

Abra seu transporte público

com OpenStreetMap e Transportr

Torsten Grote <t@grobox.de>



2016-07-14

15º Fórum Internacional
SOFTWARE LIVRE
A tecnologia que libera

7 a 10 de Maio de 2015



FISL15

PUCRS | Porto Alegre | Brasil

#eufui

Free Software
Free Society





Free Software
Free Society

www.fsfe.org

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Regain control of your Android device and your data. Liberate it from data leeches and run it without a Google account. We've collected all the information necessary to run (almost) exclusively Free Software on your phone, so you can take ownership of your mobile device.

Help us free the last few critical apps, and make phone liberation an effortless experience so that all Android owners may enjoy the benefits.



digitalcourage



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P



Duration: 0:57

Date: 11/27/2013

11:19 PM 52.39306/13.13070



7 min

11:26 PM S Griebnitzsee Bhf

11:26 PM S1 > S Anhalter Bahnhof

1

11:55 PM S Schöneberg

2

11:59 PM S42 > Ringbahn S 42

12

12:00 AM S Südkreuz Bhf

12:01 AM

12:03 AM S+U Tempelhof

12:04 AM

12:07 AM S+U Hermannstr.

12:07 AM

12:08 AM S+U Neukölln

2

12:15 AM U7 > S+U Rathaus Spandau

12:16 AM U Karl-Marx-Str.





13:37



Florianópolis
SIM

Direções

6

Viagens Recentes

Partidas

Estações Próximas

⋮

Configurações

⋮

Novidades

⋮

Sobre



Transportr

Florianópolis

De

Para

DE

22:48

+15

06/07/16

PESQUISAR



TILAG - Terminal de I... Lagoa da Conceição

TICEN - Terminal Centro

Bola de Neve Church

TICEN - Terminal Centro

Rodovia Admar Gonzaga (10)

Rodovia Jornalista Manoel de Menezes (02)



Transportr

Florianópolis



23:16 Rua Tomaz Ramos



1:25

00:42 TICEN - Terminal Centro



00:12 Rua Tomaz Ramos



1:24

01:37 TICEN - Terminal Centro



01:51 Rua Tomaz Ramos



0:45

02:37 TICEN - Terminal Centro



03:51 Rua Tomaz Ramos



0:45

04:37 TICEN - Terminal Centro





23:16 Rua Tomaz Ramos



67 m

0:01

23:17 Rua Altamiro Barcelos Dutra (12)

23:17 Rua Altamiro Barcelos Dutra (12)



360

Barra da Lagoa

23:41 TILAG - Terminal de Integração da Lagoa da Conceição

00:00 TILAG - Terminal de Integração da Lagoa da Conceição



330

TILAG - TICEN via Mauro Ramos

00:42 TICEN - Terminal Centro



Partidas

Florianópolis

★ TICEN - Terminal Centro ✖

13:37

+15

07/07/16



13:39 138 Volta ao Morro Pantanal Sul

› Rodovia Gustavo Richard

13:39 135 Volta ao Morro Carvoeira Norte

› TICEN - Terminal Centro

13:40 460 Porto da Lagoa

› Rodovia Antônio Luiz Moura Gonzaga (18)

13:40 630 Corredor Continente

› TICEN - Terminal Centro

13:40 184 UDESC via Beira Mar

› Celesc - Itacurubi

13:41 185 UFSC - Semidireto

› TICEN - Terminal Centro



TIRIO

Terminal
Rio Tavares

630



430 VIA-COSTEIRA

45174

OHG-2497



Marcopolo

cim





AUTO-PEÇAS
(48) 3234-4445
OFICINA
(48) 3233-6180

ALHETAS ORIGINAIS

Ipiranga
SUPER TROCA DE ÓLEO

AR CONDICIONADO



GARAG

PARTICU

ESTACION





What is GTFS?

Contents

[How do I start?](#)

[Overview of a GTFS feed](#)

[Making a Transit Feed Publicly Available](#)

[Submitting a Transit Feed to Google](#)

The General Transit Feed Specification (GTFS) defines a common format for public transportation schedules and associated geographic information. GTFS "feeds" allow public transit agencies to publish their transit data and developers to write applications that consume that data in an interoperable way.

How do I start?

Google Maps Transit

Home Cities Covered

From

Enter a location

To

Enter a location

Get Directions

Options

Any transit mode

Best route

If you provide a transportation service that is open to the public, and operates with fixed schedules and routes, we welcome your participation - it is simple and free.

Join Transit Partner Program



Google

Map data ©2016 | Terms of Use

Re: Dados abertos GTFS



From: [SAC - Consórcio Fênix <sac@consorciofenix.com.br>](mailto:sac@consorciofenix.com.br)
To: [Torsten Grote <t@grobox.de>](mailto:t@grobox.de)
Date: 24.11.15 09:21

Prezado,

Não, ainda não existe relação de horários, junto com pontos de partidas e rotas em formato GTFS - o que seria um investimento, uma vez que a hospedagem no Google Transit é cobrada. Ainda sim, o Consórcio terá sua própria base de apoio com estas informações com a criação do Sistema de Ajuda à Operação (SAO), que funcionará nas instalações do Centro de Controle Operacional (CCO). O SAO será o cérebro do sistema, fornecendo informações em tempo real para os smart phones, tablets e computadores pessoais dos usuários.

