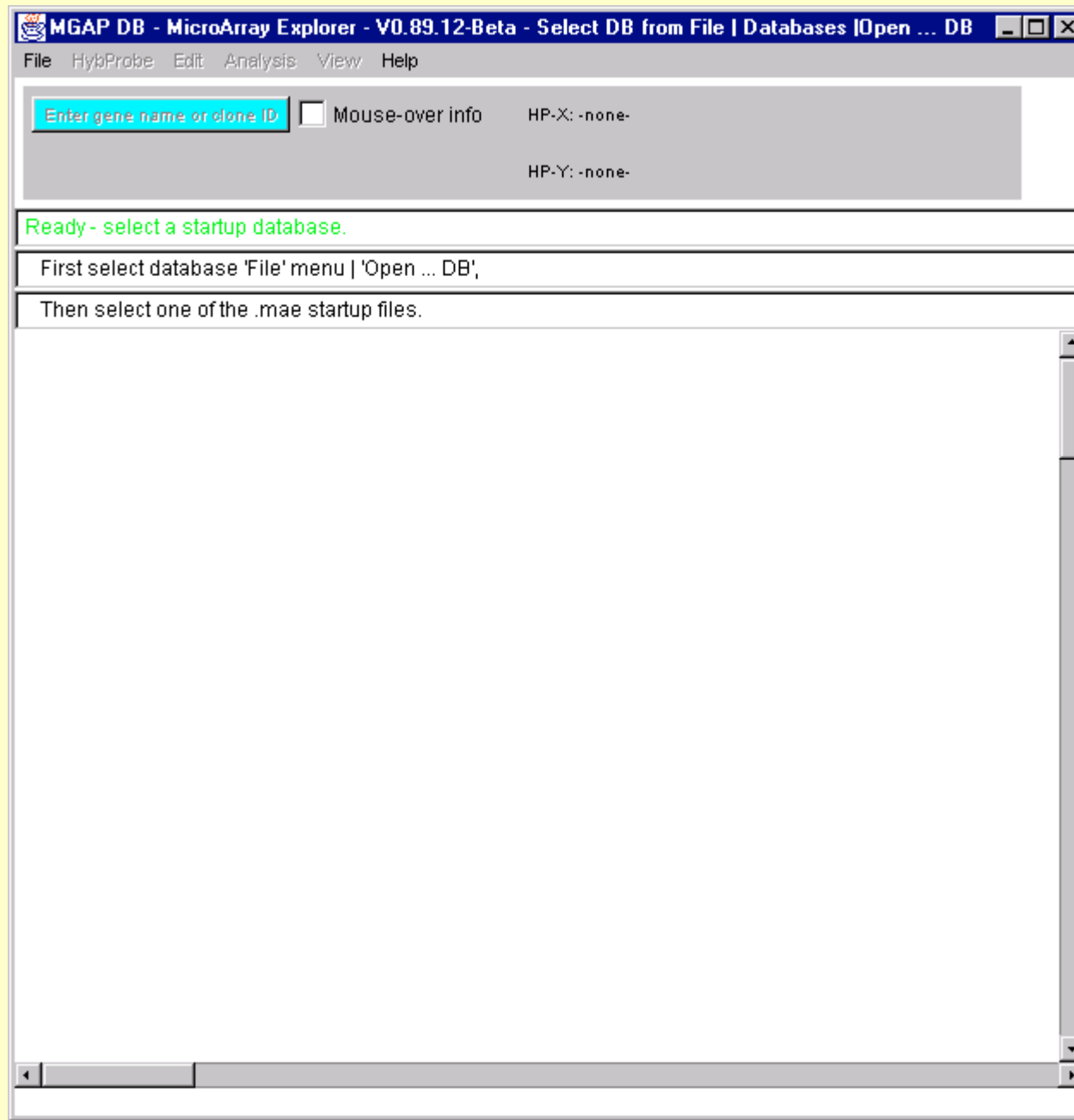
Done

1.7 Directory structure of downloaded files
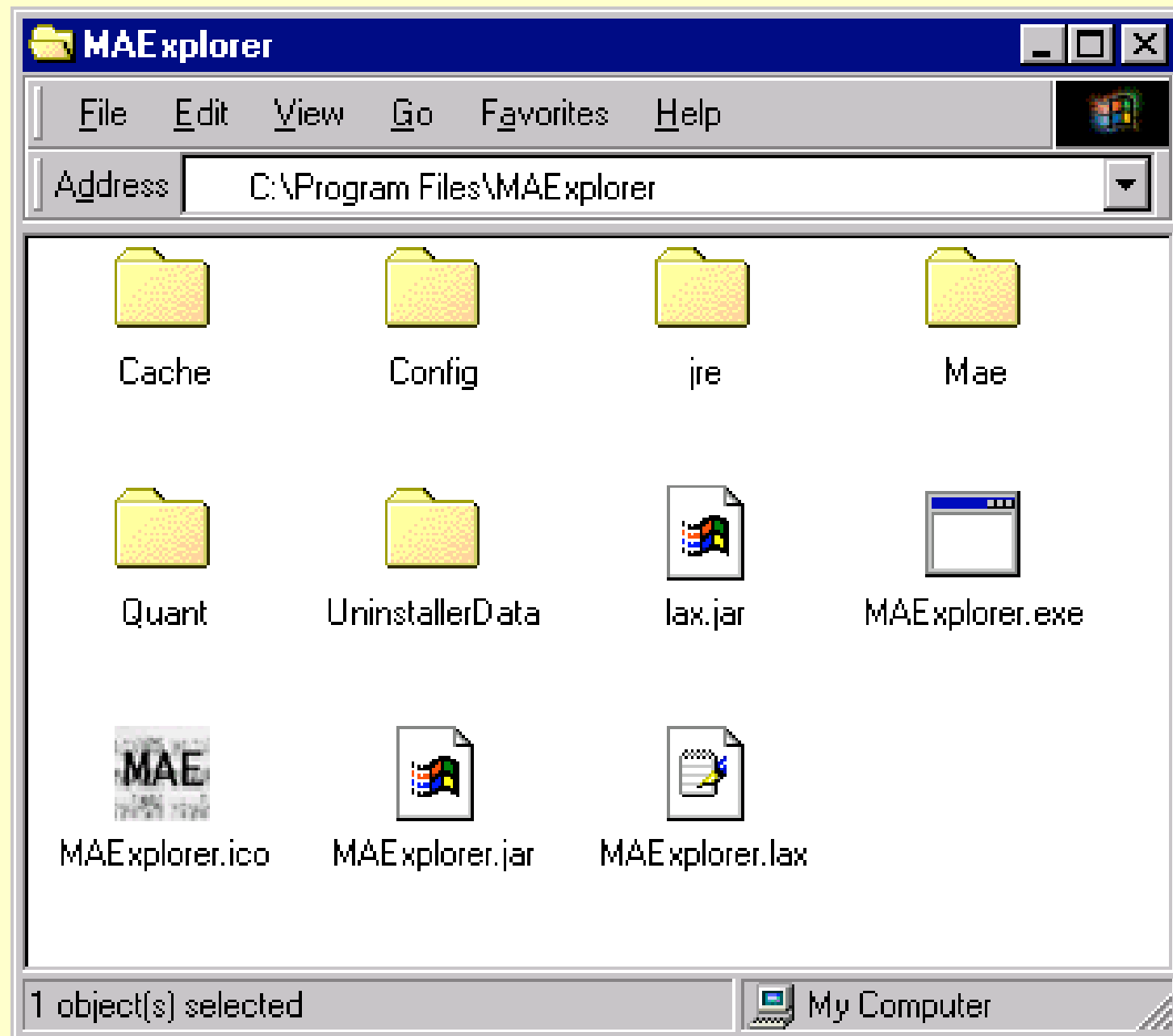
1.8 Start MAExplorer from Windows PC "Start" menu. Initially starts with empty database .

MGAP DB - MicroArray Explorer - V0.89.12-Beta - Select DB from File | Databases |Open ... DB

File   HybProbe   Edit   Analysis   View   Help

Enter gene name or clone ID   ☐ Mouse-over info   HP-X: -none-

HP-Y: -none-

Ready - select a startup database.

First select database 'File' menu | 'Open ... DB',

Then select one of the .mae startup files.

