

# Map::Tube

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# Background

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- First released in Oct 2010.
- So far 150+ public releases.
- Created around 36 maps of some of the most popular metros around the world.
- Currently 7 people associated with this project e.g. MANWAR, SKIM, GWS, SREZIC, ERRIETTA, MFONTANI and SLU.
- Formally introduced to Perl Community at LPW 2017.

# Setup Environment

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- `$ sudo cpanm -v Map::Tube`
- `$ sudo cpanm -v Map::Tube::Plugin::Graph`

# Optional Plugins

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- `sudo cpanm -v Map::Tube::Plugin::FuzzyFind`
- `sudo cpanm -v Map::Tube::Plugin::Formatter`

# Let us create map for Madrid Metro

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- Look for available map of Madrid Metro
- For this map, we would create JSON formatted source.

# Skeleton of map data

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```
{
  "name": "Madrid Metro",
  "lines": {
    "line": [
    ]
  },
  "stations": {
    "station": [
    ]
  }
}
```

# Line details

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```
{  
  "id": "L3",  
  "name": "L3",  
  "color": "yellow"  
}
```

# Station details

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```
{  
  "id": "L3-01",  
  "name": "Villaverde Alto",  
  "line": "L3:1",  
  "link": "L3-02"  
}
```



# Map::Tube::Madrid

```
package Map::Tube::Madrid;

use File::Share ':all';
use Moo;
use namespace::autoclean;

has json => (is => 'lazy');
with 'Map::Tube';

sub _build_json { dist_file('Map-Tube-Madrid', 'madrid-map.json') }

1;
```

# Shortest Route?

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```
use strict; use warnings;
use Map::Tube::Madrid;

my $metro = Map::Tube::Madrid->new;
my $route = $metro->get_shortest_route('Sol', 'Delicias');
print "Route: $route\n";
```

# Map Image?

```
use strict; use warnings;
use MIME::Base64;
use Map::Tube::Madrid;

my $metro = Map::Tube::Madrid->new;
my $map    = $metro->name;
open(my $MAP_IMAGE, ">", "$map.png")
    or die "ERROR: Can't open [$map.png]: $!";
binmode($MAP_IMAGE);
print $MAP_IMAGE decode_base64($metro->as_image);
close($MAP_IMAGE);
```

# Line Image?

```
use strict; use warnings;
use MIME::Base64;
use Map::Tube::Madrid;

my $metro = Map::Tube::Madrid->new;
my $line  = 'L3';
open(my $LINE_IMAGE, ">", "$line.png")
    or die "ERROR: Can't open [$line.png]: $!";
binmode($LINE_IMAGE);
print $LINE_IMAGE decode_base64($metro->as_image($line));
close($LINE_IMAGE);
```

# map-tube

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- There is a very handy command line utility “map-tube” to play with installed maps.
- Just install **Map::Tube::CLI** to get the utility.

# map-data-converter

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- The distribution **Map::Tube** comes with a very useful tool “map-data-converter”.
- With this tool, you can easily change the map source data format to XML or JSON.

# More information?

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- Please follow the documentation for **Map::Tube::Cookbook**.
- For object related details, please follow **Map::Tube** documentation.

# Questions?

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**Thank You**

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