Manyfold: Federating 3d models

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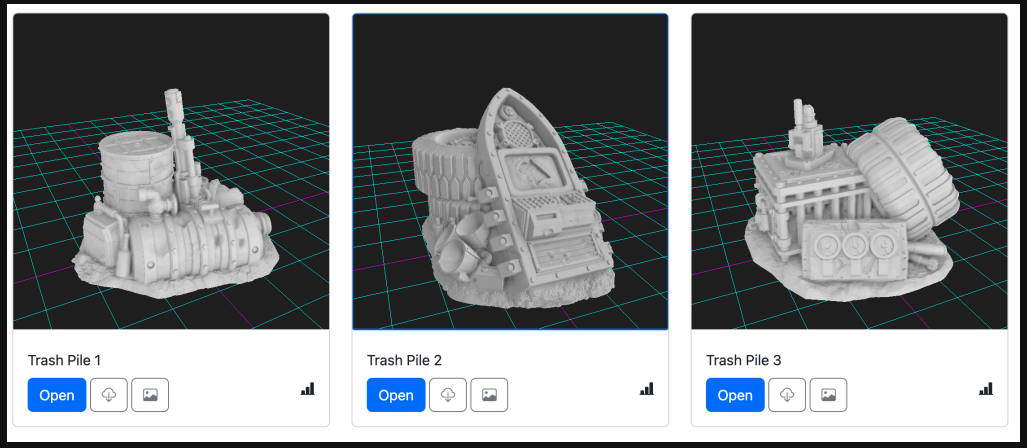
What's Manyfold?

