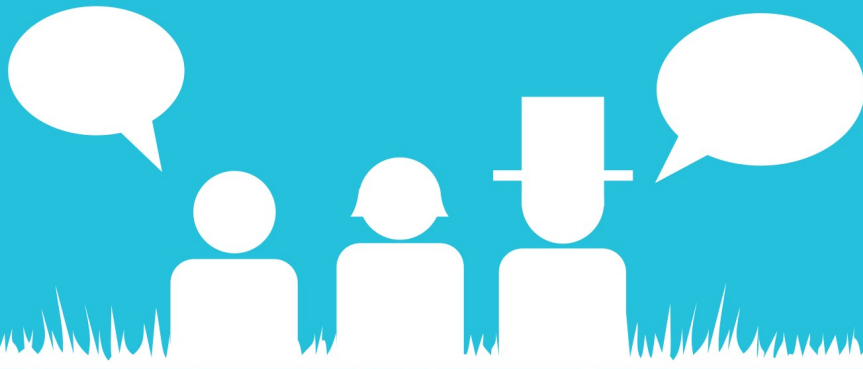


# Grilo

and Lua Integration

**Victor Toso**



# ... what is Grilo?

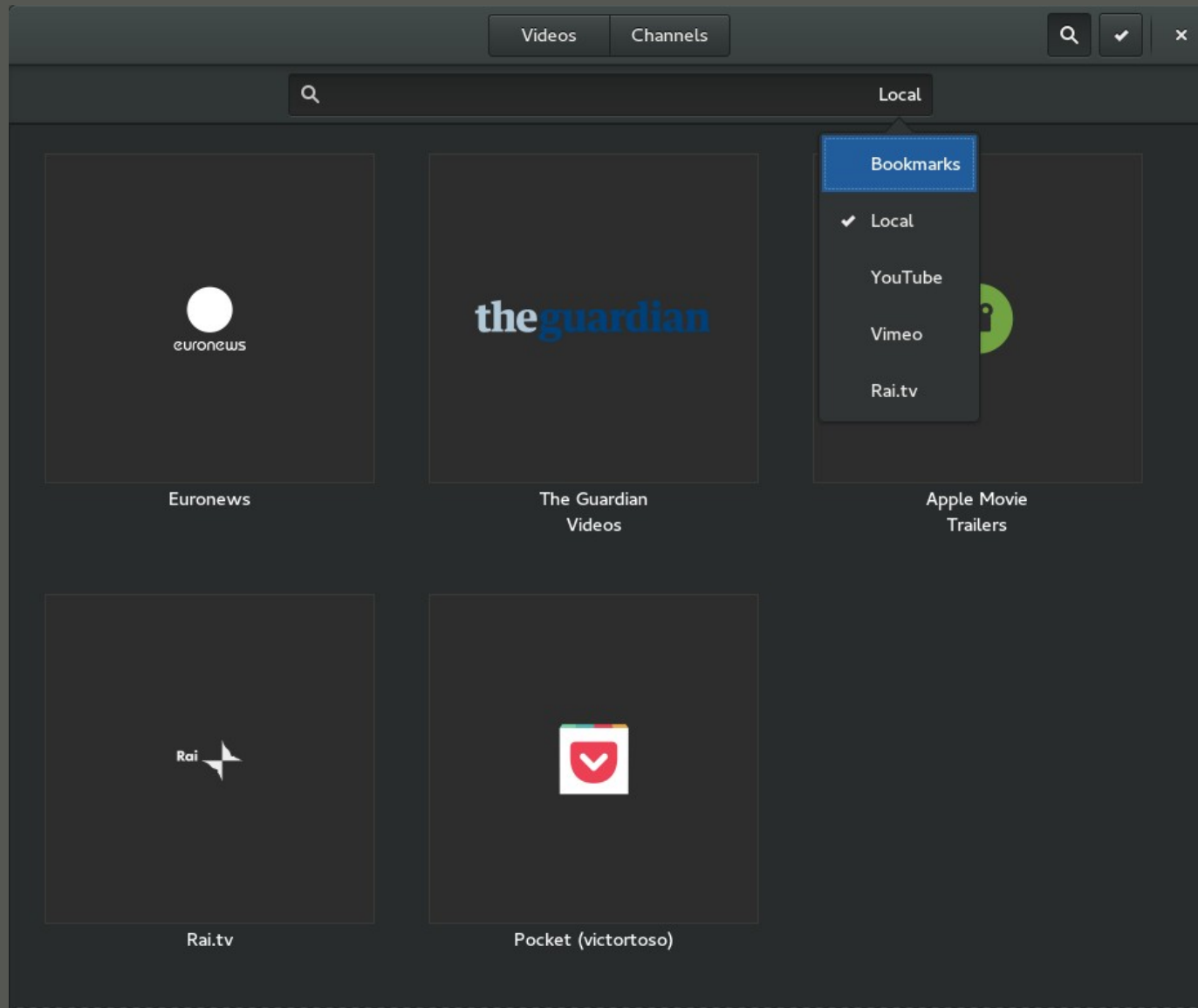
- Framework for Multimedia Applications
  - ◊ Gathering content and metadata
- Pluggable
  - ◊ Youtube, Flickr, Pocket, etc.