As principais informações serão:

- a) em que ponto está o ônibus que o usuário está interessado;
- b) que horas o ônibus irá passar no ponto desejado e
- c) as condições de tráfego

O SAO depende da construção do CCO para sua instalação e os projetos já foram encaminhados à Prefeitura. O Consórcio Fênix aguarda a concessão dos alvarás e licenças para iniciar a obra, cujo prazo de conclusão é de 360 dias. Uma vez concluída a obra, entra em operação um projeto-piloto e depois será estendido para toda a frota.

Estamos à disposição para maiores informações.

Att.,

Filename	Required	Defines
agency.txt	Required	One or more transit agencies that provide the data in this feed.
stops.txt	Required	Individual locations where vehicles pick up or drop off passengers.
routes.txt	Required	Transit routes. A route is a group of trips that are displayed to riders as a single service.
trips.txt	Required	Trips for each route. A trip is a sequence of two or more stops that occurs at specific time.
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buscar horário e itinerário da linha

selecione a linha

busque por número, nome, rua ...



horários

Linhas Alimentadora TICAN

- > 276 - Balneário Canasvieiras
- > 277 - Balneário Ingleses
- > 280 - Cachoeira - TICAN
- > 260 - Cachoeira do Bom Jesus
- > 291 - Canasvieiras/Jurerê
- > 261 - Capivari via Graciliano Gomes
- > 262 - Circular Canasvieiras
- > 285 - Circular Moçambique
- > 281 - Costa do Moçambique
- > 250 - Forte/Canasvieiras
- > 263 - Gaivotas
- > 264 - Ingleses
- > 265 - Ponta das Canas
- > 266 - Praia Brava
- > 267 - Rio Vermelho
- > 274 - Rio Vermelho via Muquém
- > 268 - Sítio de Baixo
- > 269 - Travessão via Rua Alzira Rosa Aguiar
- > 284 - Travessão via Rua da Intendência
- > 283 - Vargem do Bom Jesus
- > 270 - Vargem Grande
- > 282 - Vargem Pequena

Linhas Alimentadora TICEN

- > 665 - Abraão
- > 762 - Angelo Laporta
- > 660 - Aracy Vaz Callado
- > 844 - Bairro de Fátima
- > 661 - Balneário
- > 763 - Caeira do Saco dos Limões
- > 631 - Capoeiras
- > 632 - Capoeiras via Ivo Silveira
- > 151 - Centro Administrativo via Beira Mar Norte
- > 156 - Centro Administrativo via Mauro Ramos
- > 772 - Chico Mendes
- > 101 - Circular Centro
- > 663 - Coloninha
- > 630 - Corredor Continental
- > 183 - Corredor Sudoeste
- > 186 - Corredor Sudoeste Semidireto
- > 153 - Costeira do Pirajubaé
- > 664 - Itaguaçu
- > 670 - Monte Cristo
- > 764 - Monte Serrat
- > 160 - Morro da Cruz
- > 161 - Morro da Penitenciária
- > 765 - Morro da Queimada
- > 766 - Morro do 25
- > 760 - Morro do Geraldo
- > 768 - Morro do Horácio via Mauro Ramos
- > 769 - Morro Nova Trento
- > 460 - Porto da Lagoa
- > 667 - Promorar

Linhas Alimentadora TILAG

- > 360 - Barra da Lagoa
- > 362 - Canto dos Araças
- > 363 - Joaquina
- > 364 - Osni Ortiga

Linhas Alimentadora TIRIO

- > 561 - Caieira da Barra do Sul
- > 566 - Caieira via Tapera
- > 462 - Campeche
- > 472 - Campeche via Capela
- > 463 - Castanheiras via Eucaliptos
- > 464 - Castanheiras via Gramal
- > 562 - Costa de Cima
- > 563 - Costa de Dentro
- > 473 - Morro das Pedras via Eucaliptos
- > 474 - Morro das Pedras via Gramal
- > 564 - Pantano do Sul
- > 565 - Ribeirão da Ilha
- > 469 - Tapera / Rio Tavares

Linhas Alimentadora TISAN

- > 181 - Cacupé/João Paulo
- > 940 - Canasvieiras Santo Antônio via Jurerê
- > 273 - Circular Ratones
- > 271 - Daniela
- > 272 - Jurerê
- > 365 - Sambagui

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Domingo - Saída TIRIO - Terminal Integração Rio Tavares

