

Animate Your Subtimelines in GES

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The Problem: Collaborative video Editing

Imagine **sequence.film** - multiple editors working simultaneously:

- Alice edits the “main” timeline for a project
- Bob edits a “scene” timeline (a sequence within the project)
- Alice uses Bob’s scene as a clip in her main timeline
- **When Bob makes changes → Alice should see them live**

Timelines replicas

Bob's scene timeline → registered as Primary → Replica

```
// Bob's timeline is registered as primary timeline
ges_timeline_register_as_subtimeline_primary(
    scene_timeline, "scene-42", &error);
// Alice's creates a clip from Bob's primary timeline URI
GESTimeline* alice_main = ...;
GESClip* scene_clip = ges_uri_clip_new(
    "gessubtimeline://scene-42");
ges_layer_add_clip(alice_layer, scene_clip);
```

Bob edits → changes propagate → **Alice sees updates live!**



Implementation

The key insight: create clips from subtimeline URIs

```
// Create a clip directly from the subtimeline URI  
GESClip* clip = ges_uri_clip_new("gessubtimeline://sene-42");
```

→ Same design as 'static' subtimelines that are loaded from project files

Implementation

Two-parts, implemented in a new GES Rust plugin:

- `SubTimelineFormatter` - handles `gessubtimeline://` URI scheme
- `SubtimelinePrimaryManager` - tracks primary timelines and propagates changes to all replicas

Status

- Upstreaming planned
- C API available in GES when the `gesplugin` is found

Thank You