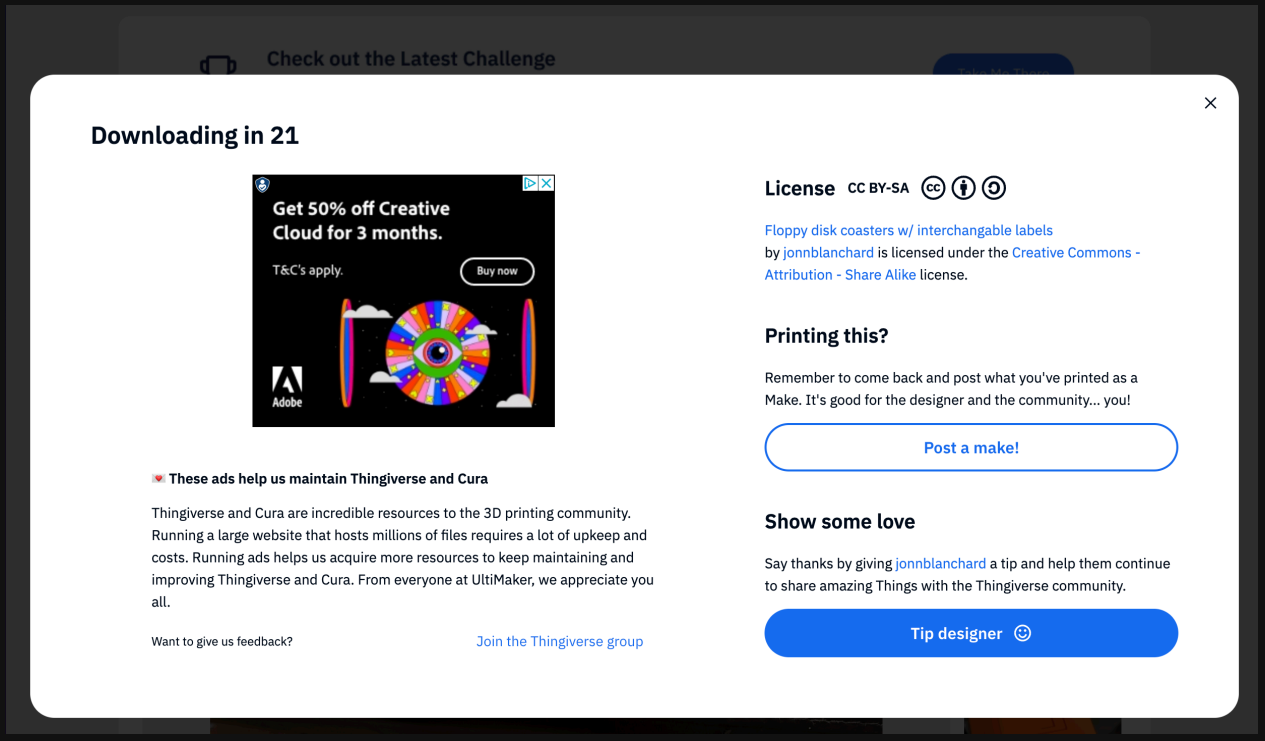
manyfold.app

Organising 3d print models

- Browse & Preview
- Organise & Tidy
- Troubleshoot & Convert



...a bit like having your own Thingiverse, but without this:



Self Hosted Container

Operation Modes

- Private single-user
- Multiuser
- Federated!

Federation

manyfold.app/technology/activitypub

Note: this is *about* to release, probably next week

`f3di` namespace

https://purl.org/f3di/ns

Extension properties for 3d content.

- `concreteType`
- `compatibilityNote`

...with many more to come.

Name chosen to be platform-independent.

Actors

Internal type	Actor type	concreteType
Creator	"Person"	"Creator"
Model	"Service"	"Model"
Collection	"Group"	"Collection"
User	"Person"	"User"

Activities

	Model/Creator/Collection	User	Note
Create	both		send
Update	both		send
Delete	both		send
Flag	recv	both	recv
Follow	recv	send	
Accept	send	recv	
Undo	recv	send	

Floppy

@floppy@manyfold.floppy.org.uk

Creator of Manyfold, and a terrible 3D designer

- Thingiverse
- Cults3D
- Floppy
- Mastodon

0 Models

Compatibility Notes

Most activities are changes to Actors; these won't show in microblog feeds.

So: post "Compatibility Notes", which describe the other activities.

```
"f3di:compatibilityNote": true
```

Floppy
@floppy@manyfold.floppy....

55s

I've just added a new model: "Hello Fediverse, this is Manyfold"

#fediverse #activitypub

Translate

manyfold.floppy.org.uk

Hello Fediverse, this is Manyfold

Hello Fediverse! This is Manyfold, a self-...

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Federails

by @mtancoigne@mamot.fr

gitlab.com/experimentslabs/federails

#federails:matrix.org

Setup

```
bundle add federails
```

```
# config/routes.rb
mount Federails::Engine => '/'
```

```
rails generate federails:install
rails generate federails:install:migrations
```

Federails::ActorEntity

```ruby
# app/models/user.rb

class User < ApplicationRecord
  # Include the concern here:
  include Federails::ActorEntity

  # Configure field names
  acts_as_federails_actor username_field: :username, name_field:
    profile_url_method: :user_url
end
```

Following

```
target = Federails::Actor.find_by_account "@floppy@mastodon.me.uk

user.federails_actor.following_follows.create(target_actor: targe
```

Incoming requests:

```
class User < ApplicationModel
  include Federails::ActorEntity

  after_follow :throw_party

end
```

Federails::Activity

```ruby
Federails::Activity.create!(
  actor: user.federails_actor,
  action: "Create",
  entity: comment
)
```

Object Serialization

```ruby
class Comment < ApplicationRecord

  include Federails::DataEntity
  acts_as_federails_data handles: "Note", actor_entity_method: :c

  def to_activitypub_object
    Federails::DataTransformer::Note.to_federation(
      self,
      content: comment.to_html,
      custom: {
        "sensitive" => sensitive,
      }
    )
  end
end
```

Trust & Safety

https://github.com/manyfold3d/federails-moderation

- "Flag" activities
- Domain blocks

Thanks!

manyfold.app // @manyfold@3dp.chat

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