05:50	06:25	07:00
09:45	10:30	11:15
14:15	15:00	15:45
18:45	19:33	20:15
22:55	23:40	00:20R

Itinerário

1. TIRIO - TERMINAL DE INTEGRAÇÃO DO RIO TAVARES
2. ROD. GOVERNADOR ADERBAL RAMOS DA SILVA (SC 405)
3. AV. PEQUENO PRÍNCIPE
4. AV. CAMPECHE
5. ROD. DOUTOR ANTÔNIO LUIZ MOURA GONZAGA (SC 406)
6. RUA SILVIO LOPES ARAÚJO (PONTO FINAL)

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6. RUA SILVIO LOPES ARAÚJO (PONTO FINAL)

Should be left blank for stops without a name.

stop_name	Required	The stop_name field contains the name of a stop or station. Please use a name that people will understand in the local or tourist vernacular.
stop_desc	Optional	The stop_desc field contains a description of a stop. Please provide useful, quality information. Do not simply duplicate the name of the stop.
stop_lat	Required	The stop_lat field contains the latitude of a stop or station. The field value must be a valid WGS 84 latitude.
stop_lon	Required	The stop_lon field contains the longitude of a stop or station. The field value must be a valid WGS 84 longitude value from -180 to 180.
zone_id	Optional	The zone_id field defines the fare zone for a stop ID. Zone IDs are required if you want to provide fare information using fare_rules.txt . If this stop ID represents a station, the zone ID is ignored.
stop_url	Optional	The stop_url field contains the URL of a web page about a particular stop. This should be different from the stop name.

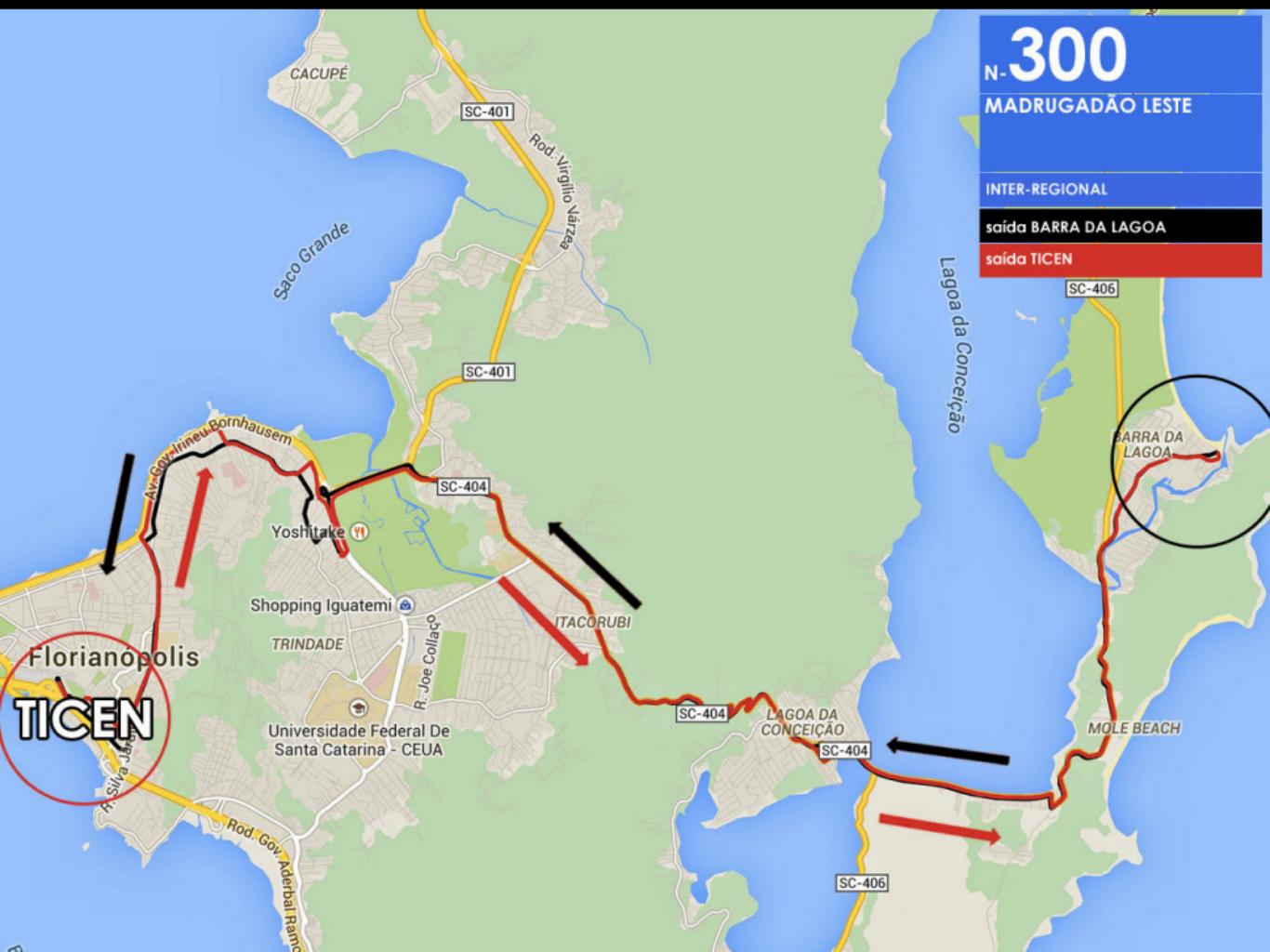
N-300

MADRUGADÃO LESTE

INTER-REGIONAL

saída BARRA DA LAGOA

saída TICEN





Edit feature

X

Point

Line

Area

Save

Bus Stop

All fields

▼ All tags (4)

bench	yes
highway	bus_stop
name	Rua Deputado Antônio César Viana
shelter	yes

+

▼ All relations (5)

