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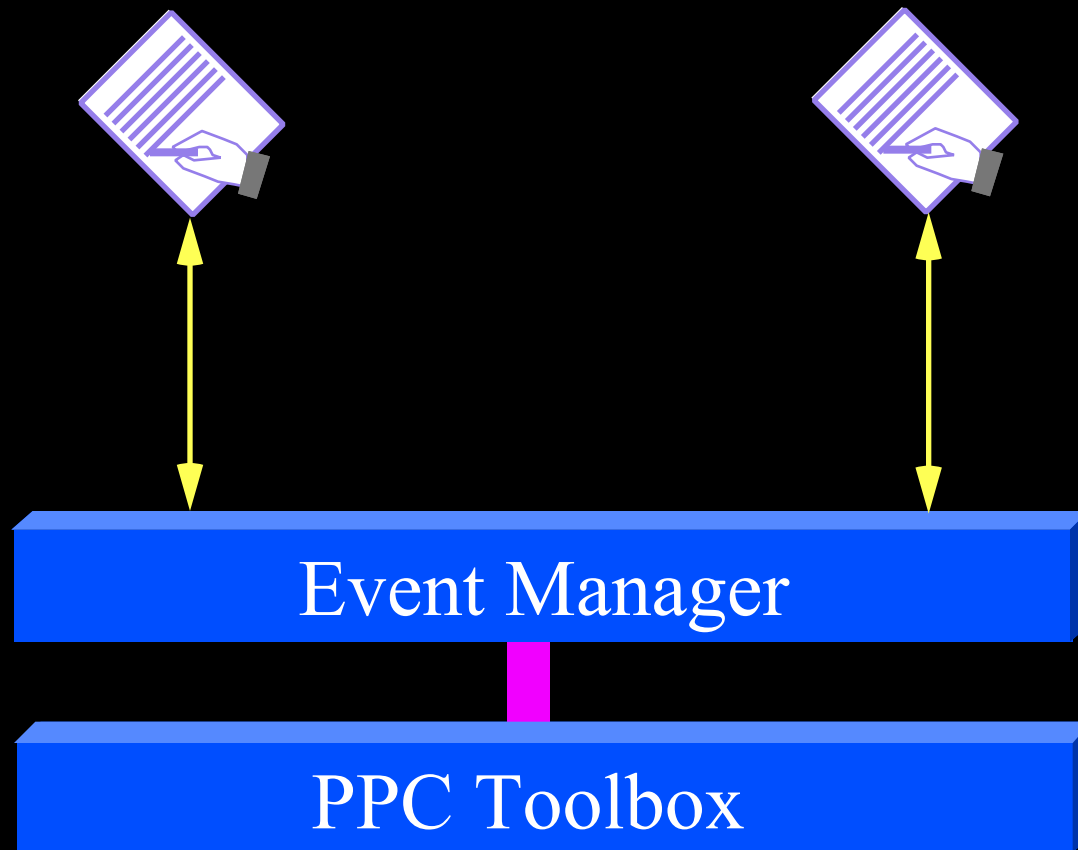
Event Manager High-Level Events

