XtManageChildren, XtManageChild, XtUnmanageChildren, XtUnmanageChild, XtChangeManagedSet, XtIsManaged – manage and unmanage children

typedef Widget *WidgetList;

void XtManageChildren(children, num_children)
    WidgetList children;
    Cardinal num_children;
void XtManageChild(child)
    Widget child;
void XtUnmanageChildren(children, num_children)
    WidgetList children;
    Cardinal num_children;
void XtUnmanageChild(child)
    Widget child;
void XtChangeManagedSet(unmanage_children, num_unmanage_children, manage_children, num_manage_children, post_unmanage_pre_manage_hook, client_data)
    WidgetList unmanage_children;
    Cardinal num_unmanage_children;
    WidgetList manage_children;
    Cardinal num_manage_children;
    XtCSMProc post_unmanage_pre_manage_hook;
    XtPointer client_data;
Boolean XtIsManaged(widget)
    Widget widget

child          Specifies the child.
children       Specifies a list of child widgets.
num_children   Specifies the number of children.
widget         Specifies the widget.
manage_children Specifies the list of widget children to add to the managed set.
num_manage_children Specifies the number of entries in the manage_children list.
unmanage_children Specifies the list of widget children to remove from the managed set.
num_unmanage_children Specifies the number of entries in the unmanage_children list.
post_unmanage_pre_manage_hook Specifies the post unmanage, pre manage hook procedure to invoke.
client_data    Specifies the client data to be passed to the hook procedure.

The XtManageChildren function performs the following:

• Issues an error if the children do not all have the same parent or if the parent is not a subclass of compositeWidgetClass.
• Returns immediately if the common parent is being destroyed; otherwise, for each unique child on the list, XtManageChildren ignores the child if it already is managed or is being destroyed and marks it if not.
• If the parent is realized and after all children have been marked, it makes some of the newly managed children viewable:
− Calls the change_managed routine of the widgets’ parent.
− Calls XtRealizeWidget on each previously unmanaged child that is unrealized.
− Maps each previously unmanaged child that has map_when_managed True.

Managing children is independent of the ordering of children and independent of creating and deleting children. The layout routine of the parent should consider children whose managed field is True and should ignore all other children. Note that some composite widgets, especially fixed boxes, call XtManageChild from their insert_child procedure.

If the parent widget is realized, its change_managed procedure is called to notify it that its set of managed children has changed. The parent can reposition and resize any of its children. It moves each child as needed by calling XtMoveWidget, which first updates the x and y fields and then calls XMoveWindow if the widget is realized.

The XtManageChild function constructs a WidgetList of length one and calls XtManageChildren.

The XtUnmanageChildren function performs the following:

• Issues an error if the children do not all have the same parent or if the parent is not a subclass of compositeWidgetClass.
• Returns immediately if the common parent is being destroyed; otherwise, for each unique child on the list, XtUnmanageChildren performs the following:
  − Ignores the child if it already is unmanaged or is being destroyed and marks it if not.
  − If the child is realized, it makes it nonvisible by unmapping it.
• Calls the change_managed routine of the widgets’ parent after all children have been marked if the parent is realized.

XtUnmanageChildren does not destroy the children widgets. Removing widgets from a parent’s managed set is often a temporary banishment, and, some time later, you may manage the children again.

The XtUnmanageChild function constructs a widget list of length one and calls XtUnmanageChildren.

The XtChangeManagedSet function performs the following:

• Issues an error if the widgets specified in the manage_children and the unmanage_children lists to no all have the same parent, or if that parent is not a subclass of compositeWidgetClass.
• Returns immediately if the common parent is being destroyed.
• If no CompositeClassExtension is defined, or a CompositeClassExtension is defined but with an allows_change_managed_set field with a value of False, and XtChangeManagedSet was invoked with a non-NULL post_unmanage_pre_manage_hook procedure then XtChangeManagedSet performs the following:
  − Calls XtUnmanageChildren (unmanage_children, num_unmanage_children).
  − Calls the post_unmanage_pre_manage_hook specified.
  − Calls XtManageChildren (manage_children, num_manage_children) and then returns immediately.
• Otherwise, if a CompositeClassExtension is defined with an allows_change_managed_set field with a value of True, or if no CompositeClassExtension is defined, and XtChangeManagedSet was post_unmanage_pre_manage_hook procedure, then the following is performed:
  − For each child on the unmanage_children list; if the child is already unmanaged or is being destroyed it is ignored, otherwise it is marked as being unmanaged and if it is realized it is made nonvisible by being unmapped.
  − If the post_unmanage_pre_manage_hook procedure is non-NULL then it is invoked as specified.
  − For each child on the manage_children list; if the child is already managed or it is being destroyed it is ignored, otherwise it is marked as managed.
If the parent is realized and after all children have been marked, the change_managed method of the parent is invoked and subsequently some of the newly managed children are made viewable by:

- Calling `XtRealizeWidget` on each of the previously unmanaged child that is unrealized.
- Mapping each previously unmanaged child that has `map_when_managed True`.

The `XtIsManaged` function returns `True` if the specified widget is of class RectObj or any subclass thereof and is managed, or `False` otherwise.

`XtMapWidget(3Xt), XtRealizeWidget(3Xt)`

*X Toolkit Intrinsics – C Language Interface*

*Xlib – C Language X Interface*