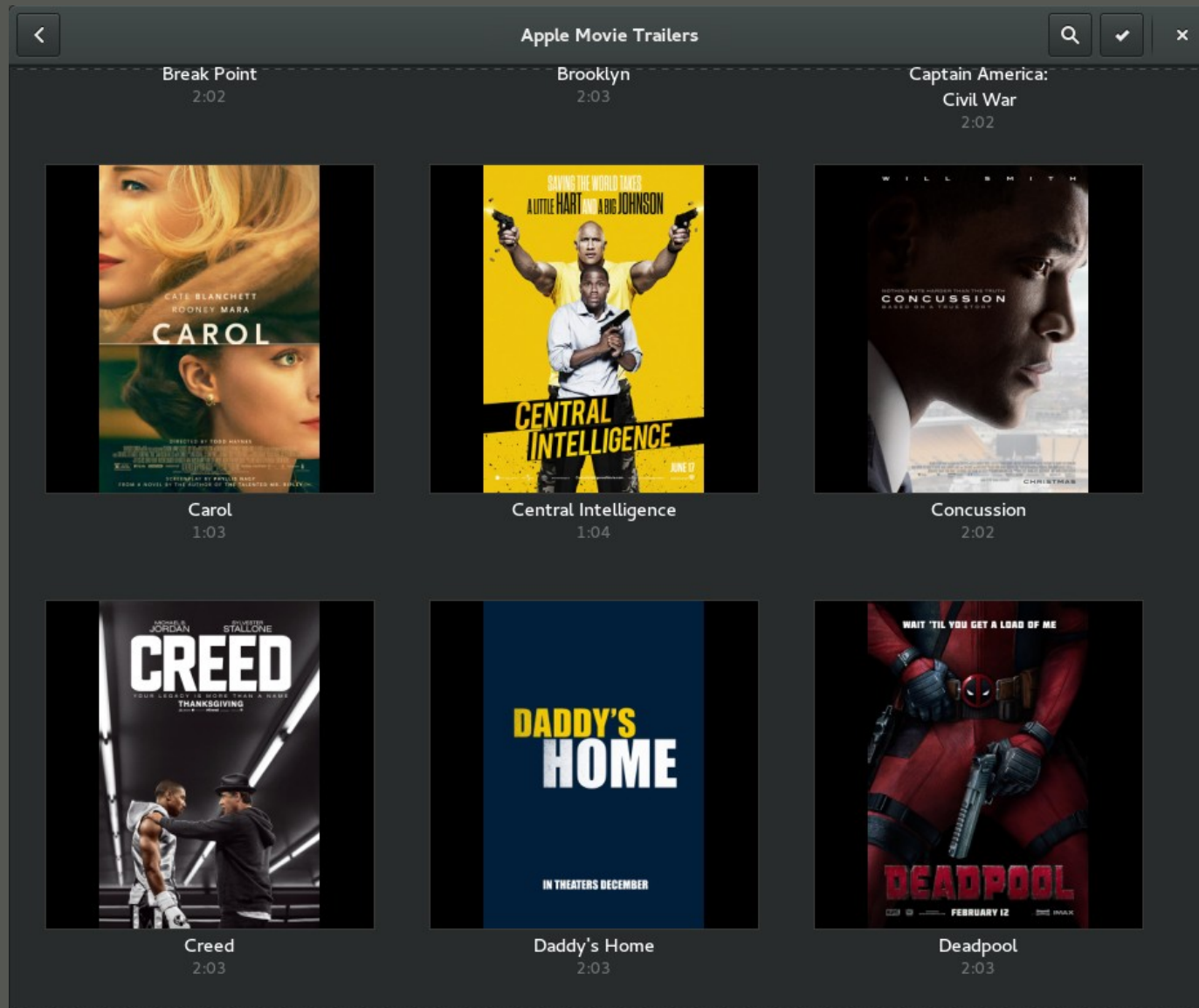
# GNOME Apps using Grilo



# Search and Browse



# Browse: Apple trailers




# Search: Youtube




Results for "MR ROBOT"


Q MR ROBOT YouTube



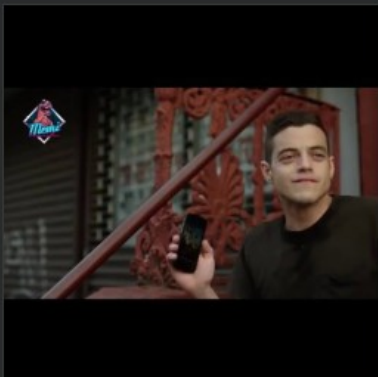
Mr. Robot:  
Extended Sneak  
Peek - N...s on USA



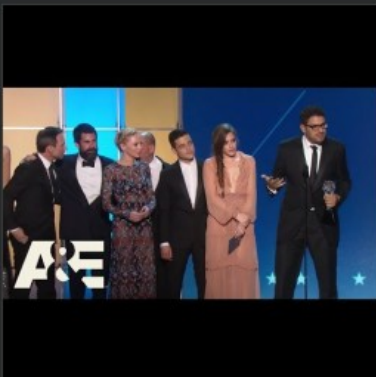
Mr. Robot: Official  
Trailer - New  
Series on USA



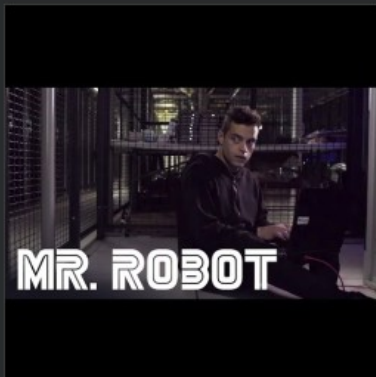
Rami Malek on Mr.  
Robot



BLOOPERS: Mr.  
Robot | Temporada  
1 (Subtitulado)



"Mr. Robot" Wins  
Best Drama Series  
| 2016 ...ds | A&E



Mr. Robot: Official  
Extended Trailer -  
New Series on USA

# Search & Browse



Brad Sucks - Making Me Nervous

⏮ ⏪ ⏸ ⏩ ⏭ 🔍

**Making Me Nervous** -2:26 / 2:39

by Brad Sucks from I Don't Know ...

**Library**

- Play Queue
- Music
- Podcasts
- OS Last.fm
- Libre.fm
- Radio

**Playlists**

- My Top Rated
- Recently Added
- Recently Played

**Shared**

- Jamendo
- Radio France
- SoundCloud

**Browse**

- Artists
- Albums
- Feeds
  - Albums of the week
  - Tracks of the week
  - New releases
  - Top artists
  - Top albums
- I Don't Know What I'm Doing
- The Dreamer's Paradox
- The Butcher's Ballroom