Bus Route Ônibus 138: Volta ao Morro Pantanal Sul

platform

Bus Route Ônibus 847: TIPPI >> TITPI

platform

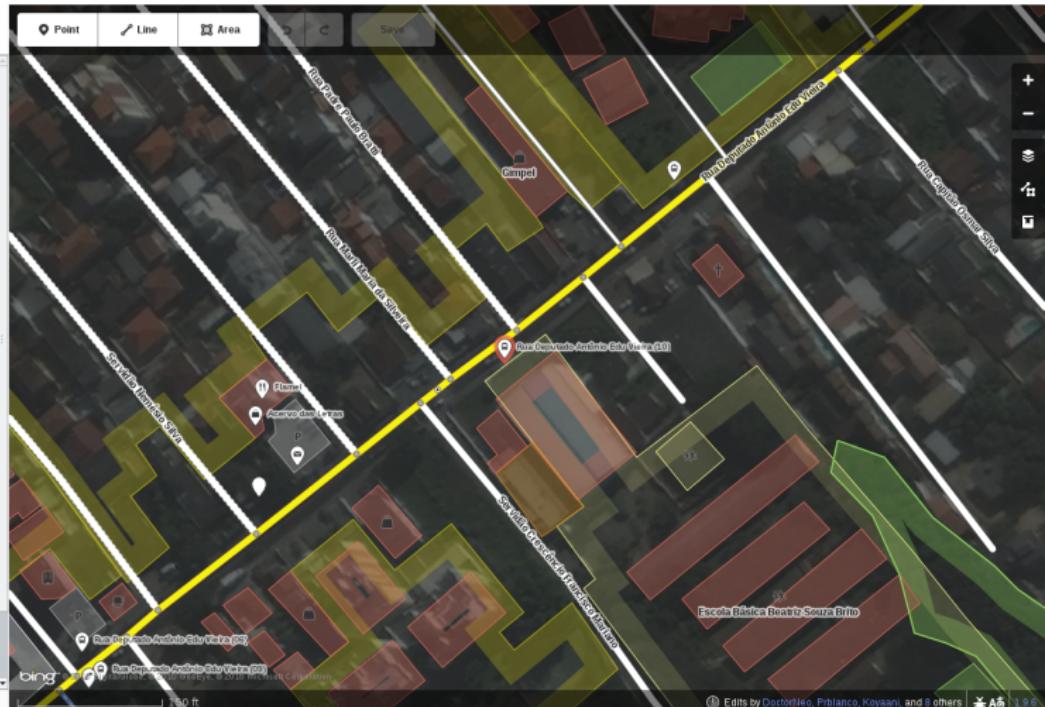
Bus Route Ônibus 943: Saco dos Limões-Trindade

