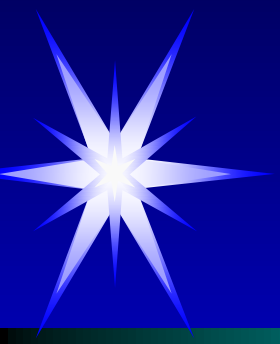
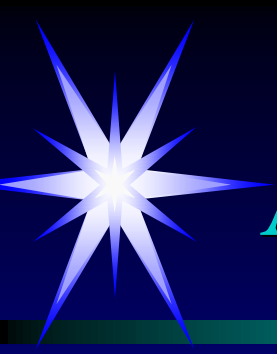


Automation Server Update

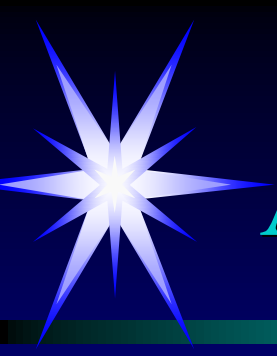
Bill Keech

Sunbelt Computer Systems



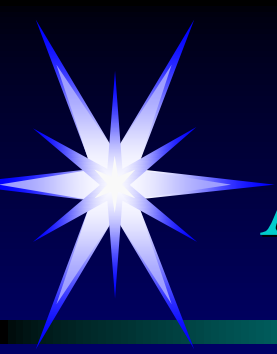
Automation Overview

- Supports ActiveX Automation
- Based on Component Object Model
- Allows PL/B runtime to be COM server
- Multi-threaded architecture



Automation Overview

- Two objects, Application and Program
- Register
  - Using /reg command line option
- Unregister using /unreg
- Can be invoked
  - Using /automation command line option



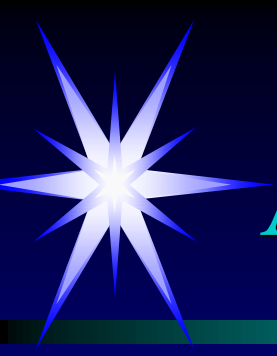
Application Object

- Represents the Automation Server
- ProgID is 'Plbwin.Application'

Application Object

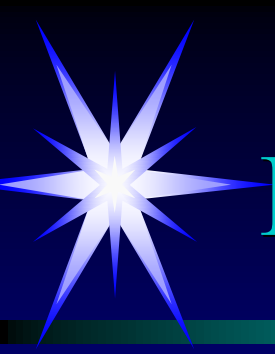
- Properties:

Application	Returns Application object
FullName	Returns path/name of application
Name	Returns name of application
Parent	Returns Application object
Visible	Sets or returns visible state



Application Object

- Methods:
  - Quit — Terminates Automation Server
  - CreateProgram — Creates new program object
  - CreateProgramNE — Creates new program object



Program Object

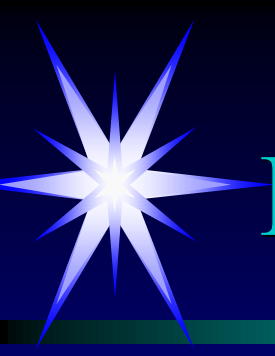
- Represents one PL/B program
- ProgID is 'Plbwin.Program'
- Limited to running one program

Program Object

- Properties:
  - ErrorText — Returns error text of terminating error
  - Visible — Sets or returns visible state

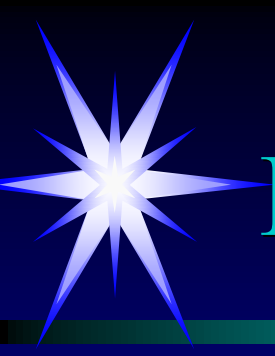
Program Object

- Methods:
  - Run — Starts a PL/B component
  - EventSend — Sends event to PL/B component



Program Object

- Events:
  - UserEventX — UserEvent1 to 10 produced by SendEvent
  - Exit — Indicates program termination



Program NE Object

- NE stands for no events
- Represents one PL/B program
- ProgID is 'PlbwinNE.Program'
- Limited to running one program

Program NE Object

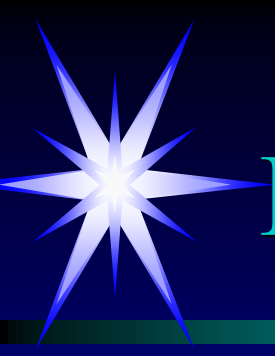
- Properties:
  - ErrorText — Returns error test of terminating error
  - Visible — Sets or returns visible state

Program NE Object

- Methods:
  - Run — Starts a PL/B component
  - EventSend — Sends fast event to a PL/B component
  - ProgramNE object has no events
  - Result is returned when program exits

Statement Changes

- GETMODE/SETMODE Added *THREADRDY
- GETMODE Added *THREADID
- EVENTREG Added FASTEVENT
- GETPROP/SETPROP Added *ARG1 to *ARG10
- GETPROP/SETPROP Added *RESULT



Program Object Communications

- Client/Server communicate using events
- EventSend method (Client)
  - Client sends events using this method
  - Up to 10 parameters allowed

Program Object Communications

- EventReg statement (Server)
  - Statement to receive Server program events
- EventSend statement (Server)
  - Statement to send events for Server program
  - Up to 5 parameters
- *Client object used to represent the client

