

IGXML to XPDL 2.1/2.2 Conversion Reference

(as of Build 57 of IGXML)

Some important notes about the converter:

1. An iGrafx “Process” may contain one or more XPDL WorkflowProcesses, so there is not a one to one correlation between these objects. Each “process” in iGrafx roughly corresponds to a Page in XPDL.
2. Object Ids (Activity, Transition, Pool, Lane) are made unique within the package by concatenating the diagram index with the iGrafx ID, for example, “1.24”.
3. Many elements in an IGXML files are lost in the translation to XPDL. However, in some cases, such as the Resource Model, Events, and Decisions, extra data is appended to the corresponding XPDL elements. This extra data is loosely defined in the schema located at <http://www.igrafx.com/schemas/igrafx-xpdl21extensions-09.xsd> .

The following is a list of XPDL 2.1/2.2 elements that are used by the IGXML to XPDL 2.1/2.2 converter.

XPDL Element	Usage
Package	Corresponds to a single IGX file/document
PackageHeader/XPDLVersion	Always “2.1” or “2.2”
PackageHeader/Vendor	Always “iGrafx”
PackageHeader/Created	Blank.
Package/TypeDeclarations	TypeDeclarations correspond to Types from the Model menu. The built in types “TrueFalse” and “YesNo” are exported as <EnumerationType>.
Package/Participants	Participants correspond roughly to the ResourceModel. The ix:ResourceModel element is appended to xpdl:Participants.
Participant/@Id	Currently the Id is a the full name of the resource, where the folders are separated by the '.' character, e.g. “Worker.Pool-A”.
Participant/@Name	This is the short name of the resource, e.g. “Pool-A”.
Package/DataFields	Scenario Attributes.

DataField	
DataField/@Id, DataField/@Name	This is the name of the IGX attribute.
DataType/BasicType/@Type	When the attribute in iGrafx is a “Value”, this value is FLOAT.

	Unfortunately there is no distinction in iGrafx between a number value and a string value.
DataType/ DeclaredType/@Id DataType/ DeclaredType/@Name	For a built-in type or user defined enumeration, this references the type in TypeDeclarations.

Package/Pages	(new in XPD 2.1) Each xpd Page corresponds to an iGrafx diagram.
Page/@ixpdl:IgnorePools	If true, the diagram was a 'Process' diagram (as opposed to a 'BPMN' diagram), meaning that there were no pools.
Page/@Id	The Id is generated by the XML transform.
Page/ix:PageLayout	The IGXML page layout.
Page/ix:PropertyLists	The IGXML diagram property lists

Package/Pools	There is one pool for every top-level department in an iGrafx BPMN diagram. They are sorted from top to bottom or from left to right.
Pool/@Id	The Id is a concatenation of the diagram index and the iGrafx object ID, e.g. "2.14".
Pool/@Process	Since the process ID is the same as the pool ID this will be the same as @Id
Pool/@Name	The department name.
Pool/Lanes	All of the lanes that are descendants of the top-level department (pool).
Lane@Id	The Id is a concatenation of the diagram index and the iGrafx object ID, e.g. "2.14".
Lane/@Name	The department name.
Lane/@ParentLane	The Id of the parent department.
Lane/@ParentPool	The Id of the top-level department that this department is a descendant of.

NodeGraphicsInfo	Used for shapes, departments, and text objects (pools, lanes, activities, and artifacts)
@ToolId	Always "iGrafx".
@IsVisible	Always "true"
@Page	The page in XPD 2.1 corresponds to the diagram in iGrafx. This

	attribute is “Page1”, “Page2”, etc.
@Height	The height of the shape, department, or text object, converted to 72 dpi.
@Width	The width of the shape, department, or text object, converted to 72 dpi.
@FillColor	The fill color of the shape, department, or text object, if applicable, in the format #rrggbb.
@BorderColor	The line color of the shape, line, department, or text object, if applicable, in the format #rrggbb
@LaneId	If the object is an activity, this is the ID of its lane.
Coordinates	The top left corner of the shape, department, or text object, converted to 72 dpi.