- Listen
- Public Domain
- Anomalous Material
- Divinity
- Increase the Dosage
- Space Opera
- On verra plus tard ...
- Dinner for One
- Trance Planet
- Breathin' Again

**Search**

Title	Genre	Artist
Making Me Nervous	rock	Brad Sucks
Look and Feel Years Younger	rock	Brad Sucks
Fixing My Brain	rock	Brad Sucks
Bad Attraction	rock	Brad Sucks
Sick as a Dog	rock	Brad Sucks
Borderline	rock	Brad Sucks
I Think I Started a Trend	rock	Brad Sucks
Never Get Out	rock	Brad Sucks
Overreacting	rock	Brad Sucks
Dirtbag	rock	Brad Sucks
Time to Take out the Trash	rock	Brad Sucks
Work out Fine	rock	Brad Sucks

12 songs, 40 minutes



# Gather Metadata!



< Thief ×

Watch Now

Subtitles None ▾

Released 1981

Runtime 122 min

Michael Mann directs Jams Caan as a professional safecracker named Frank, who specializes in high-profile diamond heists. Frank plans to use his ill-gotten income to retire from crime and build a nice life for himself complete with a home, wife and kids. To accelerate this process, he signs on with a top gangster (Robert Prosky) for a big score. But when Frank tries to quit the job, the mob comes after him and his girlfriend (Tuesday Weld).