platform

Bus Route Ônibus 154: UFSC Semidireto - Saída Sul

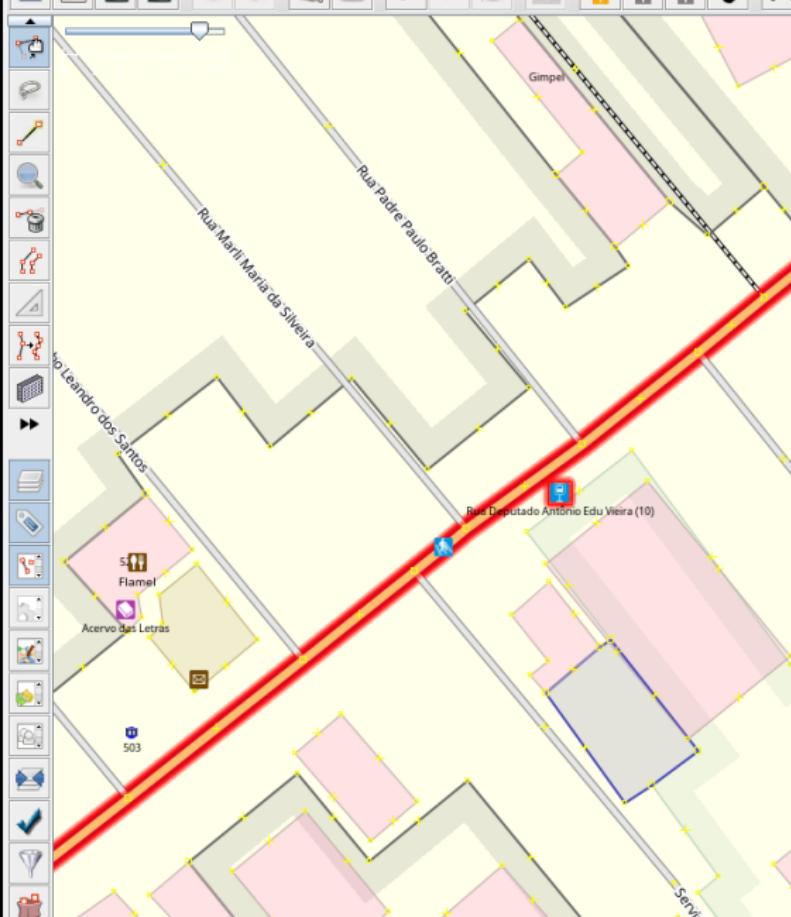
platform

Bus Route Ônibus 944: Saco dos Limões-Trindade via Madre Benvenuta

[View on openstreetmap.org](#)

Java OpenStreetMap Editor

File Edit View Tools Data Selection Presets Imagery Windows Audio Help



Layers

Data Layer 1

Tags: 4 / Memberships: 5

Transport/Public Transport (Legacy)/Bus Stop ...

Key	Value
bench	yes
highway	bus_stop
name	Rua Deputado Antônio Edu ...
shelter	yes

Member Of	Role	Position
route ("Ônibus 138: Volta ao Morro ...	platform	17
route ("Ônibus 154: UFSC Semidirec...	platform	6
route ("Ônibus 847: TIRIÓ => TITRI...	platform	26
route ("Ônibus 943: Saco dos Limõ...	platform	23
route ("Ônibus 944: Saco dos Limõ...	platform	29

+ Add

Edit

Delete

Sel.: Rel.:0 / Ways:0 / Nodes:1

Rua Deputado Antônio Edu Vieira (10) (-27.60993,

Run Share Export

Wizard

Save

Load

Settings

Help

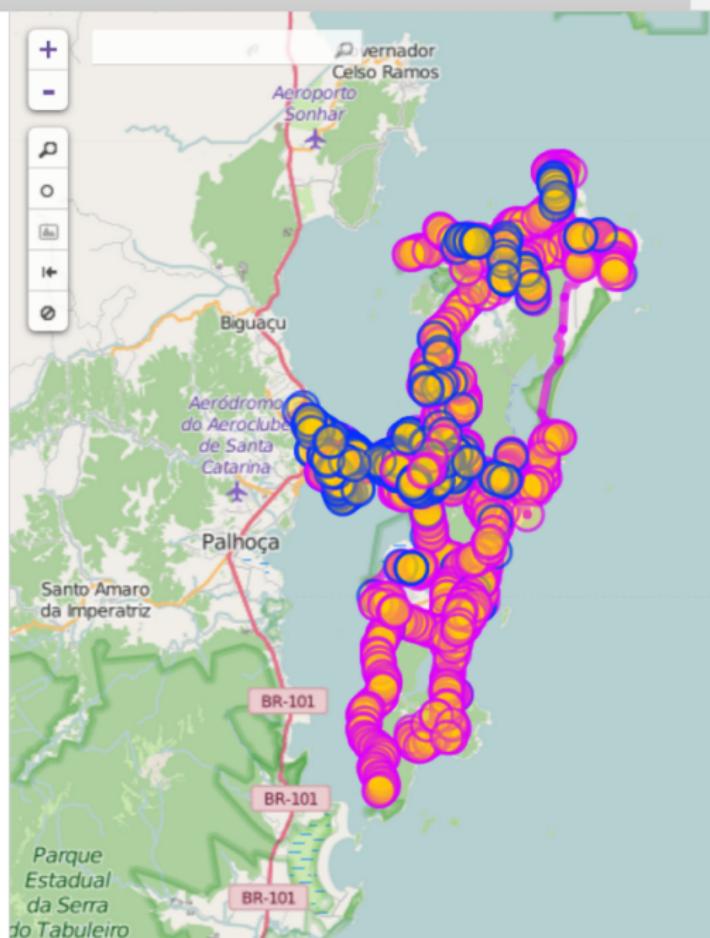
overpass turbo

Flattr this

Map

Data

```
1 <query type="relation">
2   <has-kv k="route" v="bus"/>
3   <bbox-query
4     e="-48.27" n="-27.21"
5     s="-27.94" w="-49.01"/>
6   </bbox-query>
7 </query>
8 <union>
9   <item/>
    <recurse type="down"/>
</union>
<print/>
```





google / transitfeed

[Code](#)[Issues 144](#)[Pull requests 4](#)[Wiki](#)[Pulse](#)[Graphs](#)

A Python library for reading, validating, and writing transit schedule information in the GTFS format.