Package/MessageFlows	
MessageFlow	All connector lines that connect activities in different pools are message flows.
@Id	The Id is a concatenation of the diagram index and the iGrafx object ID, e.g. “2.14”
@Name	If there is a text object attached to this connector line, that text is used for the name of the MessageFlow.
@Source, @Target	The source and target object of this message flow (“2.14”), which may be top-level departments (pools) or Shapes/Activities.

ConnectorGraphicsInfo	Used in Transitions, MessageFlows, and Associations.
@ToolId	Always “iGrafx”
@IsVisible	Always “true”
@Page	The page in XPDL corresponds to the diagram in iGrafx. This attribute is “Page1”, “Page2”, etc.
Coordinates	There is one <Coordinates> element for each vertex of the connector line.

Package/Associations	
Association	Represents the attachment between a graphical object (not an activity) that is connected to another object

@Id	A concatenation of the diagram number, the connected object id, and 'Association'. For example, “1.4.Association” represents the connection between “1.4” and another object.
@Source	The artifact.
@Target	The activity that the artifact is attached to.
@AssociationDirection	Always “To”
Object/@Id	Same as @Target
ConnectorGraphicsInfo	The 2 coordinates are the vertices of the callout line connecting the text object to the activity.

Package/Artifacts	All graphical objects or text objects that are not activities.
Artifact	Corresponds to a graphical object or text object that is not an shape/activity. Does not include objects that act as “line labels” or “case labels”.
@Id	A concatenation of the diagram index and the object ID, e.g. “2.4”.
@Name	The text of the graphical or text object.
@ArtifactType	“Annotation”, unless this is a “Document” object, in which case it is “Data Object”.
@TextAnnotation	Same as @Name.

Package/WorkflowProcesses	
WorkflowProcess	The collection of activities contained within a single pool.
@Id	A concatenation of the diagram index and the object ID, e.g. “2.4”
@Name	Matches the name of the pool, not the diagram, because a single diagram can contain multiple processes.
@ProcessType	Always “None”.
@SuppressJoinFailure	This is the opposite of “Join Before Complete” in the process properties dialog.
@EnableInstanceCompensation	Always “false”.
@AdHoc	Corresponds to “Ad Hoc” in the process properties dialog.
@DefaultStartActivityId	References the first start point located within the pool/process.

ProcessHeader/@DurationUnit	Always “D” for days. All durations are in days.
RedefinableHeader	Empty element
FormalParameters	Not used.
DataFields	Transaction Attributes
ExtendedAttributes	Custom Properties of the pool (top-level department).

WorkflowProcess/ActivitySets	
ActivitySet	The collection of activities within an iGrafx activity marked as a “Container Shape”.
ActivitySet/@Id	A concatenation of the diagram index, the object id, and “ActivitySet”. For example, “1.131.ActivitySet”.

WorkflowProcess/Activities	
Activity	An iGrafx Activity/Shape
@Id	A concatenation of the diagram index and the object id. For example: 1.131.
@Name	The text in the Activity/Shape
Description	The note attached to the Activity/Shape
Event, Implementation, BlockActivity, Route	One of these appears based on the BPMN activity type and the “Container Shape” checkbox in the properties dialog.
Event	Used when the BPMN activity type is “Event”.
Event/StartEvent	When there are no connector lines (excluding lines between pools) entering this activity.
Event/IntermediateEvent	When there are connector lines entering and exiting this Activity (excluding lines between pools)
Event/EndEvent	When there are no connector lines exiting and there are connector lines entering (excluding lines between pools)
StartEvent/@Trigger IntermediateEvent/@Trigger EndEvent/@Result	<p>Message</p> <ul style="list-style-type: none"> - When a connector line is an input to or output of this activity and the source or target is another pool or an activity in another pool. <p>Timer</p> <ul style="list-style-type: none"> - When the Event is a delay or a recurring event (For example, “Every_Morning”) or when the Activity Task is “Delay” <p>Error</p> <ul style="list-style-type: none"> - When the activity throws a fault on completion <p>Link</p> <ul style="list-style-type: none"> - Not supported <p>Compensation</p> <ul style="list-style-type: none"> -

