New functions of GSYS and compilation tools

Ayano Makinaga

Faculty of Science, Hokkaido University

GSYS

- What is GSYS ?

- Japanese digitizing activity
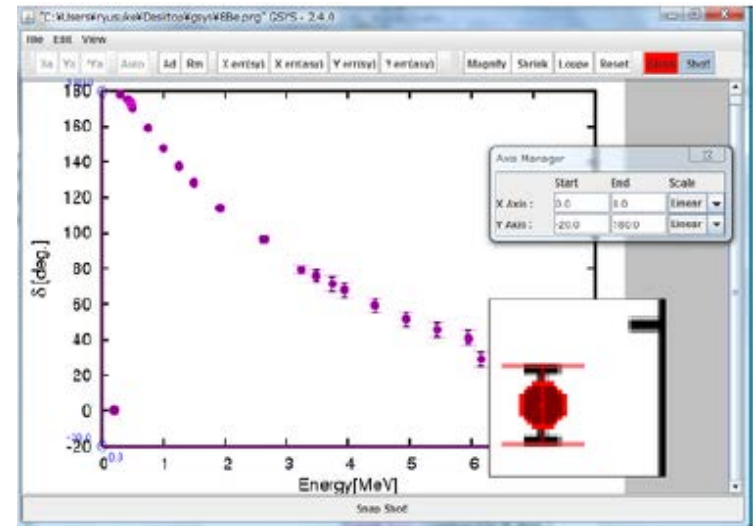
- GSYS 2.4.x new

- Demonstration

GSYS

GSYS is a software to digitize data points on the figure in a form of graphical image.

• Cross-platform window application which only requires JRE.

• Free but there are terms of use

 – PLEASE USE THIS SYSTEM AT YOUR OWN RISK.

 – IT IS NOT ALLOWED TO USE THIS SYSTEM FOR ANY KIND OF BUSINESS PURPOSE.
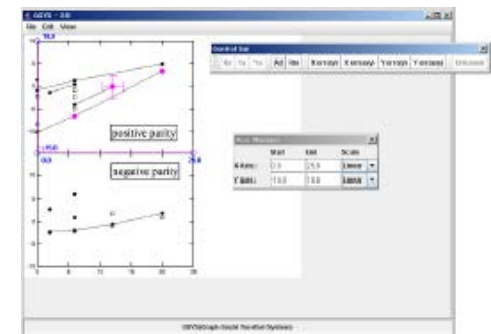
Japanese digitizing activity

- ~1984 Digitizer of Hokkaido University
- Information initiative Center was used
- 1985-:GRADIS(Tanaka, Kazama)
- 1988-:GRADIS2(Kazama)
- 1990-:Update digitizing system(Okabe)
- 1998-:sysGRD(Dr.H.Ohmi)
- 2004:GSYS(Dr.K.Arai)
- 2005-:GSYS2(Dr.R.Suzuki)
- 2006-:GSYS2.2(S. Ito, Dr.R.Suzuki)
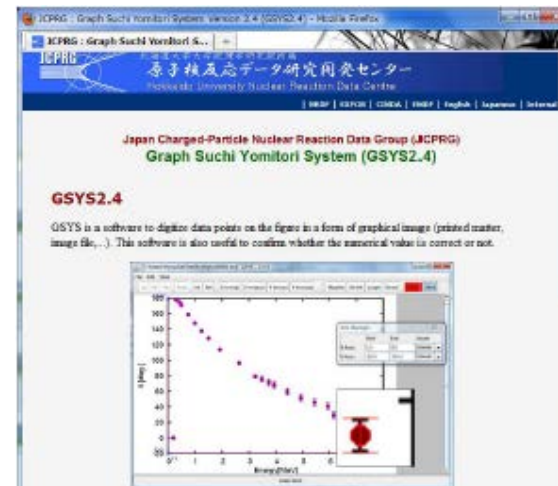- 2010-:GSYS2.4(Dr. R. Suzuki, S. Ito)