1.9 Open demo (MGAP) database from local disk

Browse demo project for startup database. Select <u>F</u>ile menu, then <u>O</u>pen file DB
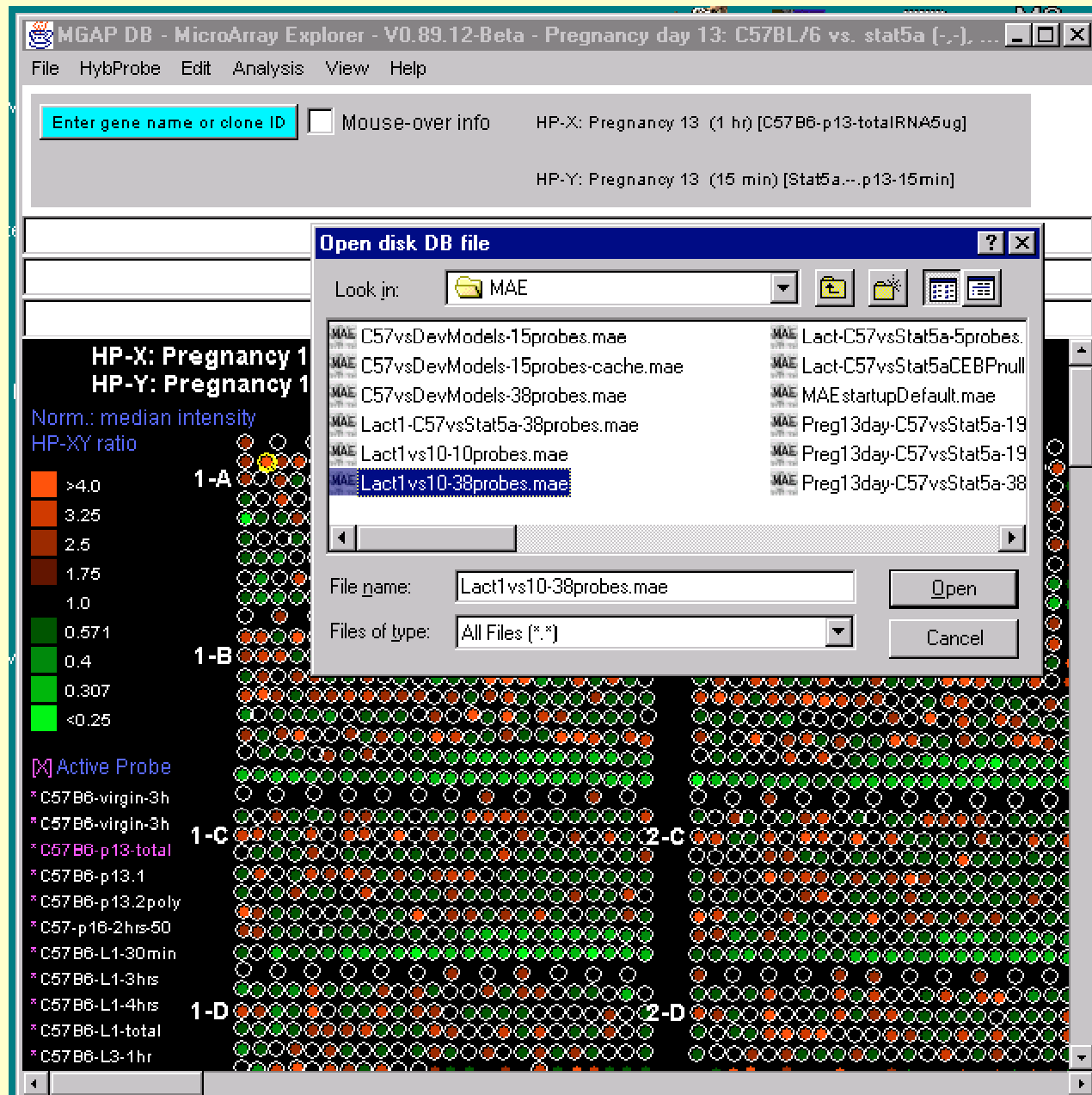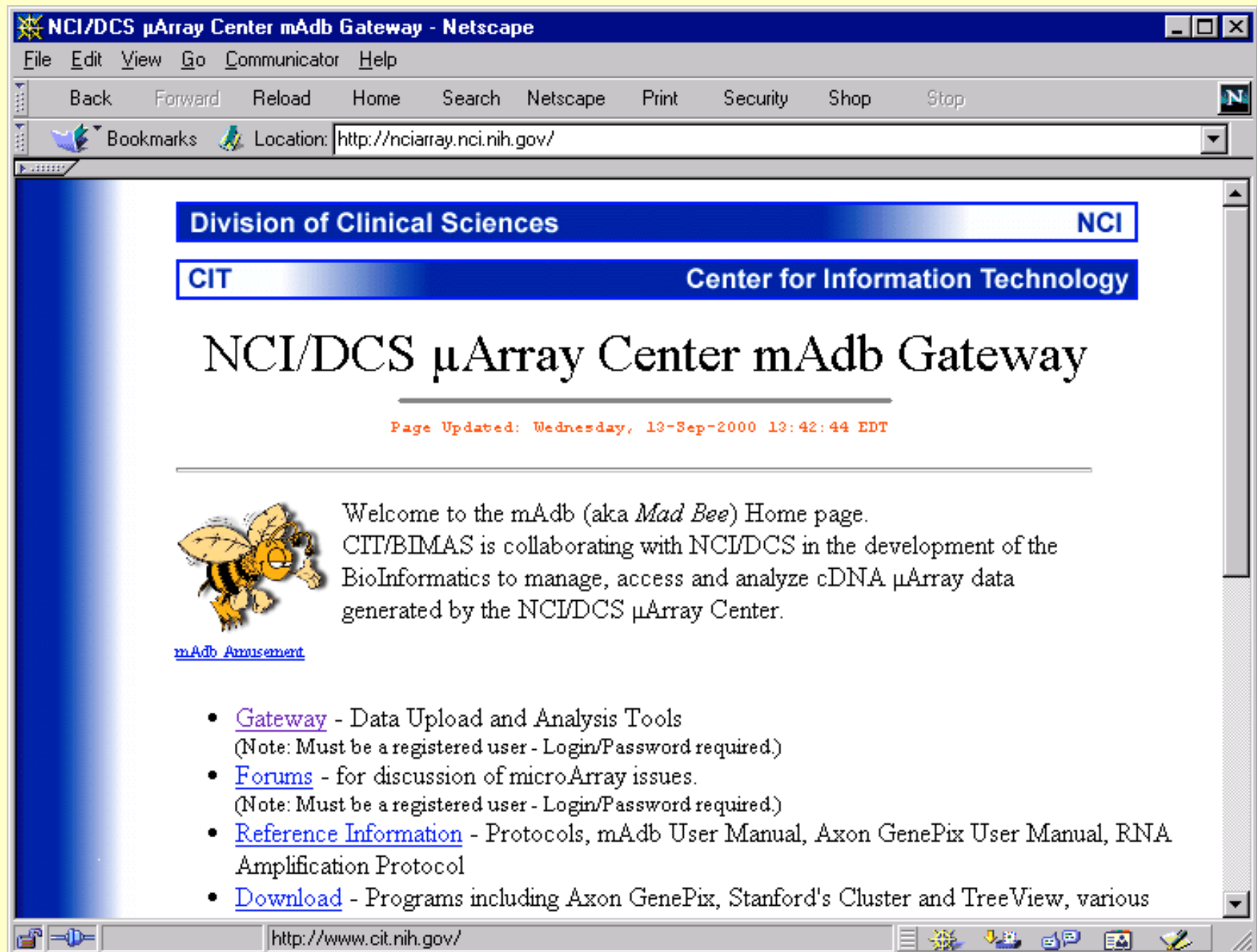
2. <u>Procedure</u> to use MAExplorer on mAdb data

1. Install MAExplorer if not already installed
2. Go to **http://nciarray.nci.nih.gov/** with your Web browser
3. Go to **"Gateway"** and log into your account
4. In "**Projects:**:", select projects & samples for export
5. In **"Tool:"**, select **"BETA formated array data retrieval tool"**
6. Select **"LECB/NCI MAExplorer"** for "Retrieval format"
7. **Submit**. This eventually replaces Web page with new page containing numbered file ending in **.zip**
8. Click on **.zip** file to download & save it locally to your disk.
9. Unpack **.zip** file to new directory, for example "C:*myData*"
10. On Windows systems, double click on <u>Start.mae</u> in C:*myData*\\MAE\\ directory. This will start MAExplorer