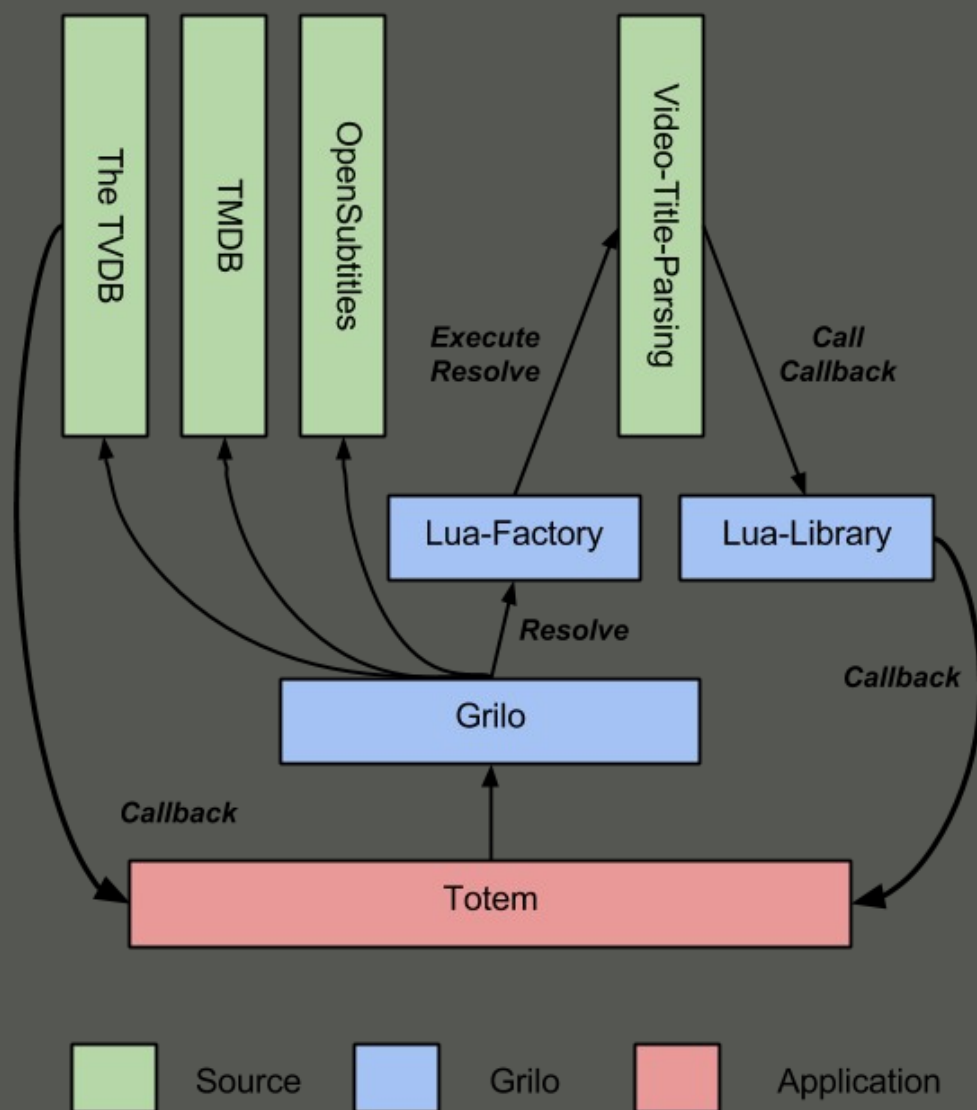
**Cast**  
James Caan, Tuesday Weld, Willie Nelson

