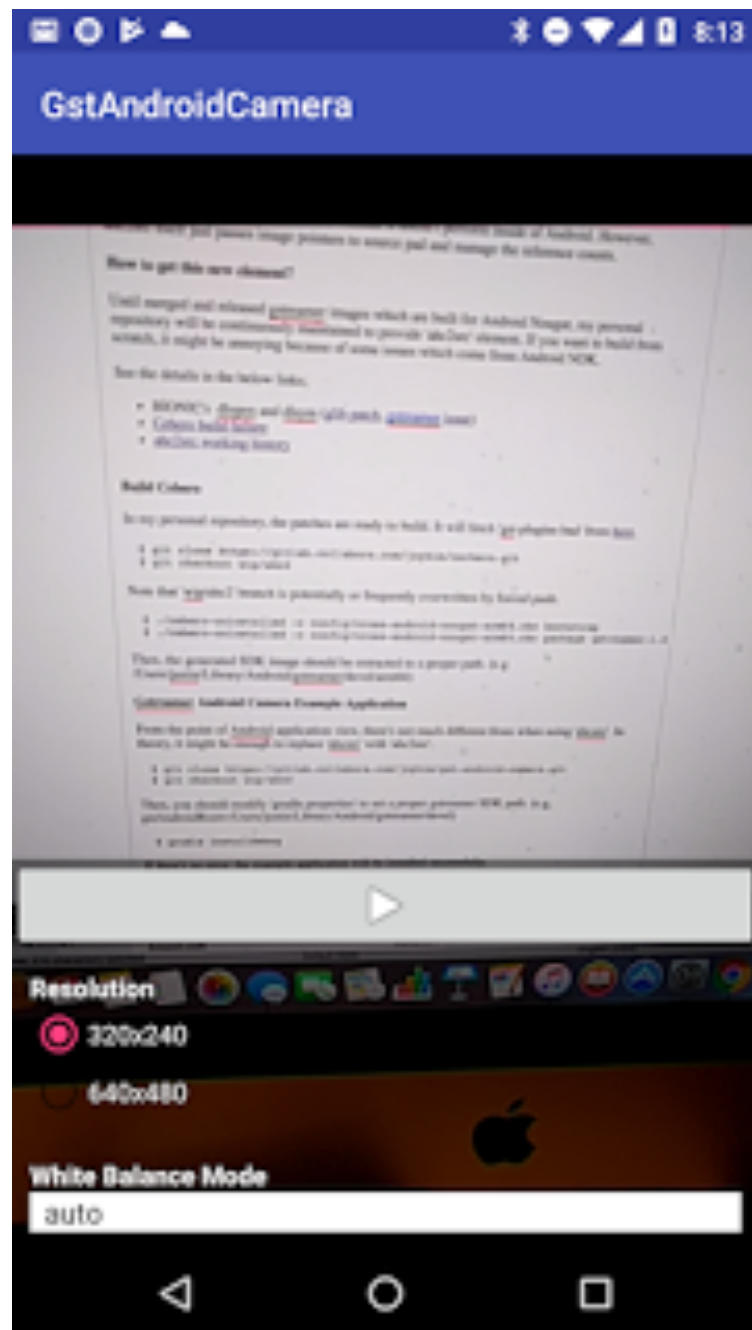


A source element for Android Camera 2 NDK API (ahc2src)

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New Android Camera 2 Source



- android.hardware.Camera is deprecated.
- Since 2016, Camera 2 NDK has been public API.

Comparison

	ahcsrc	ahc2src
Supported Android Version	> Lollipop (android-19)	> Nougat (android-24)
API	Java Camera API (deprecated)	Camera 2 NDK API
Device Control	Java API through JNI	Native
Supported Image Format	YV12, YUY2, NV16, NV21, RGB16	NV12(YUV_420_888)
Memory Copy	Java to GstBuffer	None
Batter Consumption	Very Big	less than ahcsrc

Memcpy in ahcsrc

Internal Image Buffers



GstAhcCallback.onPreviewFrame()