http://www.jcprg.org/gsys/2.4/
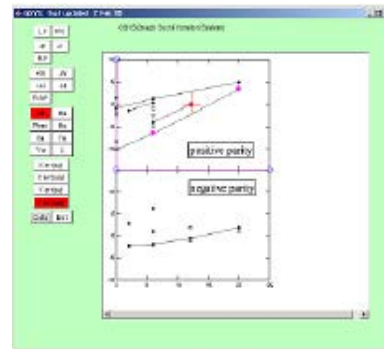
GSYS

GSYS2

GSYS2.4

GSYS 2.4 Features

- Drag-and-drop feature: shinya, rusuke
- Transparency or points and lines: shinya
- Loupe function: shinya
- Automatically point recognition function: ryusuke
- Addition of Point shape: ryusuke
- Snapshot function: ryusuke
- Magnifying glass function: ryusuke
- Some other improvements
  - Improvement of Auto axis detection function.
  - Add Navigation bar (Magnify, Shrink, reset button)
  - Add command line option (for Unix-like user)
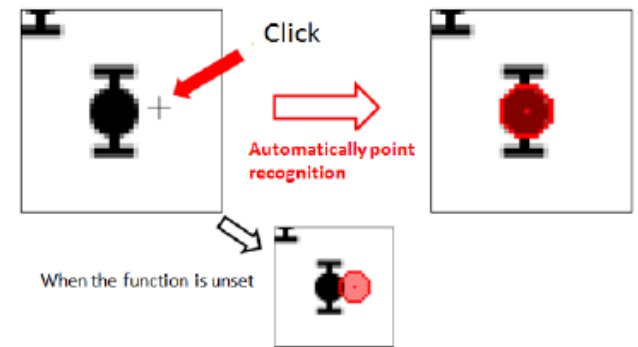
Automatic detection

Glass   **Point shape**

GSYS 2.4.5 New (by R. Suzuki)

- New:
    - Status bar -Show digitized value-
    - Feed back function -Can read file which has more than 6 digit data.-
    - Glass window design - Glass window become large.
    - Alarm display -In case of digitized values on x-axis have same values –
    - Compatibility of "Add" button and "Glass" button

- Bug fix:
    - Drag-and-drop function on Mac OS
    - Automatically recognition function –near the edge of a picture
    - Malfunction - when pictures were expands
    - Read EXFOR format with asymmetry error bar data
    - Read EXFOR format with record recognition code
    - Malfunction - application shutdown

Resources of GSYS

- Official announcement
  - CP-E/145, CP-E/106, CP-E/099
  - INDC(NDS)-0629 "Benchmarking of digitization software"p.19
- GSYS2.X Manual (by Ryusuke SUZUKI), recently updated
- GSYS2.4 Manual
- Other useful resources:
  - -The 4th DAE-BRNS Theme Meeting on EXFOR Compilation of Nuclear Data EXFOR Data Department of Physics, panjab University, Chandigarh, India 4-8 April 2011 (http://physics.puchd.ac.in/events/exfor2011/)
  - Introduction to GSYS Digitizer (By Naohiko Ohtsuka@IAEA on behalf of A. Makinaga@JCPRG)
  - GSYS Digitizer(Ver.2.4.0) Quick Practice (by Naohiko Ohtsuka@IAEA)
  - Introduction to digitization software GSYS (by Ryusuke Suzuki@Hokkaido University hospital)
  - Design and implementation of digitization software GSYS(by Ryusuke Suzuki@Hokkaido University hospital)
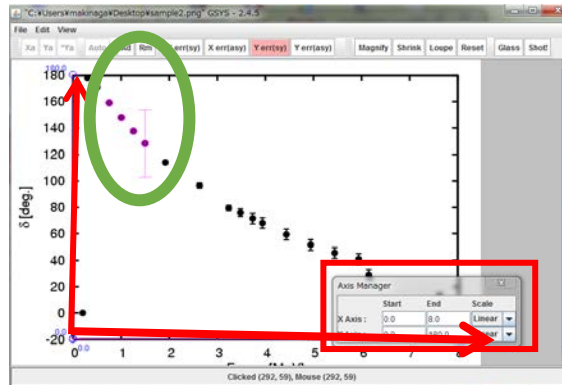
Demonstration-1

Basic procedure

- Start application(download and start)
- Load image
- Set X-axis and Y-axis
- Mark Points
- Add Error bars
- Output (EXFOR format)

http://www.jcprg.org/gsys/2.4/

- **Download "Gsys2.4.5.exe" to your Desktop**
- **Gsys2.5.4 should start by clicking "Gsys2.4.5)**

Gsys2.4.5

Release Version: GSYS 2.4.5 (Aug. 23, 2013)

Download (jar, exe)
Download (for EXFOR compilers) (jar, exe)
Download (for NRDF compilers) (jar, exe)

Manual for Gsys2.4 (Oct. 28. 2012)
See CP-E/143
Sample figure (contrib
Sample figure 2 (made

GSYS2.4 manual
Second Edition-α

Hokkaido University Hospital
Ryusuke SUZUKI

January 24, 2012

Abstract

GSYS2.4 is an update version of "GSYS version 2". Main features added in this version are "Magnifying glass function", "Automatically point recognition function" and so on. This manual contains a full explanation of operations of the GSYS2.4.

