9

Events and Errors

Events

ColorAlloc

XieEvnColorAlloc

instance: XieTypExecutable
src: XieTypPhototag
type: ConvertToIndex
color-list: XieTypColorList
color-alloc: XieTypColorAllocTechnique
data: CARD32

A **ColorAlloc** event notifies the client that a **ConvertToIndex** element has completed color allocation but has produced a result of lesser fidelity than was requested using the technique that was specified for the **ConvertToIndex** element.

Instance, *src*, and *type* identify the **Photoflo** and specific **ConvertToIndex** element from which the **ColorAlloc** event originated. *Color-list* is the **ColorList** resource that received the allocated colors. *Color-alloc* is the **ColorAllocTechnique** specified to the **ConvertToIndex** element. *Data* can be used for other information that is specific to *color-alloc*.

DecodeNotify

XieEvnDecodeNotify

instance: XieTypExecutable
src: XieTypPhototag
type: { ImportClientPhoto, ImportPhotomap }
decode: XieTypDecodeTechnique
data-width: `CARD32`
data-height: `CARD32`
band-number: `CARD8`
aborted: `BOOL`

A **DecodeNotify** event notifies the client that anomalies were encountered while decoding a compressed image (see the *notify* parameters of **ImportClientPhoto** and **ImportPhotomap**). Either an error has been encountered while decoding an image, or the image data received does not satisfy the expected dimensions.

Instance, *src*, and *type* identify the **Photoflo** and element from which the **DecodeNotify** event originated. *Decode* is the **DecodeTechnique** being used. *Data-width* and *data-height* are the dimensions discovered while decoding the data. *Band-number* associates the event with the band of the image where the problem was encountered. *Aborted* is true if decoding was aborted or false if recovery was possible.

Recovery from a decode error may result in some missing or garbled image data. This may also cause the *height* of the decoded data to be less than was expected. If *data-width* or *data-height* do not match the *width* and *height* specified to **ImportClientPhoto**, the image data is clipped or padded (with zeros), as required, to enforce the **ImportClientPhoto** specified dimensions.

ExportAvailable

XieEvnExportAvailable

instance: XieTypExecutable
src: XieTypPhototag
type:{ ExportClientHistogram, ExportClientLUT, ExportClientPhoto ExportClientROI }
band-number: `CARD8`
data; `LISTofCARD32`

An **ExportAvailable** event notifies the client that an `ExportClient` element has data available (see the *notify* parameter of the applicable `ExportClient` element). If *notify* was specified as ***FirstData,*** this event will only be sent the first time data become available from the `ExportClient` element. Otherwise (that is, ***NewData*** was specified) this event will be generated each time the amount of data available changes from zero to nonzero.

Instance, *src*, and *type* identify the **Photoflo** and specific `ExportClient` element from which the **ExportAvailable** event originated. *Band-number* associates the event with a specific band of the image or **LUT**. *Data* is information specific to *type* (for example, the number of **LUT** entries or **ROI** rectangles available).

Where there is a single `ExportClient` element, the client can just read bytes or be event-driven. For **Photoflo**s containing multiple `ExportClient` elements, the client should be event-driven.

ImportObscured

XieEvnImportObscured

instance: XieTypExecutable
src: XieTypPhototag
type: { ImportDrawable, ImportDrawablePlane }
window: WINDOW
x: INT16
y: INT16
width: CARD16
height: CARD16

An **ImportObscured** event notifies the client an **ImportDrawable** or **ImportDrawablePlane** element has encountered obscured regions in a WINDOW that cannot be retrieved from BACKINGSTORE (see the *notify* parameter of the import element). A separate **ImportObscured** event is returned for each affected region.

Instance and *src* identify the **Photoflo** and the specific import element from which the **ImportObscured** event originated. *Window* identifies the WINDOW. The obscured region of the *window* is specified by *x*, *y*, *width*, and *height*.