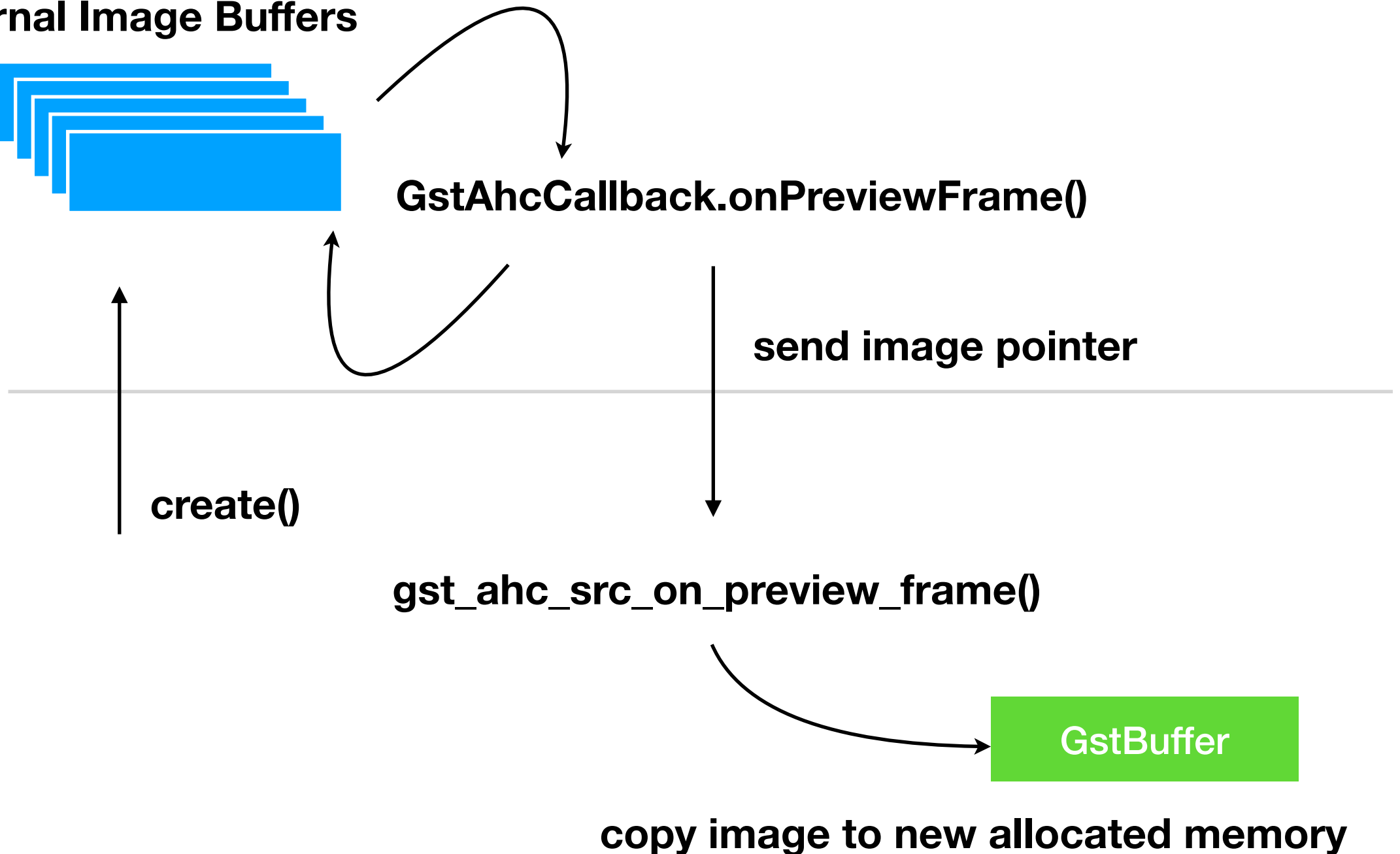
send image pointer

create()

gst_ahc_src_on_preview_frame()

