

decodebin3

GstBin ([gstreamer/gstbin.html#GstBin](https://gstreamer.freedesktop.org/documentation/playback/decodebin3.html#GstBin)) that auto-magically constructs a decoding pipeline using available decoders and demuxers via auto-plugging. The output is raw audio, video or subtitle streams.

decodebin3 differs from the previous decodebin (decodebin2) in important ways:

- supports publication and selection of stream information via GstStreamCollection messages and GST_EVENT_SELECT_STREAMS ([gstreamer/gstevent.html#GST_EVENT_SELECT_STREAMS](https://gstreamer.freedesktop.org/documentation/playback/decodebin3.html#GST_EVENT_SELECT_STREAMS)) events.
- dynamically switches stream connections internally, and reuses decoder elements when stream selections change, so that in the normal case it maintains 1 decoder of each type (video/audio/subtitle) and only creates new elements when streams change and an existing decoder is not capable of handling the new format.
- supports multiple input pads for the parallel decoding of auxiliary streams not muxed with the primary stream.
- does not handle network stream buffering. decodebin3 expects that network stream buffering is handled upstream, before data is passed to it.

Hierarchy

```
GObject (https://docs.gtk.org/gobject/class.Object.html)
├─GInitiallyUnowned (https://docs.gtk.org/gobject/class.InitiallyUnowned.html)
│   └─GstObject (gstreamer/gstobject.html#GstObject)
│       └─GstElement (gstreamer/gstelement.html#GstElement)
│           └─GstBin (gstreamer/gstbin.html#GstBin)
│               └─decodebin3
```

Implemented interfaces

```
GstChildProxy (gstreamer/gstchildproxy.html#GstChildProxy)
```

Factory details

Authors: – Edward Hervey

Classification: – Generic/Bin/Decoder

Rank – none

Plugin – playback

Package – GStreamer Base Plug-ins

Pad Templates

audio_%u

ANY

Presence – *sometimes*

Direction – *src*

Object type – GstPad (gststreamer/gstpad.html#GstPad)

metadata_%u

Pad template for metadata source pads.

ANY

Presence – *sometimes*

Direction – *src*

Object type – GstPad (gststreamer/gstpad.html#GstPad)

Since : 1.28

sink

ANY

Presence – *always*

Direction – *sink*

Object type – GstPad (gststreamer/gstpad.html#GstPad)

sink_%u

ANY

Presence – *request*

Direction – *sink*

Object type – GstPad (gststreamer/gstpad.html#GstPad)

src_%u

ANY

Presence – *sometimes*

Direction – *src*

Object type – GstPad (gststreamer/gstpad.html#GstPad)

text_%u

ANY

Presence – *sometimes*

Direction – *src*

Object type – GstPad (gststreamer/gstpad.html#GstPad)

video_%u

ANY

Presence – *sometimes*

Direction – *src*

Object type – GstPad (gststreamer/gstpad.html#GstPad)

Signals

about-to-finish

```
about_to_finish_callback (GstElement (gststreamer/gstelement.html#GstElement) * param_0,  
                          gpointer (https://docs.gtk.org/glib/types.html#gpointer) udata)
```

This signal is emitted when the data for the selected URI is entirely buffered and it is safe to specify another URI.

Parameters:

param_0 – No description available

udata – No description available

Flags: Run Last (<https://developer.gnome.org/gobject/unstable/gobject-Signals.html#G-SIGNAL-RUN-LAST:CAPS>)

select-stream

```
gint (https://docs.gtk.org/glib/types.html#gint)
select_stream_callback (GstElement (gststreamer/gstelement.html#GstElement) * decodebin,
                        GstStreamCollection (gststreamer/gststreamcollection.html#GstStreamCollection) * collection,
                        GstStream (gststreamer/gststreams.html#GstStream) * stream,
                        gpointer (https://docs.gtk.org/glib/types.html#gpointer) udata)
```

This signal is emitted whenever *decodebin* needs to decide whether to expose a *stream* of a given *collection*.

Note that the preferred way to select streams is to listen to GST_MESSAGE_STREAM_COLLECTION on the bus and send a GST_EVENT_SELECT_STREAMS with the streams the user wants.

Parameters:

decodebin – a decodebin3 (<playback/decodebin3.html#decodebin3>)

collection – a GstStreamCollection (<gststreamer/gststreamcollection.html#GstStreamCollection>)

stream – a GstStream (<gststreamer/gststreams.html#GstStream>)

udata – No description available

Returns ([gint](https://docs.gtk.org/glib/types.html#gint) (<https://docs.gtk.org/glib/types.html#gint>)) – 1 if the stream should be selected, 0 if it shouldn't be selected. A value of -1 (default) lets *decodebin* decide what to do with the stream.

Flags: Run Last (<https://developer.gnome.org/gobject/unstable/gobject-Signals.html#G-SIGNAL-RUN-LAST:CAPS>)

Properties

caps

```
“caps” GstCaps (gststreamer/gstcaps.html#GstCaps) *
```

The caps on which to stop decoding. (NULL = default)

Flags : Read / Write

Default value :

video/x-raw(ANY); audio/x-raw(ANY); text/x-raw(ANY); subpicture/x-dvd; subpicture/x-dvb; subpicture/x-raw(ANY);
