FSM-100 & LZM-100 SpliceLab Package

AFL Splicer Engineering

6/13/2012

We connect.

Agenda

- Overview of SpliceLab for 100 series
  - Goals of the software
  - Functionalities
- PC platforms
  - XP / Win7 / 32 bit / 64bit
  - MS Office 2003 / 2007/ 2010 / 32 bit / 64bit
- Installation
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Overview of SpliceLab for 100 series

General Introduction of SpliceLab

- As a joint effort of FJK and AFL teams, SpliceLab Application Package for FSM100 was released on 4/5/2012.

- Unlike the SpliceLab for FSM45, SpliceLab for FSM100 consists multiple dedicated application files instead of a single executable file.

- These dedicated applications can be used individually and also possible be used simultaneously (Excel based only).

- It is more flexible, more applications oriented, quicker in further improvement, and easier for customers to report problems for debugging.

Goal of the SpliceLab

- Help customers with functionalities which splicer does not offer. Examples:
  - Copy one mode to a different mode number and tweak
  - Design and measure an adiabatic taper
  - Design and measure a ball lens
  - Rotate left and right rotators simultaneously

- Help customers with PC functionalities. Examples:
  - Achieve splice parameters to PC files
  - Achieve splice results and pictures for future trace-back
  - Mode transfer to different machines

- Help sales team to boost marketing activities. Examples:
  - Large monitor screen for training and demo
  - Developing new functionalities meeting customer's special requirement

Currently available functionalities

- 1. Splice modes upload and download for parameter editing and archiving

- 2. Production line splice data, image, and measurement collection and parameter optimization

- 3. Splicer control and specialty component manufacturing
  - Adiabatic tapering and motor control
  - Rotator control for side-view and end-view manual alignment
  - Ball Lens making for generating ball-lensing parameters

- 4. PC software development demo and template
  - Full Screen Video for conference and trade show
  - Live Video (C#) open code for programming the splicer control
  - FSM100_CommandTest.xls for test and verify the PC command list
  - FSM100 IPA-Data_collection.XLS for IPA profile collection and debugging

PC platforms

PC platform adaption

- Non-Excel based software
  - 32 bit version for XP and Win7 32 bit platform
  - 64 bit version for Win7 64 bit platform

- Excel based software
  - 32 bit version for XP and Win7 32 bit platform plus
    - MS Office 2003 (32 bit)
    - MS Office 2007 (32 bit)
    - MS Office 2010 (32 bit)
  - 64 bit version for Win7 64 bit platform plus
    - MS Office 2010 (64 bit)
  - MS Office version (32 bit or 64 bit) must match Window platform (32 bit or 64 bit).
  - For Office 2010 32 bit installed in Win7 64 bit platform, the Excel applications will not work

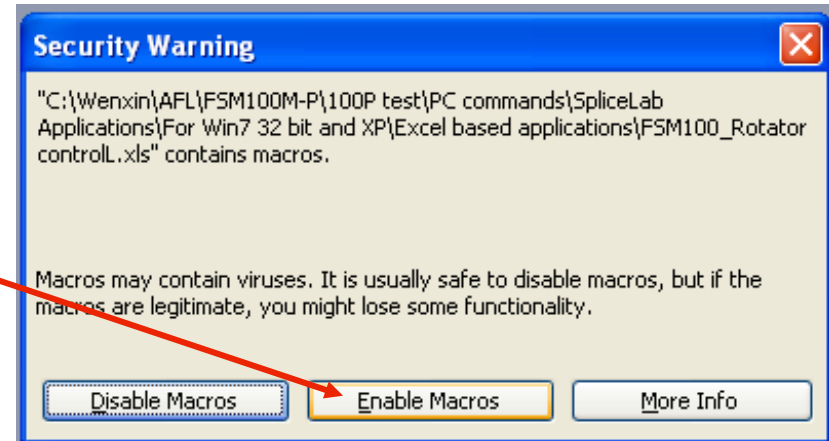# Excel based applications

- Enable macro application while open the Excel

  - Office 2003
    - Tune security level to middle or low
    - Click enable macro