Demonstration-1

Basic procedure

- Start application(download and start)
- Load image
- Set X-axis and Y-axis
- Mark Points
- Add Error bars
- Output (EXFOR format)

Load image
-Drag and drop
-Open file

Set X-axis and Y- axis
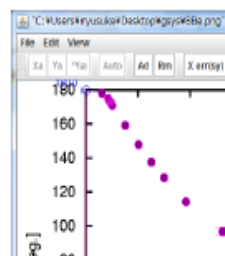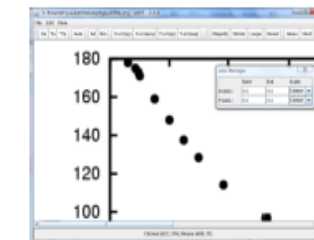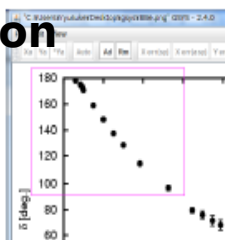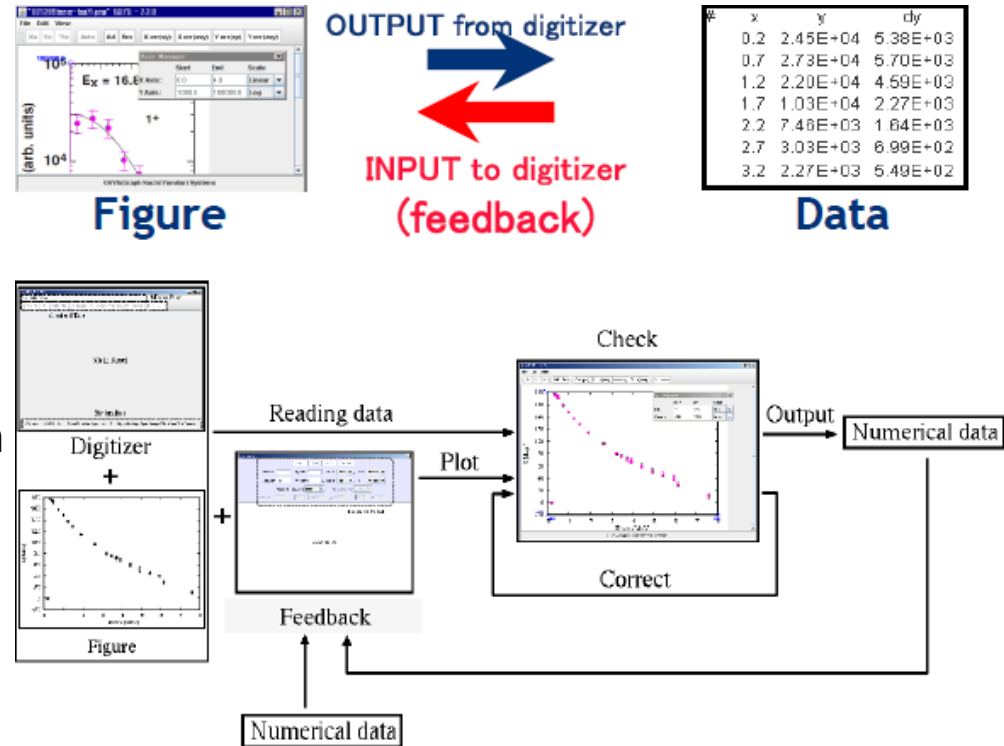**Mark Points and add error bars**

Output (EXFOR format)

Demonstration-2

Useful function

- Drag-and-drop feature
- Automatic axes detection
- Loupe function
- Orthogonality condition to X-axis and Y-axis
- Magnifying Glass function
- Automatically point recognition function
- Addition of Point shape
- Configuration file
- Snapshot function
- Feedback
- Property of Output

**Figure**

Drag and drop   Figure is opened

Numerical data

Numerical data is plotted

Axis

Point

Demonstration-2

Useful function

- Drag-and-drop feature
- Automatic axes detection
- Loupe function
- Orthogonality condition to X-axis and Y-axis
- Magnifying Glass function
- Automatically point recognition function
- Addition of Point shape
- Configuration file
- Snapshot function
- Feedback
- Property of Output