Events for IAC

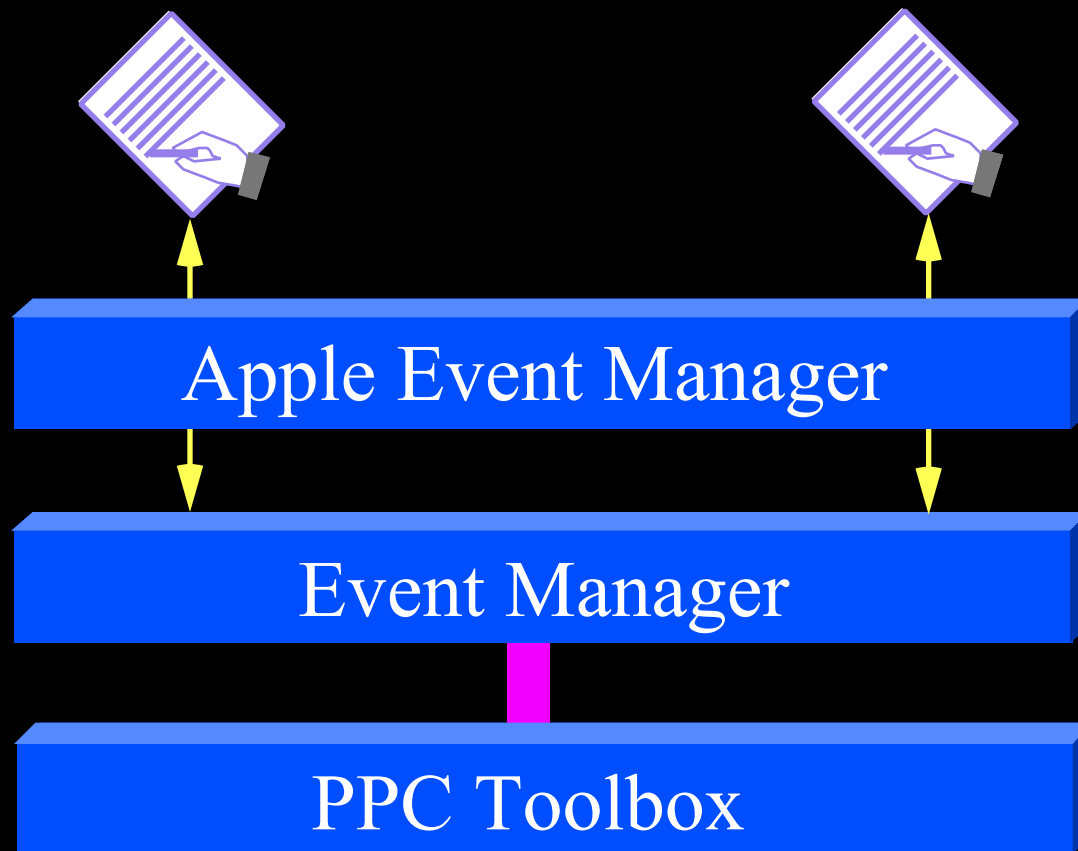
High Level Events Overview



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High Level Events Overview



Why High Level Events

- Allows addressing based on names, process serial numbers and application signatures
- A simple transport mechanism with minimum protocol
- System implements
 - Buffer management
 - Session management
 - IO completion

High Level Events

- SIZE resource
 - ModeHighLevelEventAware
 - ModeLocalAndRemoteHLEvents
 - Setting bits implies application is willing to handle the basic AppleEvents
- Event Record + Message
- Event Mask

Posting a High Level Event

- Posting options
- Target
- Event
- Message

Posting Options

- Return receipt
- Attention message
- Target ID format

Target

- Process serial numbers
- Application's creator signature
- Session ID
- Target ID record/structure
- Target ID—Where do I get one?

Process Serial Numbers

- Process Serial Numbers
 - A unique 64 bit number assigned to an application at launch time
 - Valid for the life of the application

Process Serial Numbers (*cont.*)

var

 psn:ProcessSerialNumber;

psn.highLongOfPSN :=0;

psn.lowLongOfPSN :=0;

while GetNextProcess(psn) = noErr **do**

 AddToList(**psn**);

Application's Creator Signature

var

 PInfo:ProcessInfo;

 PInfo.ProcessInfoLength := sizeof(PInfo);

 PInfo.ProcessName := nil;

 PInfo.ProcessFileName := nil;

while GetNextProcess(psn) = noErr **do begin**

 err:= GetProcessInformation(psn, PInfo);

 AddToList(PInfo.processSignature);

end;

Session ID

- A unique 32-bit number which identifies a connection between two applications
- Returned when posting by portname
- Returned when accepting the High Level Event
- Most efficient means of posting a message

Target ID Record-What is it?

- Portname
 - Name usually an Application's name
 - Type app's signature<ep><01...99>
- Location
 - Object <This Macintosh's Name:>
 - Type "PPCToolbox"
 - Zone

Target ID Record—Where to get one?

- PPCBrowser
- Translate process serial number to a portname
- Returned when accepting a High Level Event

High Level Event record

- What Integer kHighLevelEvent
- ClassID OSType aevt
- When LongInt TICKS at post
- MessageID OSType oapp
- Modifiers Integer

Message

- Buffer
- Size
- Reference number

A line of code

- `err := PostHighLevelEvent (`
 `event,`
 `targetID,`
 `msgNumber,`
 `buffer,`
 `msgLength,`
 `postingOptions);`

Accepting a High Level Event

- CASE curEvent.what OF
- DoHighLevelEvent
- DoHighLevelEvent (cont.)

CASE curEvent.what OF

- mouseDown : DoMouseDown;
- mouseUp : DoMouseUp;
- keyDown, autoKey : DoKeystroke;
- updateEvt : DoUpdate;
- activateEvt : DoActivate;
- diskEvt : DoDiskEvent;
- kHighLevelEvent: DoHighLevelEvent;

DoHighLevelEvent

- `err = AcceptHighLevelEvent (sendersPort, msgNumber, nil, msgLength);`

DoHighLevelEvent (*cont.*)

- if msgLength \neq 0 then begin
 - msgBuffer = NewPtr(msgLength);
 - err = AcceptHighLevelEvent(sendersPort, msgNumber, msgBuffer, msgLength);
- end;

Getting Specific High Level Events

- Allow viewing and accepting of all outstanding High Level Events for the calling application
- Filter procedure



The power to be your best