372 commits

1 branch

30 releases

Branch: **master** ▾[New pull request](#) **bdferris** Bump version to 1.2.15 for new release.

examples

Remove references to code.google.com and googletransitdatafeed.

extensions

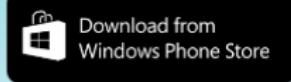
Remove references to code.google.com and googletransitdatafeed.

gtfscheduleviewer

Fix bug in stop marker position update code introduced in move from v

misc

Remove references to code.google.com and googletransitdatafeed.



Operadora integrante do SIM

sim SISTEMA
INTEGRADO DE
MOBILIDADE

 consórcio.fênix

osm2gtfs

<https://github.com/grote/osm2gtfs>



Key:

web service

service

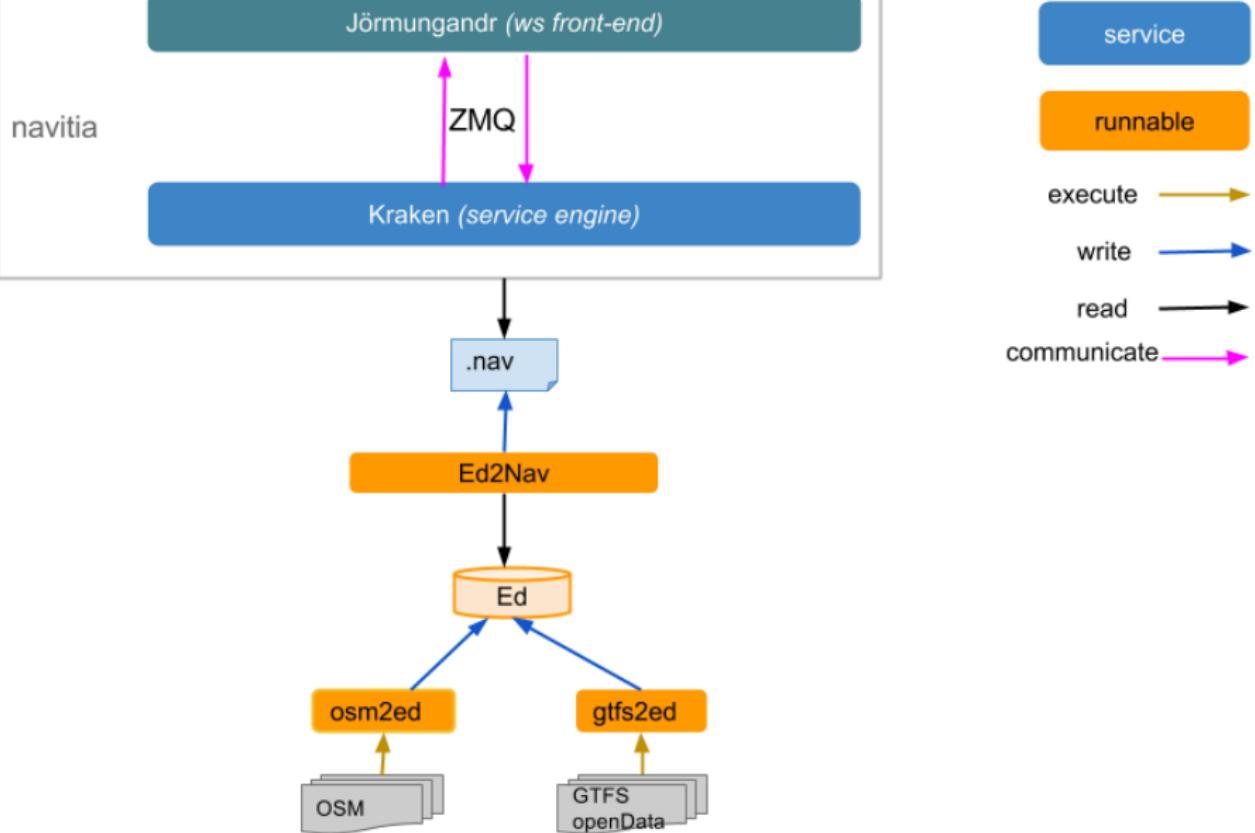
runnable

execute →

write →

read →

communicate →



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185 - UFSC - Semidireto

Característica: Alimentadora TICEN

Tempo de percurso : 00:46aproximado

Alterada em: 14/03/2016

[Exibir Itinerário](#)

Tarifa - Região Única

Cartão: R\$ 3,34

Dinheiro: R\$ 3,50

[Exibir Mapa](#)

Legenda

D Veículo Adaptado para Cadeirante

Próximo horário

Dias Úteis - Saída TICEN - Plataforma A lado 2

06:00

06:09

06:18**D**

06:27

06:34

06:42



Transportr

Florianópolis



23:16 Rua Tomaz Ramos



1:25

00:42 TICEN - Terminal Centro



^
▼

00:12 Rua Tomaz Ramos



1:24

01:37 TICEN - Terminal Centro



^
▼

01:51 Rua Tomaz Ramos



0:45

02:37 TICEN - Terminal Centro



^
▼

03:51 Rua Tomaz Ramos



0:45

04:37 TICEN - Terminal Centro





23:16 Rua Tomaz Ramos



67 m

0:01

23:17 Rua Altamiro Barcelos Dutra (12)