ProgramNE Object Communications

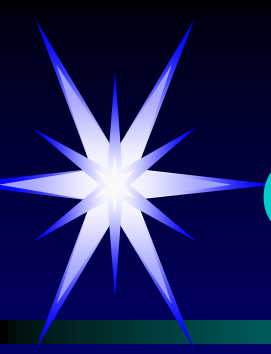
- Client communicates using fast events
- EventSend method (Client)
  - Method to send fast events for Client program
  - Up to 10 parameters allowed

ProgramNE Object Communications

- EventReg statement (Server)
  - Server program receives events
- Using SETPROP *RESULT
  - Server program returns result
- Using SETPROP *ARG1 to *ARG10
  - Server program can modify arguments
- *Client object used to represent the client

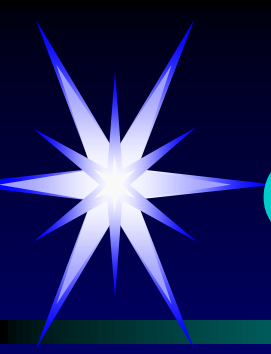
Server programs

- Same as any other PL/B program
- Uses EventReg and *Client
  - Receive requests from client
- Send information back in Program case
  - EventSend used
- Send information back in ProgramNE case
  - SETPROP *RESULT used



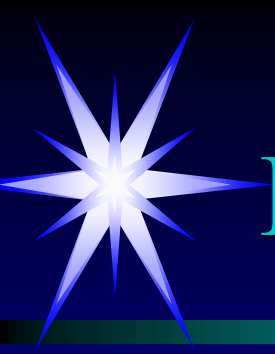
Client Programs

- Can be C++, PL/B, Java, VB, COBOL...
- Start by creating a program object
- Run method invokes a PL/B component
- EventSend method to request actions



Client Programs

- Link code to UserEvents in Program case
- Link code to Exit event in Program case
- Gets returned a result in ProgramNE case
- Use ErrorText property to get error text

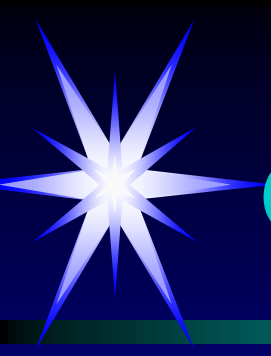


Running Objects Table

- Release in 8.5C
- Allows
  - Unique class identifiers for PL/B objects
  - Object reuse
  - Pre-loading of programs
- SETMODE *THREADRDY
  - To indicate that an object is ready to be used

Configuration Information

- Contained in plbrot.ini file
- Section name is used as a unique PROGID

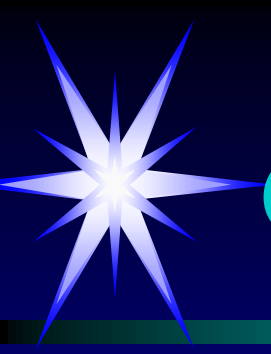


Configuration Information

- Keywords
  - CLSID
    - Specifies the Class Identifier
  - CMDLINE
    - Specifies the program to run
  - COUNT
    - Specifies a initial load or max load

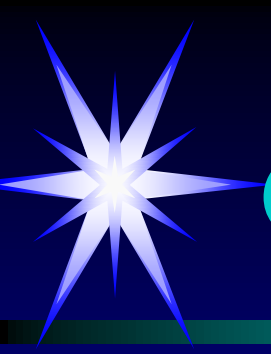
Configuration Information

- Keywords (continued)
  - USESEVENTS
    - Specifies if this is a Program or ProgramNE object
  - TYPE
    - Specifies if this is Single or Multiple use
  - VISIBLE
    - Specifies the visible state



Configuration Information

- GUIDGEN.EXE
  - Create CLSID numbers
- For Single use COUNT
  - Initial load count
- Single use objects
  - Use SETMODE *THREADRDY=ON



Configuration Information

- For multiple use objects
  - COUNT is the maximum count
- Register using /rotreg command line option
- Unregister using /rotunreg

Sample Configuration

[SUNBELT.ROT.1]

CLSID={B7DCD1EE-E34A-4448-BA0C-4C6398E0E16B}

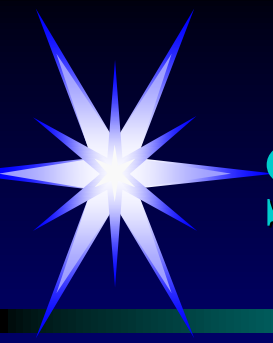
CMDLINE= rotsrvs

Count=2

UsesEvents=0

Type=Single

Visible=1



Sample Configuration

[Whk.Test2.1]

CLSID={B14957FF-E22B-48f1-82AA-8CB1B8B25AE8}

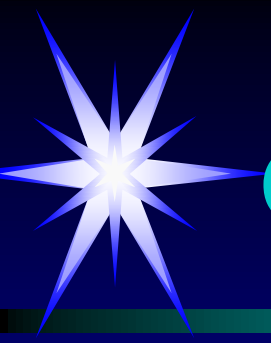
CMDLINE=srvTest2

Count=2

UsesEvents=1

Visible=1

Type=Multi



QUESTIONS?

That's All!!