2.1 NCI/CIT mAdb Web server home page
http://nciarray.nci.nih.gov/

NCI/DCS μArray Center mAdb Gateway - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop Stop

Bookmarks Location: http://nciarray.nci.nih.gov/

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NCI/DCS μArray Center mAdb Gateway
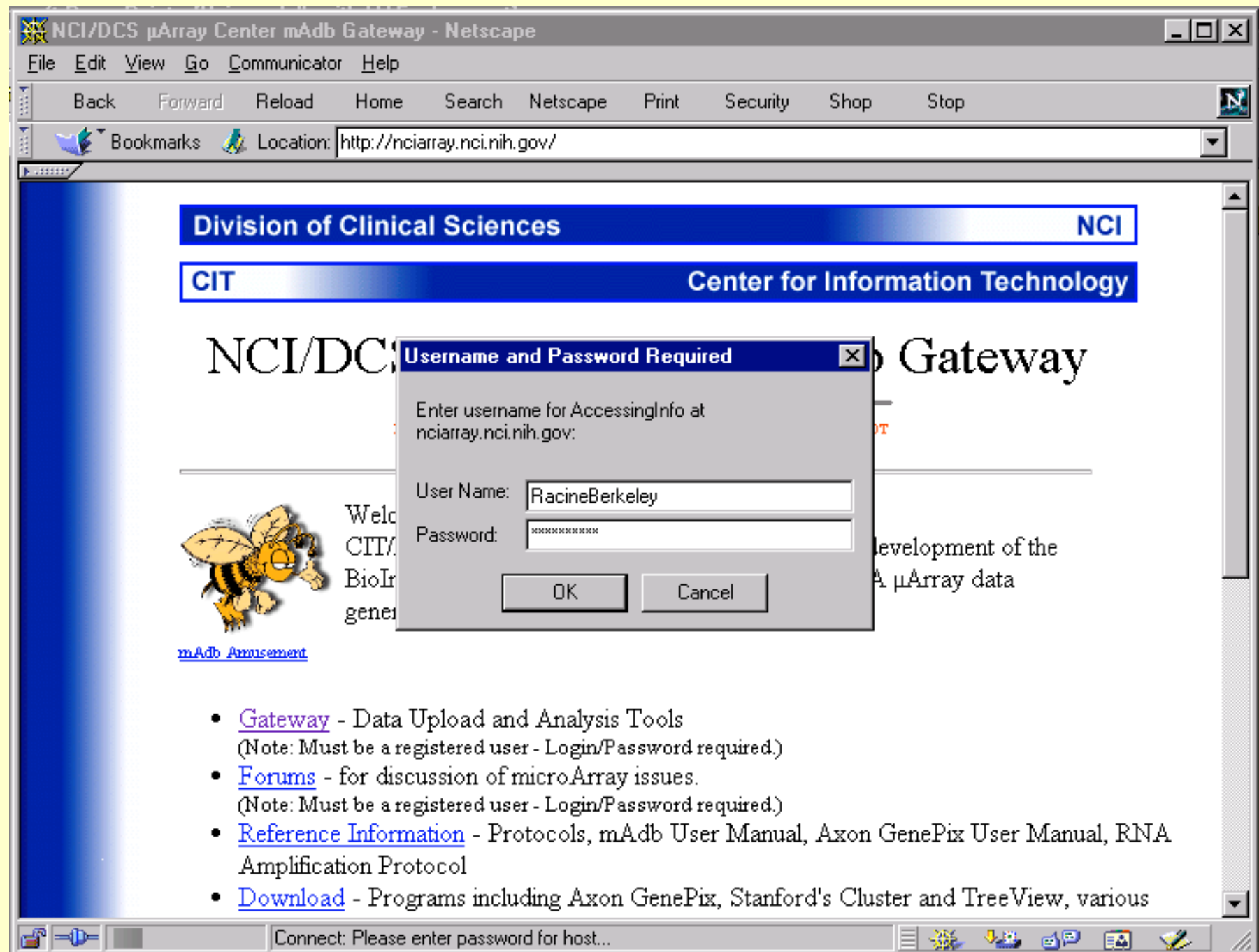
Page Updated: Wednesday, 13-Sep-2000 13:42:44 EDT

Welcome to the mAdb (aka *Mad Bee*) Home page.
CIT/BIMAS is collaborating with NCI/DCS in the development of the
BioInformatics to manage, access and analyze cDNA μArray data
generated by the NCI/DCS μArray Center.

mAdb Amusement

- Gateway - Data Upload and Analysis Tools
  (Note: Must be a registered user - Login/Password required.)
- Forums - for discussion of microArray issues.
  (Note: Must be a registered user - Login/Password required.)
- Reference Information - Protocols, mAdb User Manual, Axon GenePix User Manual, RNA
  Amplification Protocol
- Download - Programs including Axon GenePix, Stanford's Cluster and TreeView, various

http://www.cit.nih.gov/

2.2 Press "Gateway" & Log on to the mAdb server

2.3 Select: a) Projects, b) "Formated Array data Retrieval Tool", c) then press "Continue"

2.4 Set a) Format option to "MAExplorer", b) select arrays to be analyzed, c) press "Submit"

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mAdb: Data Retrieval Form

Format Options 🐝

Dataset Formatted for   NCI/LECB's MAExplorer ▼

Array Selection 🐝

--	A	Submit

	A	**Array Name & Description**
○	◉	MmOC8p6-46 4 Hrs A
○	◉	MmOC8p6-47 4 Hrs B
○	◉	MmOC8p6-48 8 Hrs A
○	◉	MmOC8p6-49 8 Hrs B

2.5 It will contact the mAdb server to get data

mAdb WAIT Data Retrieval Tool 1.00 - Netscape

File Edit View Go Communicator Help

Back   Forward   Reload   Home   Search   Netscape   Print   Security   Shop   Stop

Bookmarks   Location: http://nciarray.nci.nih.gov/cgi-bin/restricted/mAdb_formatted_dataretrieval_v1.cgi

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mAdb WAIT Data Retrieval Tool 1.00

The Data Retrieval process is running. This page monitors the progress and allows you to continue when the results are available.