GstBuffer

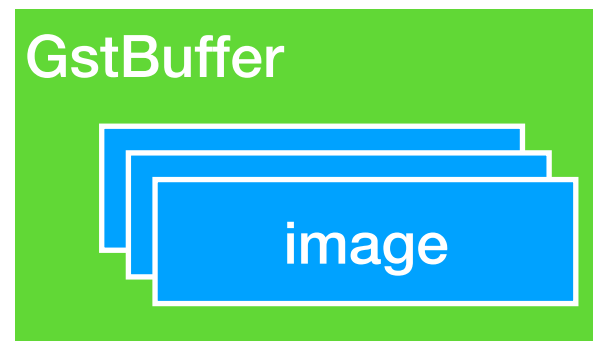
copy image to new allocated memory



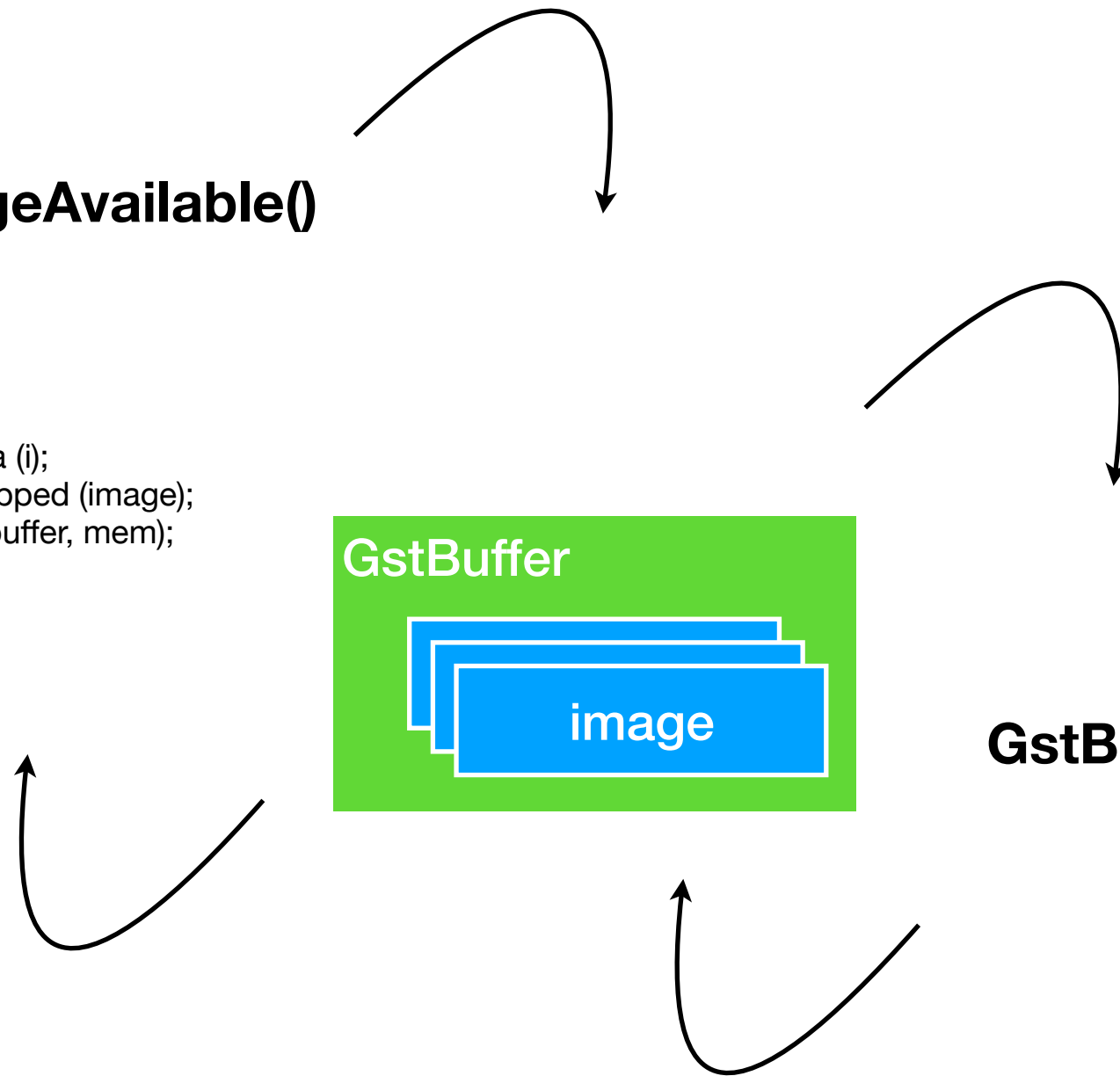
Wrapping memory in ahc2src

AlmageReader.onImageAvailable()

```
for (;i < n_planes; i++)  
{  
    image = Almage_getPlaneData (i);  
    mem = gst_memory_new_wrapped (image);  
    gst_buffer_append_memory (buffer, mem);  
}
```



GstBaseSrc.create()



Related works

- bgo #788696 - ahc2src: new source
- bgo #788270 - *dlopen(NULL)* doesn't work on Android
- bgo #788273 - cebero: build for Nougat
- bgo #760963 - an example of ahcsrc

Further works

- Check if GLMemory can be used instead of image plane data.
- Verify Photography APIs
 - Different naming between Android and Gstreamer
- Android Media Codec with NDK
 - but JNI still needs to enumerate CodecList