	<p>Multiple</p> <ul style="list-style-type: none"> - Unused. <p>None</p> <ul style="list-style-type: none"> - When this activity does nothing. <p>Rule</p> <ul style="list-style-type: none"> - When the activity collects transactions based on an expression.
TriggerTimer/@TimerType	<p>(new for XPDL 2.1)</p> <p>Named</p> <ul style="list-style-type: none"> - An iGrafx named event, defined in xpd:Package/igxpd:TriggerTimers <p>Periodic</p> <ul style="list-style-type: none"> - A periodic event <p>Postponed</p> <ul style="list-style-type: none"> - An event that fires after a specified delay <p>Delay</p> <ul style="list-style-type: none"> - An event that fires after a specified delay – this time the source of the Delay is the “Task”
TriggerTimer/TimeCycle	<p>Depends on the value of TriggerTimer/@igxpd:TimerType</p> <p>When TimerType is 'Named', TimeCycle is the name of the event and should be found in Package/igxpd:TriggerTimers, otherwise it is a duration, and can be an expression.</p>
TriggerTimer/@igxpd:Repeats	<p>If the trigger was created from a gate, this specifies whether or not this trigger is one-time only or it repeats.</p>
TriggerRule/@RuleName	<p>A value is placed here for validation purposes, but it has no meaning.</p>
TriggerRule/ix:Expression	<p>The expression used for this rule, in IGXML. XPDL does not define a location for this expression.</p>
TriggerResultMessage/Message/@Id	<p>The message is identified by its name in the properties dialog, or else it is “DefaultMessage”</p>
TriggerResultMessage/Message/@From	<p>The message partner is identified by Partner Name in the properties dialog, or else it is “DefaultPartner”. This is only used if the activity receives a message.</p>
TriggerResultMessage/Message/@To	<p>This is the message partner in the properties dialog, or it is “DefaultPartner”. This is only used if the activity sends a message.</p>
Route	<p>Used when BPMN Type is 'Gateway'</p>
@GatewayType	<p>XOR</p> <ul style="list-style-type: none"> - input is Join By Count and output is All - input is none and output is Decision - input is none and output is XOR <p>OR</p> <ul style="list-style-type: none"> - input is Join By Entire Family and output is All - input is none and output is NamedOutputs - input is Join by Entire Family and output is Named Outputs

	<p>AND</p> <ul style="list-style-type: none"> - input is none and output is All - input is Join by Input Paths and output is All <p>Other combinations are undefined.</p>
@Instantiate	When output is 'Available', this is 'true'.
@MarkerVisible	In iGrafx This is the diagram level property “Indicator on Exclusive OR Gateways”.
Implementation	Used when the BPMN Type is 'Activity'
Implementation/SubFlow	Used when activity calls a subprocess.
SubFlow/@Id	References the WorkflowProcess/Pool that is called.
SubFlow/@Execution	When the subprocess type is 'WaitForReturn', this is SYNCHR. When it is 'Concurrent', this is ASYNCHR.
SubFlow/DataMappings	Mappings represent each transaction attribute being mapped to the DataField with the same name in the subflow.
Implementation/Task	Used when there are resources required to perform this task. For iGrafx processes, this is always Task/TaskManual.
TaskManual/Performers/Performer	This remains blank because XPDL cannot represent the iGrafx ResourceModel.
Performers/ix:ResourceUses	This is a copy of the Resource requirements of this Activity, in IGXML.
Implementation/No	Used when there are no resource requirements and this is not a subprocess or a container shape.
BlockActivity	Used when the shape is a container shape.
@ActivitySetId	For every container shape, there is a corresponding XPDL ActivitySet with an id like “1.4.ActivitySet”.
Deadline	Used when this activity has an exception of a maximum time.
DeadlineDuration	The length of the deadline expressed as an iGrafx expression.
ExceptionName	The name of the exception thrown.
SimulationInformation/Cost	Appears when there is a value for Fixed Cost in the properties dialog.
SimulationInformation/TimeEstimation/WaitingTime	Appears when this is a Delay.
SimulationInformation/TimeEstimation/WorkingTime	Appears when this is a “Work” activity.
SimulationInformation/TimeEstimation/Duration	The same as WaitingTime or WorkingTime, whichever is used.
TransitionRestriction/Join/@T	Default is XOR. For activities that collect transactions – OR for a