Please wait for completion.

2K read (at 256 bytes/sec)

2.6 Click on Zip file (e.g. 319-103653.zip) result to download to your computer.

mAdb WAIT Data Retrieval Tool 1.00 - Netscape

File   Edit   View   Go   Communicator   Help

Back   Forward   Reload   Home   Search   Netscape   Print   Security   Shop   Stop

Bookmarks   Location: http://nciarray.nci.nih.gov/cgi-bin/restricted/mAdb_formatted_dataretrieval_v1.cgi

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mAdb WAIT Data Retrieval Tool 1.00

The Data Retrieval process is running. This page monitors the progress and allows you to continue when the results are available.

Please wait for completion.

Worki...

Done! To retrieve the dataset ...s ..." or Save Link as ..."

319_103653.zip

To unpack the dataset, you will need an uncompress utility which can handle ZIP compressed files. One such utility is WINZIP available on the mAdb Program Downloads page.

Viewing Location

Location: http://nciarray....n/319_103653.zip
Viewer: "C:\Program File...t.exe" /download
Status: 72K of 637K (at 2.1K/sec)
Time Left: 00:04:24

[████   ] 11%
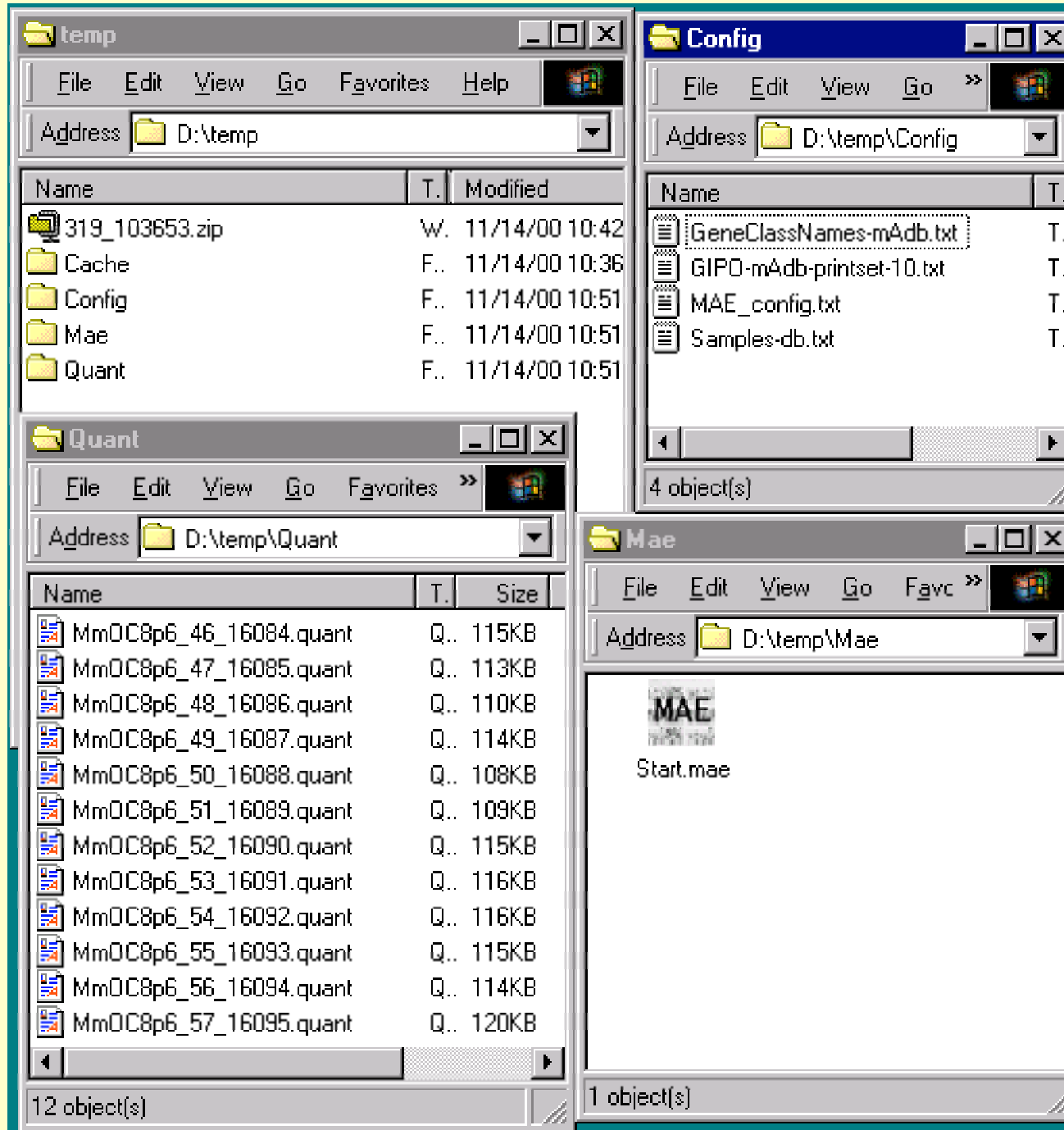
Cancel

Document: Done

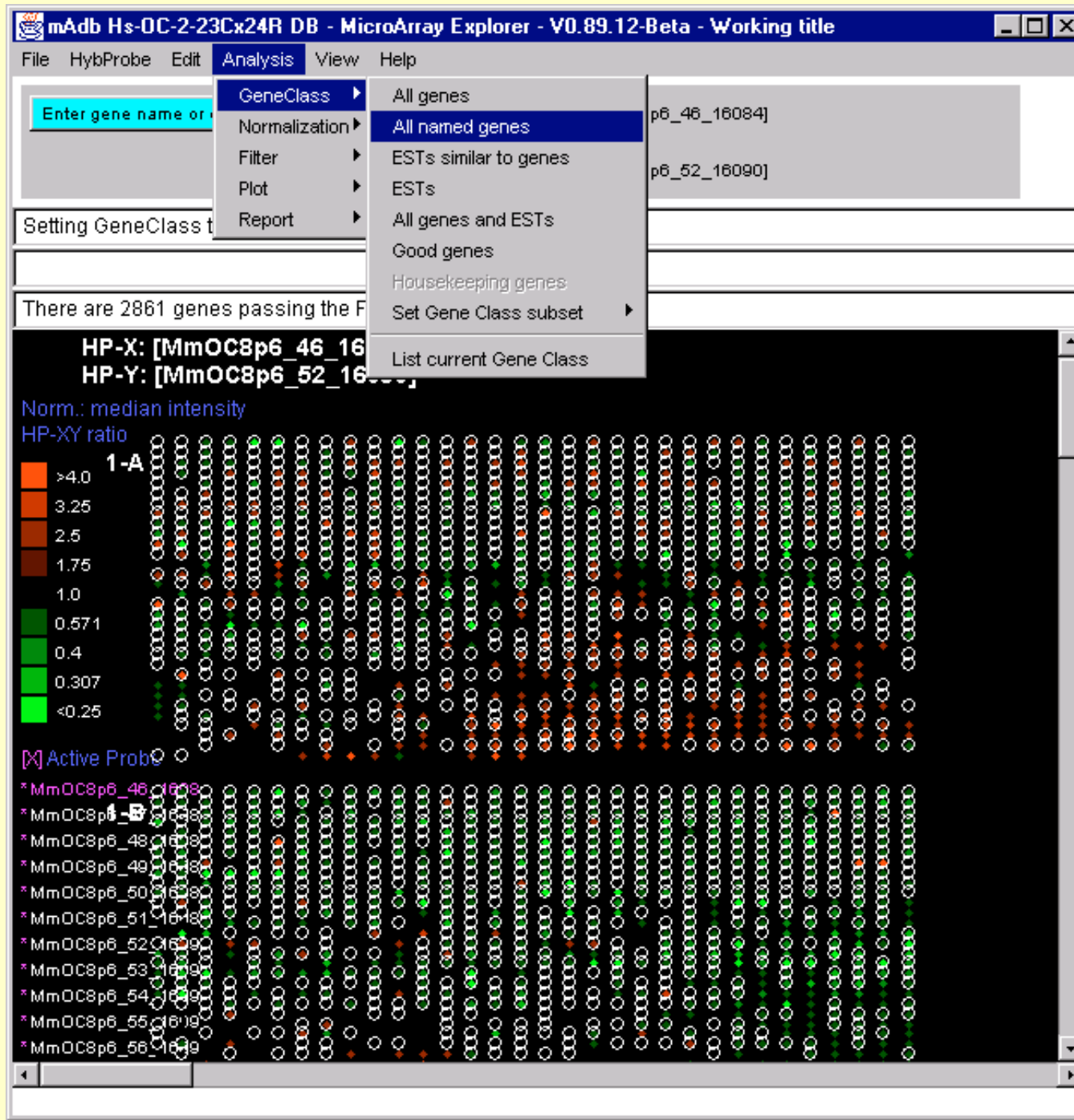# 2.7 Save the Zip data file on your local disk
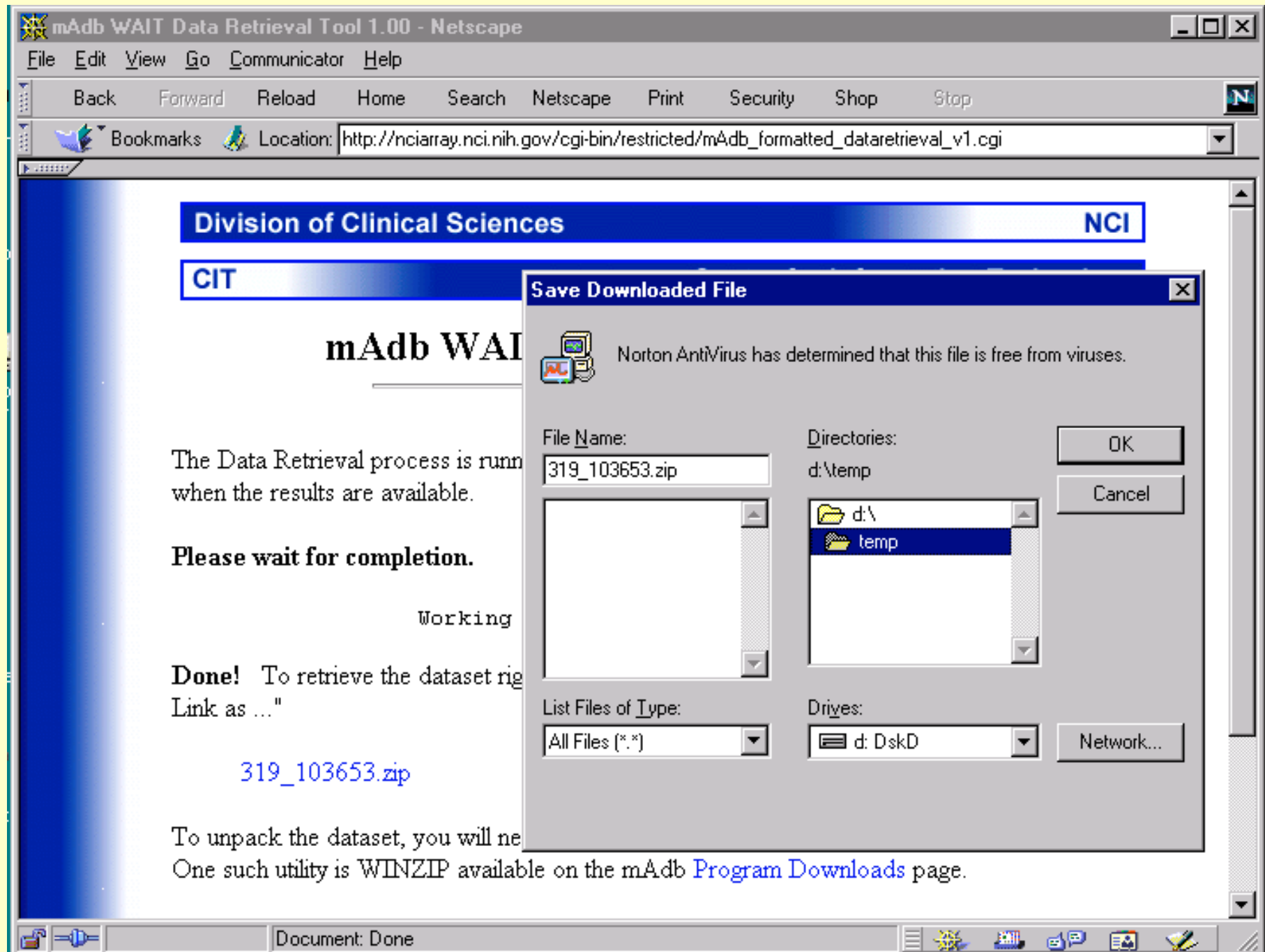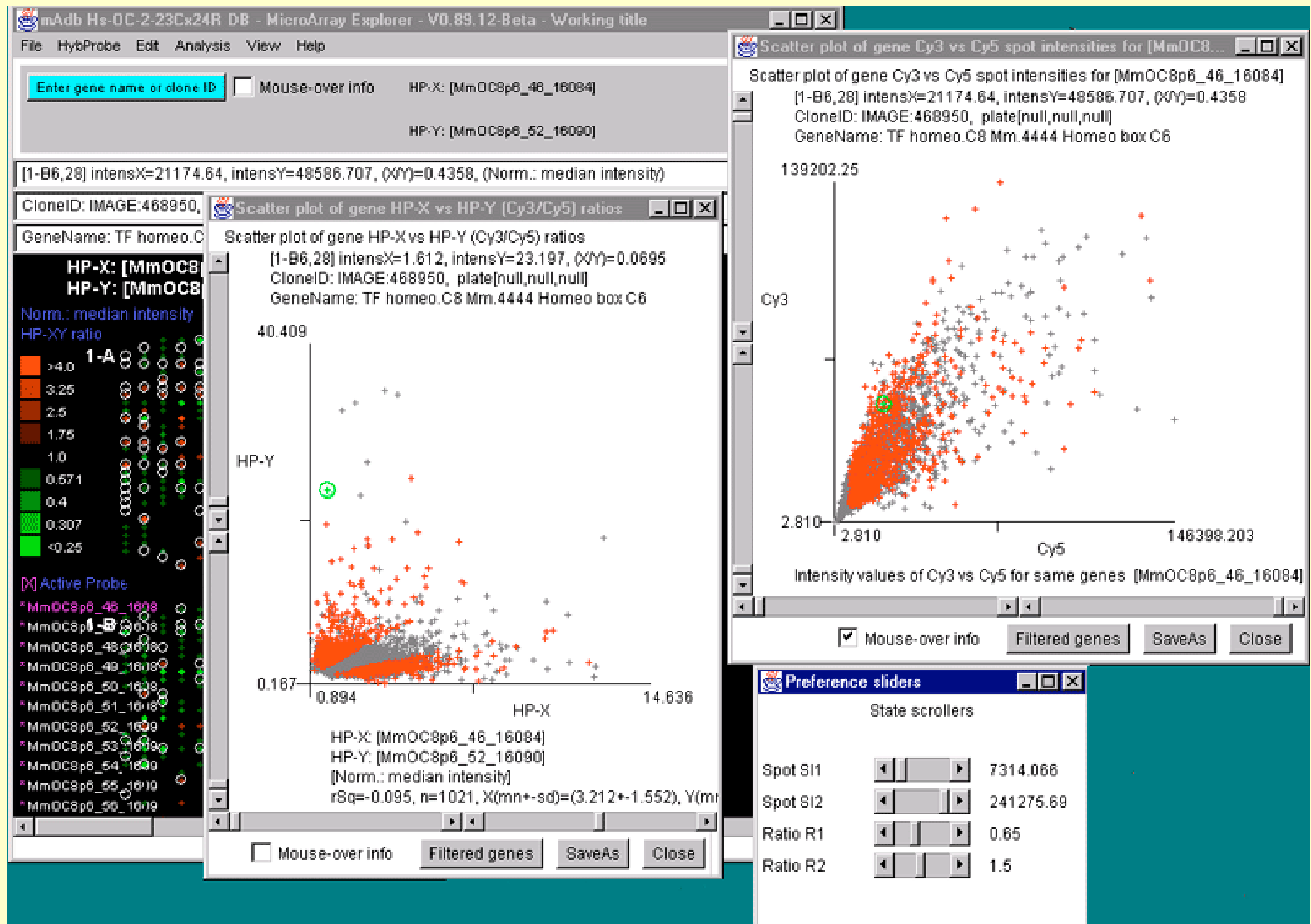
2.8 Unzipping the Zip data file
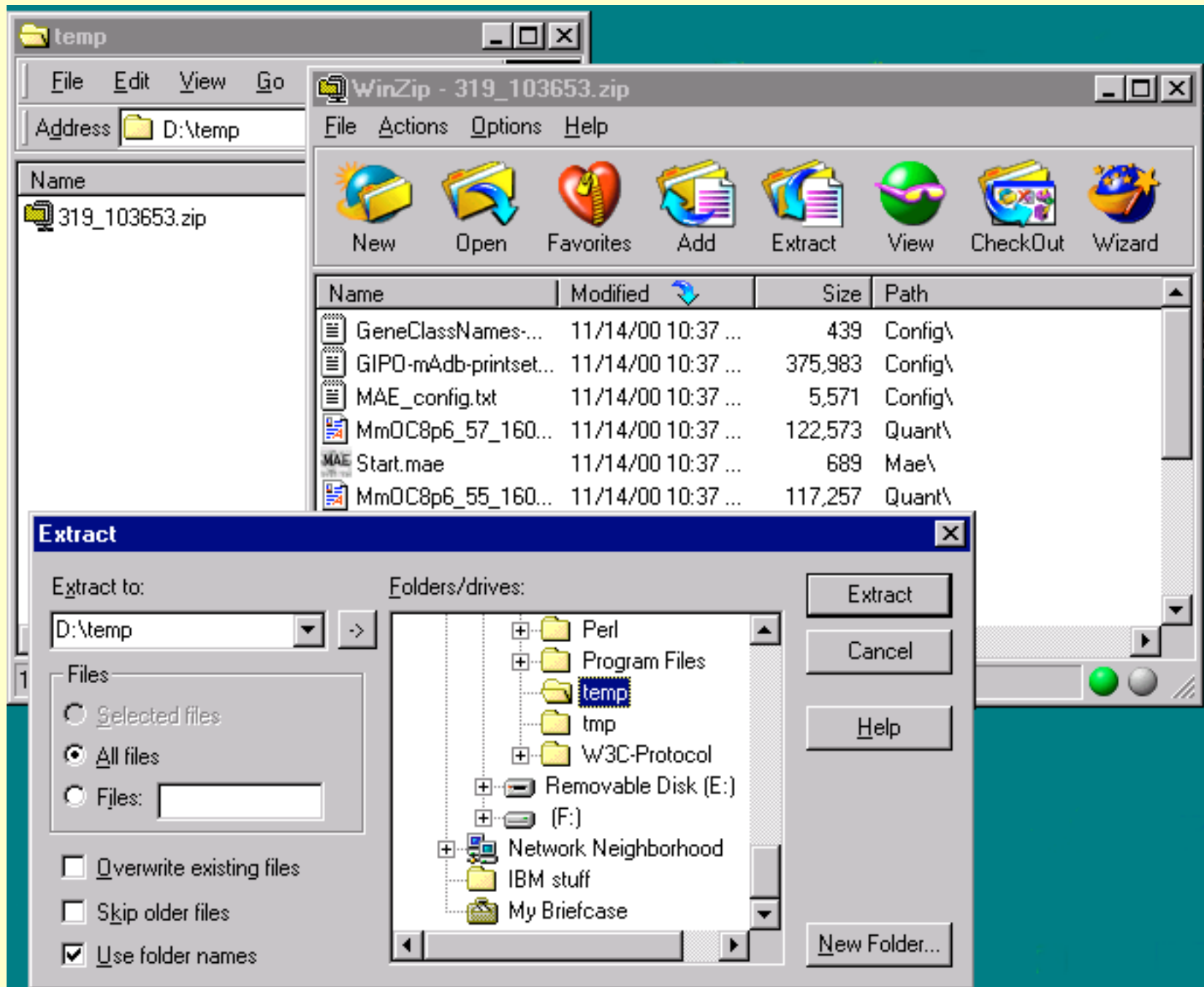
2.9 Inspecting the unzipped data files

2.10 Click on "Start.mae" to start MAExplorer

2.11 Explore data using data filters, plots, etc.

Analysis of mAdb data using MAExplorer

- MAExplorer is fully documented on its Web site,
  http://www.lecb.ncifcrf.gov/MAExplorer
  including the following:

  1. Detailed hyperlinked reference manual with screen shots of all menu operations **http://www.lecb.ncifcrf.gov/MAExplorer/maeHelp.html**

  2. Overview - slide show

  3. Examples of various analysis operations - slide-show

  4. Short tutorial - showing enough of the fundamental concepts to get started

  5. Advanced tutorial - showing more advanced concepts

  6. Demonstration databases from the MGAP (Mammary Genome Anatomy Program) included in the MAExplorer installation download