Glass function
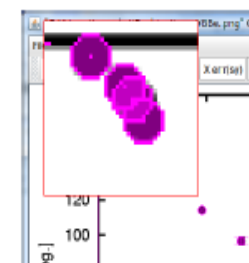
Loupe function

Point shape

Demonstration-2

Useful function

- Drag-and-drop feature
- Automatic axes detection
- Loupe function
- Orthogonality condition to X-axis and Y-axis
- Magnifying Glass function
- Automatically point recognition function
- Addition of Point shape
- Configuration file
- Snapshot function
- Feedback
- Property of Output

Demonstration-3 New

- Status bar -Show digitized value-
- Feed back function -Can read file which has more than 6 digit data.-
- Glass window design- Glass window become large.
- Alarm display -In case of digitized values on x-axis have same values –
- Compatibility of "Add" button and "Glass" button

Status bar

Alarm display

Demonstration-3 New

- Status bar -Show digitized value-
- Feed back function -Can read file which has more than 6 digit data.-
- Glass window design- Glass window become large.
- Alarm display -In case of digitized values on x-axis have same values –
- Compatibility of "Add" button and "Glass" button

Glass window design
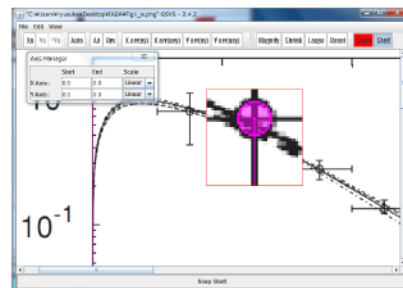
GSYS2.4 : Magnify : x 5, size : 205x205 (fixed)
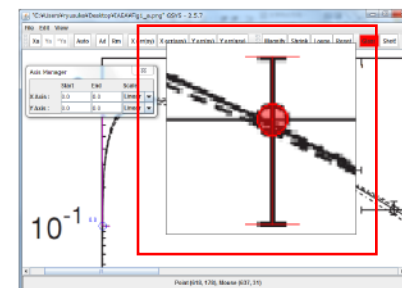
Magnify : x 4, size : 404x404

Undo function (future)
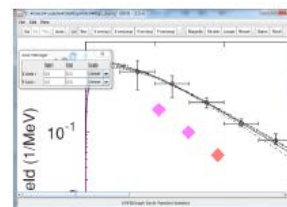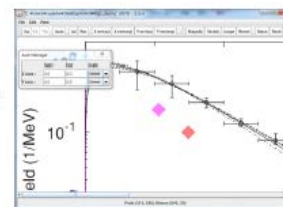
Add points   Delete point   Undo ! (Ctrl+Z)
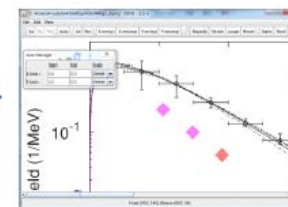
Tools

EXFOR Compilation internal tool (β version)

- EXFOR Compilation internal tool is a checking tools for EXFOR file to construct prelim/trans files.

- It includes CHEX and ORDER which is developed by V.McLane and extended/maintained by V. Zerkin.

- XDOMINO has been developed by S. Yamaguchi (Hokkaido Univ.)

- X4CINDA has been developed by N. Otsuka

http://www.jcprg.org/exfor/tool/

Demonstration-1

1. Order output

2. Chex output

3. Flag output

Easy to use
- Push "Browse.." button
- Chose your file
- Push "Submit" button
- You can get ,
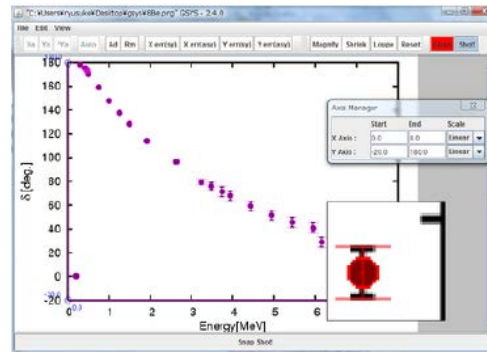 - 1. order output,
  - 2. chex output,
  - 3. flag output

Summary

GSYS

- What is GSYS ?
- Japanese digitizing activity
- GSYS 2.4.5 new
- Demonstration
  - 1-Basic procedure
  - 2-Useful function
  - 3-New function

Tools

- EXFOR Compilation internal tools b version (CHEX, ORDER, XDOMINO, X4CINDA)

http://www.jcprg.org/gsys/2.4/

http://www.jcprg.org/exfor/tool/