23:17 Rua Altamiro Barcelos Dutra (12)



360

Barra da Lagoa

23:41 TILAG - Terminal de Integração da Lagoa da Conceição

00:00 TILAG - Terminal de Integração da Lagoa da Conceição



330

TILAG - TICEN via Mauro Ramos

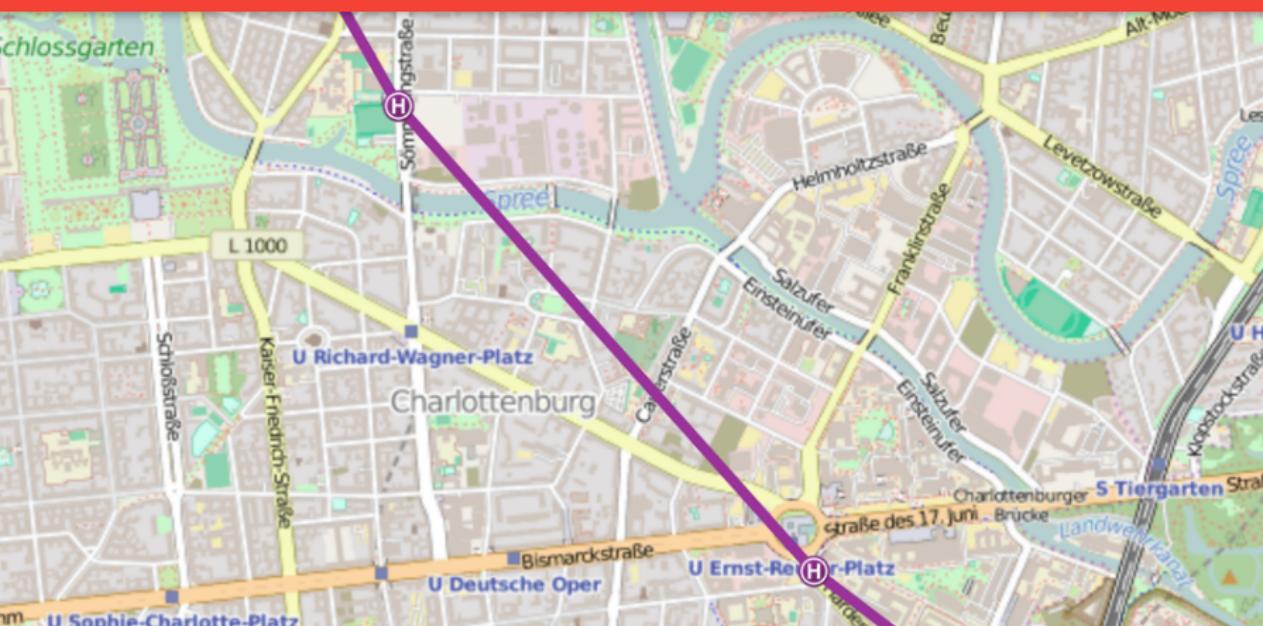
00:42 TICEN - Terminal Centro

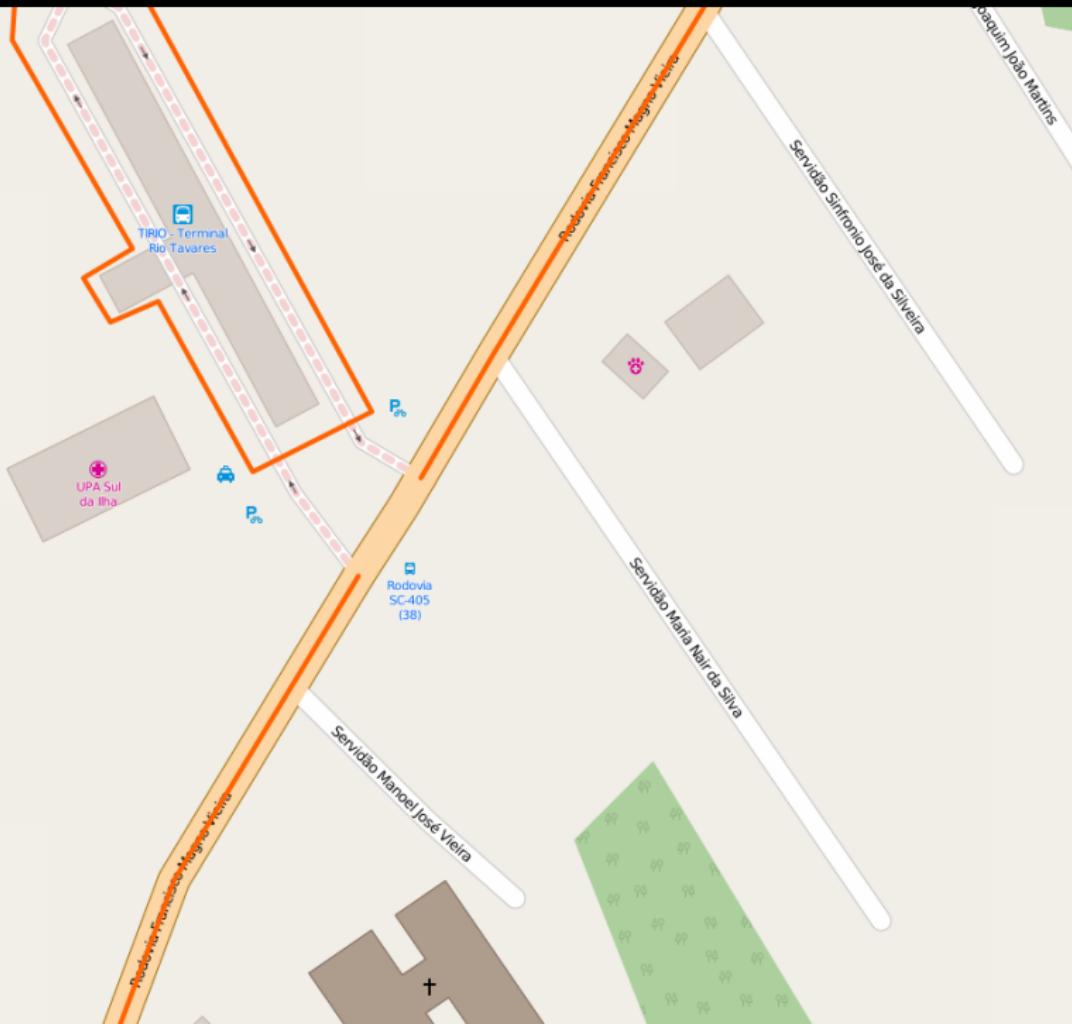
calendar_dates.txt	Optional	Exceptions for the service IDs defined in the calendar.txt file. If calendar_dates.txt includes ALL dates of service, this file may be specified instead of calendar.txt.
fare_attributes.txt	Optional	Fare information for a transit organization's routes.