Note: image data within obscured regions will be populated with the *fill* value supplied to the import element.

PhotofloDone

XieEvnPhotofloDone

instance: XieTypExecutable
outcome: XieTypPhotofloOutcome

A **PhotofloDone** event notifies the client that a **Photoflo** has left the ***Active*** state. It is enabled by the *notify* parameter of the **ExecutePhotoflo** and **ExecuteImmediate** requests.

Instance identifies the **Photoflo** from which the **PhotofloDone** event originated. *Outcome* indicates the reason the **Photoflo** left the ***Active*** state.

If the **Photoflo** terminated due to an error condition, the details concerning the error have preceded this event in an error message.

Resource Errors

The following *error-codes* are allocated from the extension error space to provide for the errors returned by XIE:

Table 9-1 XIE Error codes

Error	Cause
XieErrColorList	The value for a *color-list* argument does not name a defined **ColorList**.
XieErrFlo . . .	An error has been detected while defining, executing, or accessing a **Photoflo**. See Table 9-2 for additional detail.
XieErrLUT	The value for a *lut* argument does not name a defined **LUT**.
XieErrPhotoflo	The value for a *photoflo* argument does not name a defined **Photoflo**.
XieErrPhotomap	The value for a *photomap* argument does not name a defined **Photomap**.
XieErrPhotospace	The value for a *photospace* argument does not name a defined **Photospace**.
XieErrROI	The value for a *roi* argument does not name a defined **ROI**.

XIE also uses the core protocol errors: ***Access, Alloc***, ***IDChoice***, ***Length***, ***Request***, and ***Value***.

Photoflo errors

If an error is detected while defining, executing, or accessing a **Photoflo**, a ***Flo***-error is returned. This single *error-code* is allocated from the extension error space for all **Photoflo** related errors. The following *subcodes* are defined to provide the details of the error:

Table 9-2 Photoflo error subcodes

Error	Cause
XieErrFloAccess	Attempt to execute, modify, or redefine an ***Active*** **Photoflo** Attempt to Get/Put client data from/to an ***Inactive*** **Photoflo**
XieErrFloAlloc	Insufficient resources (for example, memory)
XieErrFloColormap	An unknown `COLORMAP` has been specified
XieErrFloColorList	An unknown **ColorList** has been specified
XieErrFloDomain	Invalid *domain* **Phototag**: – source data is not a *list-of-rectangles* or *control-plane* – specified nonzero on a ***DIS*** server
XieErrFloDrawable	An unknown `DRAWABLE` has been specified
XieErrFloElement	An unknown **PhotoElement** type has been specified Invalid **PhotoElement** type for request (for example, **GetClientData** from **Math**) Attempt to change or add a **PhotoElement** type using **ModifyPhotoflo**
XieErrFloGC	An unknown `GCONTEXT` has been specified
XieErrFloID	Invalid **Executable**: – an unknown **Photoflo** has been specified – an unknown **Photospace** has been specified
XieErrFloLength	A **PhotoElement** was received with the incorrect number of bytes
XieErrFloLUT	An unknown **LUT** has been specified
XieErrFloMatch	Some parameter or pair of parameters has the correct type and range, but it fails to match in some other way required by the **PhotoElement**
XieErrFloOperator	An unknown *operator* has been specified (for example, ArithmeticOp, MathOp, and so on)
XieErrFloPhotomap	An unknown **Photomap** has been specified
XieErrFloROI	An unknown **ROI** has been specified
XieErrFloSource	An invalid **Phototag** has been specified: – zero, but a **Phototag** is required – downstream from the particular **PhotoElement** – beyond the bounds of the **Photoflo**
XieErrFloTechnique	An unknown *technique* has been specified The wrong number of *technique* specific parameters have been supplied Invalid *technique* specific parameters have been specified
XieErrFloValue	Some numeric value falls outside of the range of values accepted by the **PhotoElement**
XieErrFloImplementation	

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