  - Office 2007 and 2010
    - Tune security level to middle or low
    - Click enable content

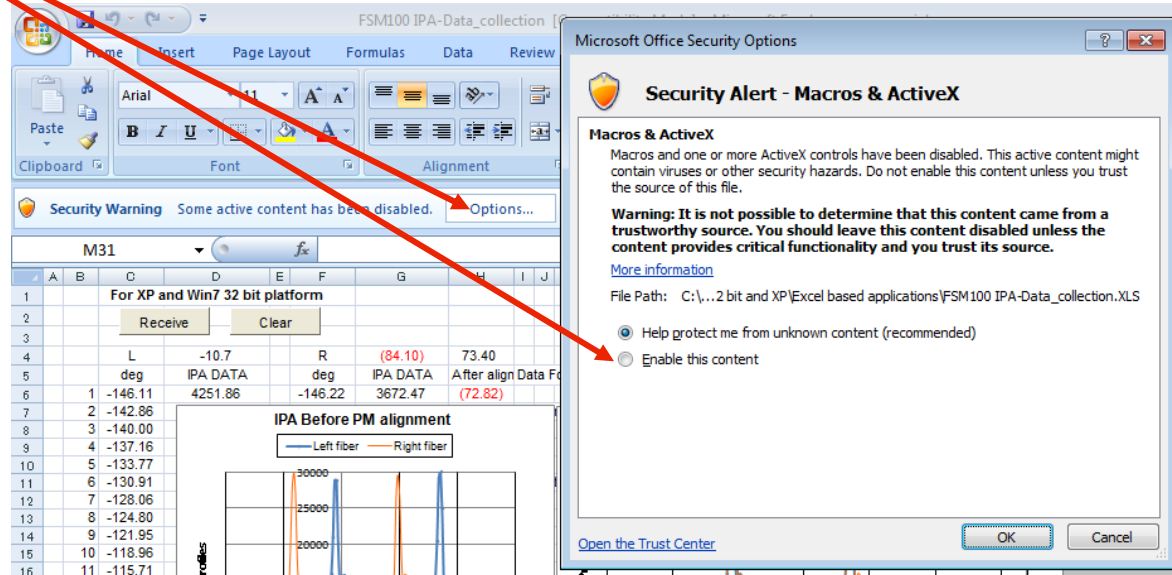- To change security level

For Office 2003, please read

  Enable macros to run for Excel 2003

For Office 2007, please read

  Change macro security in Excel 2007

For Office 2010, please read

  Change macro security in Excel 2010

Security Warning

"C:\Wenxin\AFL\FSM100M-P\100P test\PC commands\SpliceLab Applications\For Win7 32 bit and XP\Excel based applications\FSM100_Rotator controlL.xls" contains macros.

Macros may contain viruses. It is usually safe to disable macros, but if the macros are legitimate, you might lose some functionality.

Disable Macros | Enable Macros | More Info

Microsoft Office Security Options

Security Alert - Macros & ActiveX

Macros & ActiveX

Macros and one or more ActiveX controls have been disabled. This active content might contain viruses or other security hazards. Do not enable this content unless you trust the source of this file.

Warning: It is not possible to determine that this content came from a trustworthy source. You should leave this content disabled unless the content provides critical functionality and you trust its source.

More information

File Path: C:\...2 bit and XP\Excel based applications\FSM100 IPA-Data_collection.XLS

- Help protect me from unknown content (recommended)
- Enable this content

Open the Trust Center | OK | Cancel

Installation

Necessary environment

- You need to install Data Communication software from FJK CD ROM version 5 or higher in yellow case

- After the installation you need to check if you have installed the following software

  - For Windows XP
    - Service Pack 2 or higher
    - Micro software .Net Framework 3.5 or higher

  - For Windows 7
    - Service Pack 1 or higher
    - Micro software .Net Framework 3.5 or higher

  - All above software are free downloadable from Microsoft website

  - You need to have Administrator privilege for your computer to install the programs

32 bit system setup for Excel Apps

- In your PC Control Panel\Add Remove Programs, check if there is a program "UsbFsm100Server" installed. If there is, please removed it by double click the file name.