**Director**  
Michael Mann

**Writers**  
Michael Mann (screenpaly), Frank Hohimer (novel)







4 Sources being used!

- Video-Title-Parsing
- The TVDB (TV Shows)
- TMDB (Movies)
- OpenSubtitles



# Using Grilo



# ... common application flow

1. Load
2. Configure
3. Activate
4. Have fun!



```
static void
configure_plugins (void)
{
    GrlConfig *config;
    GrlRegistry *registry;

    /* Let's configure only the Youtube plugin (only requires an API key) */
    config = grl_config_new ("grl-youtube", NULL);
    grl_config_set_api_key (config,
                           "MY-API-KEY-PROVIDED-BY-YOUTUBE");
    registry = grl_registry_get_default ();
    grl_registry_add_config (registry, config, NULL);
}

static void
load_plugins (void)
{
    GrlRegistry *registry;
    GError *error = NULL;

    registry = grl_registry_get_default ();
    g_signal_connect (registry, "source-added",
                     G_CALLBACK (source_added_cb), NULL);
    if (!grl_registry_load_all_plugins (registry, TRUE, &error)) {
        g_error ("Failed to load plugins: %s", error->message);
    }
}
```



# ... Operations

- Search
- Browse
- Resolve
- Remove
- Store



# ... Operations

- Search
- Browse
- Resolve
- Remove
- Store

```
guint
grl_source_search (GrlSource *source,
                  const gchar *text,
                  const GList *keys,
                  GrlOperationOptions *options,
                  GrlSourceResultCb callback,
                  gpointer user_data)
```

```
GList * keys = grl_metadata_key_list_new (GRL_METADATA_KEY_TITLE,
                                           GRL_METADATA_KEY_DURATION,
                                           GRL_METADATA_KEY_CHILDCOUNT,
                                           GRL_METADATA_KEY_INVALID);

caps = grl_source_get_caps (source, GRL_OP_SEARCH);
options = grl_operation_options_new (caps);
grl_operation_options_set_count (options, 5);
grl_operation_options_set_resolution_flags (options, GRL_RESOLVE_IDLE_RELAY);

g_debug ("Searching \"rock\" in Jamendo");
grl_source_search (source,
                  "rock",
                  keys,
                  options,
                  search_cb,
                  NULL);
g_list_free (keys);
```

# ... Operations

- Search
- Browse
- Resolve
- Remove
- Store

```
typedef void (*GrlSourceResultCb) (GrlSource *source,  
                                   guint operation_id,  
                                   GrlMedia *media,  
                                   guint remaining,  
                                   gpointer user_data,  
                                   const GError *error);
```

```
static void  
search_cb (GrlSource *source,  
           guint browse_id,  
           GrlMedia *media,  
           guint remaining,  
           gpointer user_data,  
           const GError *error)  
{  
    if (error) {  
        g_error ("Search operation failed. Reason: %s", error->message);  
    }  
  
    guint childcount = grl_media_get_childcount (media);  
    guint seconds = grl_media_get_duration (media);  
    const gchar *url = grl_media_get_url (media);  
    /* .... */  
}
```



# ... Operations

- Search
- Browse
- **Resolve**
- Remove
- Store

# DEMO!



# Creating Plugins



# ... Plugins

- C plugins (GObject)
  - Can create multiple sources (e.g. UPnP)
- Lua sources
  - Loaded by Lua-Factory plugin
- And Vala



# ... Lua?

- “Lua is a powerful, fast, lightweight, embeddable scripting language” – *[www.lua.org](http://www.lua.org)*
- Less boilerplate code than the GObject plugins in C
- Much faster to write plugins
- Great helpers with Lua-Library (JSON, XML, GOA, ...)
- It has its limitations



## ... Initialization

```
source = {  
    id = "grl-video-title-parsing",  
    name = "video-title-parsing",  
    description = "Video title parsing",  
    supported_keys = { "episode-title", 'show',  
                      'publication-date', 'season',  
                      'episode', 'title' },  
    supported_media = 'video',  
    resolve_keys = {  
        ["type"] = "video",  
        required = { "title" },  
    },  
}
```



# Showing sources



# ... Grilo is cool!

- Less code in your Application
- One API to handle all different technologies and protocols
- Create plugins in C and Lua or Vala





# Thank You!

#grilo at [irc.gimp.org](https://irc.gimp.org)  
@victortoso