ype	family and AND for all inputs.
TransitionRestriction/Split/@T ype	Default is AND. For a decision, this is XOR. For named outputs, it is COMPLEX.
Split/TransitionRefs/Transition Ref/@igxpdl:DecisionCasePer centage	For a decision that choose a path randomly, this is the percentage of time this transition is chosen.
Split/TransitionRefs/ igxpdl:DecisionExpression	For a decision that chooses a path based on the result of an expression, this is the expression.
ExtendedAttributes	The custom data values and the named properties (hidden, accessible via API).
ExtendedAttribute/ @igxpdl:Source	If it's a custom data value, then this is "CustomData", if it's a named property, it is "Property".
DataFields	The activity attributes.
InputSets	A single InputSet appears when at least one data object is attached to an activity, or one is attached to a connector line that has this activity as its target.
OutputSets	A single OutputSet appears when at least one data object is attached to a connector line that has this activity as its source.
Loop	Appears when 'Repeat' is checked in the properties dialog.
LoopType='Standard', LoopStandard	Appears when 'Sequential' is chosen in the Repeat Details dialog.
LoopType='MultiInstance' LoopMultiInstance	Appears when 'Simultaneous' is chosen in the Repeat Details dialog.
LoopStandard/@LoopConditio n	Corresponds to 'Repeat condition' in the Repeat Details dialog.
LoopStandard/@LoopMaximu m	Corresponds to 'Repeat Count' in the Repeat Details dialog. Only appears when it is checked.
LoopStandard/@TestTime	Corresponds to 'Test before activity executes'/'Test after activity completes'.
LoopMultiInstance/@MI_Con dition	Corresponds to 'Repeat condition' in the Repeat Details dialog.
LoopMultiInstance/@MI_Orde ring	Always set to 'Parallel'.
MI_FlowCondition	Not supported.
ComplexMI_FlowCondition	Not supported.
Assignment	Corresponds to the "Attribute" page in the Activity properties dialog.
Assignment/@AssignTime	XPDL only supports 2 values: 'Start' and 'End'. For all assignments that are 'Enter', 'PostInput', and 'PreTask', the value is 'Start'.

	Otherwise it is 'End'.
Assignment/Target	The Attribute being assigned the new value.
Assignment/Expression	The value to assign.

WorkflowProcess/Transitions	
Transition	A connector line that does not cross from one pool to another.
@Id	Same as other object IDs
@Name	Finds the first text object attached to this line and uses that text as the name of the Transition.
@From	The ID of the source activity or pool of the connector line
@To	The ID of the target activity or pool of the connector line.
Condition	If this line is an output from a decision shape/activity, and a case is assigned.
Condition/@Type	CONDITION or OTHERWISE, corresponds to the Output page in the properties dialog. If this is the DefaultCase or DefaultOutput, it is “OTHERWISE”.
Condition/Expression	If the decision is based on an expression, then this is a concatenation of the expression, ' = ', and the value. For example “T.value > 1 = Yes”. For named outputs, if it is Conditional, then the corresponding expression is simply copied.
Condition/Assignments	The assignments in iGrafx are associated with the cases on the activity, not the line, so these assignments are from the Activity. Only attribute assignments marked as “active” are copied.
ConnectorGraphicsInfo/ Coordinates	The route of this line.

Package/ExtendedAttributes	The custom property lists (accessible via API)
Package/ix:PageLayout	The master PageLayout of the iGrafx document, from which each xpdl:Page can inherit settings.
Package/ix:Generators	The default set of generators from the iGrafx document.
igxpdl:TriggerTimers	Contains IGXML Events, DaysSchedules, and Times – everything needed to reconstruct iGrafx events from xpdl TriggerTimers.

@igxpdl:OriginalUnits	For every element or attribute that specifies a duration or duration expression, the value is converted to Days. This attribute says what the units were before conversion, so the importer can recreate “3 Hours” instead of “0.125 Days”.
-----------------------	---

--	--