- Turn off all your Excel programs in your PC.

- In your folder SpliceLab Applications\For Win7 32 bit and XP\Excel based applications\32bit System Setup for Excel applications,
    - Double click Unregister(.bat).
    - If you read "...... Types un-registered successfully. ....", you can double click Register(.bat).
    - If you read "...... the type library was registered successfully. ....", your installation is completed
    - If you read "...... Requested registry access is not allowed. ....", or you read ".... An error occurred while writing the registration information to registry....", you need to temporarily turn off your computer's UAC (User Account Control)

- To change computer's User Account Control (UAC)
    - From Control Panel/System and Security/Review your computer's status/User Account Control Settings, select the "Never notify" and then reboot the computer
    - Re-run the Unregister and Register described above
    - If it still shows that registry access not allowed, you need to check you privilege level to the computer

64 bit system setup for Excel Apps

- In your PC Control Panel\Add Remove Programs, check if there is a program "UsbFsm100Server" installed. If there is, please removed it by double click the file name.

- Turn off all your Excel programs in your PC.

- In your folder SpliceLab Applications\For Win7 64 bit\Excel based applications\64bit System Setup for Excel applications, follow the instruction in the file of Read-me-first for configuration

- Please make sure that both of your computer platform and Office should be 64 bit version. If one of them is 32 bit version, the application will not work

Excel Based Applications

Multiple Excel applications

- Multiple Excel application files can be opened at same time

- You can run any one of them at one time. For example, you can use Mode Upload Download to tweak the mode parameter, and then use the Measurement and Data Collection to collect splice data. But you cannot run 2 application at same time (simultaneously).
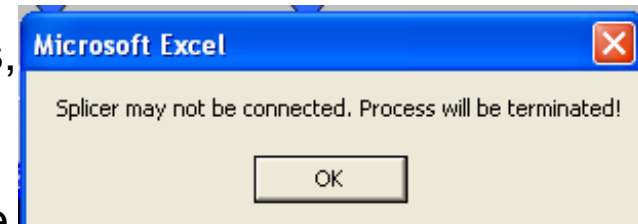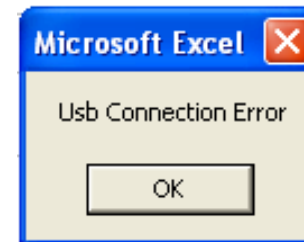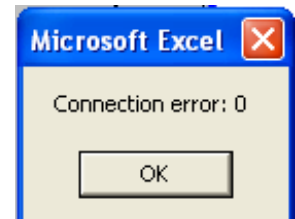
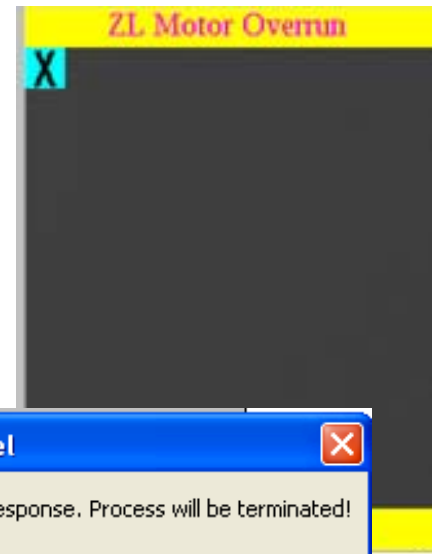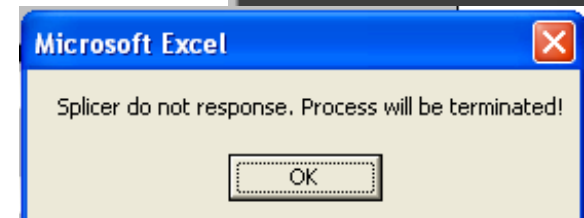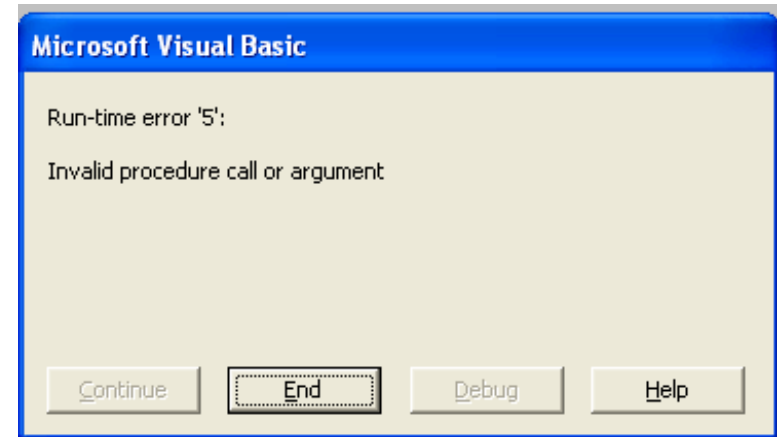**AFL**

- Connection Error

  - This is typical when machine is first time connected to PC, or first time run an application. The old data in the buffer was not cleaned and causes the error.

  - If the machine does what you tell it to do anyway, you can ignore this error by click OK and continue.

  - If it appears consistently, you need to double check you USB cable connection. And also double check if there is non-Excel based SpliceLab application is active, such as Ball Lens, Data Connection, etc.

  - You cannot have 2 non-Excel based application running at same time, since they will compete the same USB port, such as Data Connection and Full Screen cannot be turn on at same time

- You can also use Data Connection software to check the connectivity between splicer and PC by turning off all Excel applications.

Microsoft Excel
Connect Error
OK

Microsoft Excel
Connection error: 0
OK

Microsoft Excel
Usb Connection Error
OK

Microsoft Excel
Cannot find splicer
OK

Microsoft Excel
Splicer may not be connected. Process will be terminated!
OK

Microsoft Excel
Send Text Error : Communication Error at Sending the Command
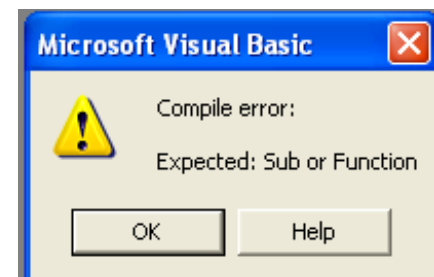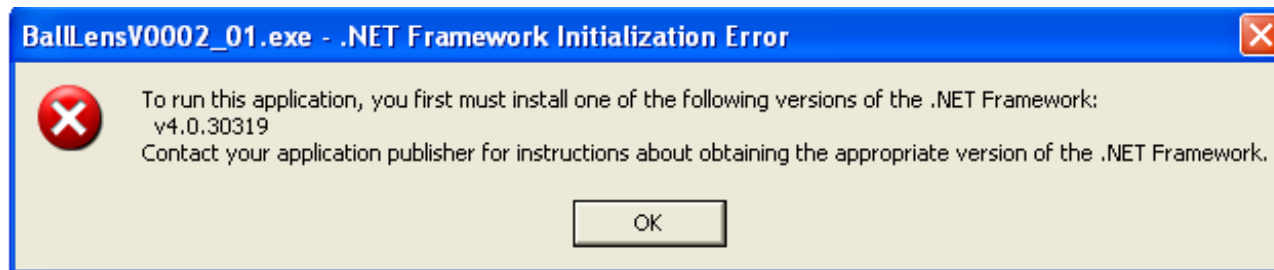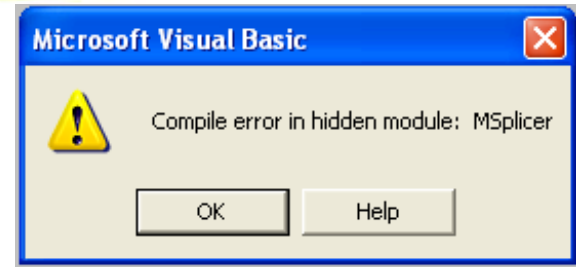OK
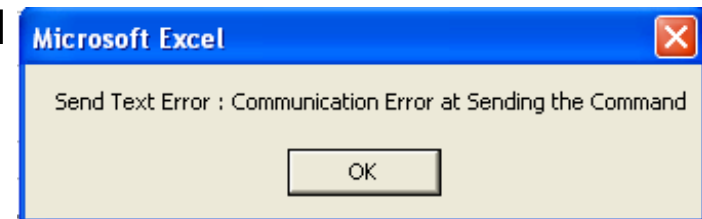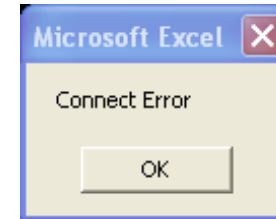
- Run Time Error '5': Invalid Procedure call
  - This happens if you ask splicer to do some process which is no possible. For example, if you click motor rotation button to a 100M machine, which does not have a rotator, you will see this error.

Microsoft Visual Basic

Run-time error '5':

Invalid procedure call or argument

| Continue | End | Debug | Help |

- Receive Error or Splicer does not response
  - These errors happen when you acquire data from splicer but splicer has error message displayed shown on the right. You can simply reset splicer and then acquire the data
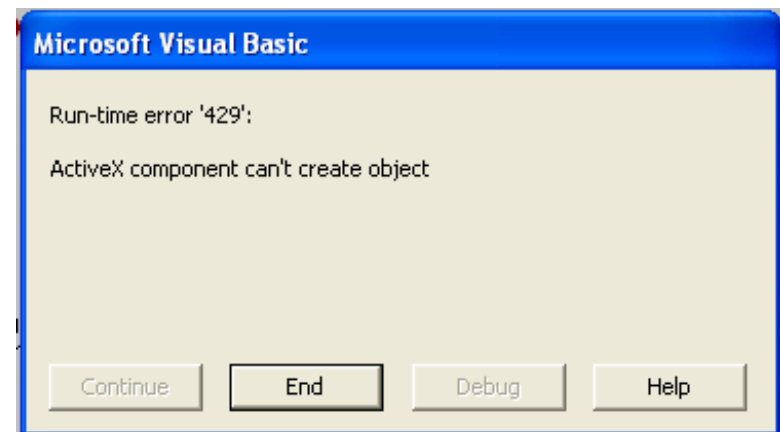

ZL Motor Overrun

Microsoft Excel

Receive Error

OK

Microsoft Excel

Splicer do not response. Process will be terminated!

OK

Typical error messages (3)

F AFL

- Compile errors: wrong Windows platform. e.g., 64 bit version application is used in XP computers

Microsoft Visual Basic

⚠ Compile error in hidden module: MSplicer

OK   Help

BallLensV0002_01.exe - .NET Framework Initialization Error

❌ To run this application, you first must install one of the following versions of the .NET Framework:
v4.0.30319
Contact your application publisher for instructions about obtaining the appropriate version of the .NET Framework.

OK

Microsoft Visual Basic

⚠ Compile error:

Expected: Sub or Function

OK   Help

- Runtime error '429': Excel driver not installed, or 32 bit Office is installed with 64 bit Windows.

- Note: 64 bit Windows needs to install 64 bit Office (Excel) to make SpliceLab applications to work

Microsoft Visual Basic

Run-time error '429':

ActiveX component can't create object

Continue   End   Debug   Help

- There are many possibilities that operators can do something wrong. And it is also possible that some software bugs are still there. When errors happen, it would be good the keep a screen capture and e-mail to us.

- Communication recording function is added to a few advanced applications, such as Taper and Rotator Control. For those applications, operator can save the Excel files and then e-mail to us. We can analyze the cause of the error from the e-mailed files.

- SpliceLab applications are still under development. For most of applications, AFL does not plan to write user instructions

- Since the applications are free of charge to customers, AFL will not take responsibility for misuses of those applications