fare_rules.txt	Optional	Rules for applying fare information for a transit organization's routes.
shapes.txt	Optional	Rules for drawing lines on a map to represent a transit organization's routes.
frequencies.txt	Optional	Headway (time between trips) for routes with variable frequency of service.
transfers.txt	Optional	Rules for making connections at transfer points between routes.
feed_info.txt	Optional	Additional information about the feed itself, including publisher, version,

13:37



Transportr BVG

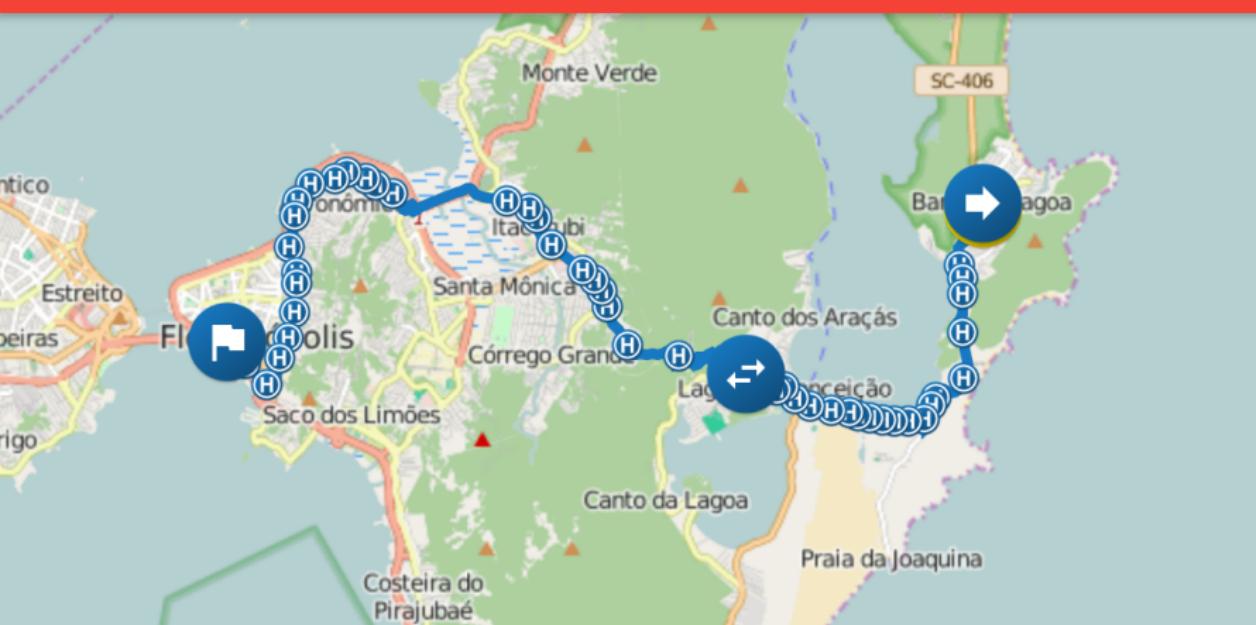




13:37



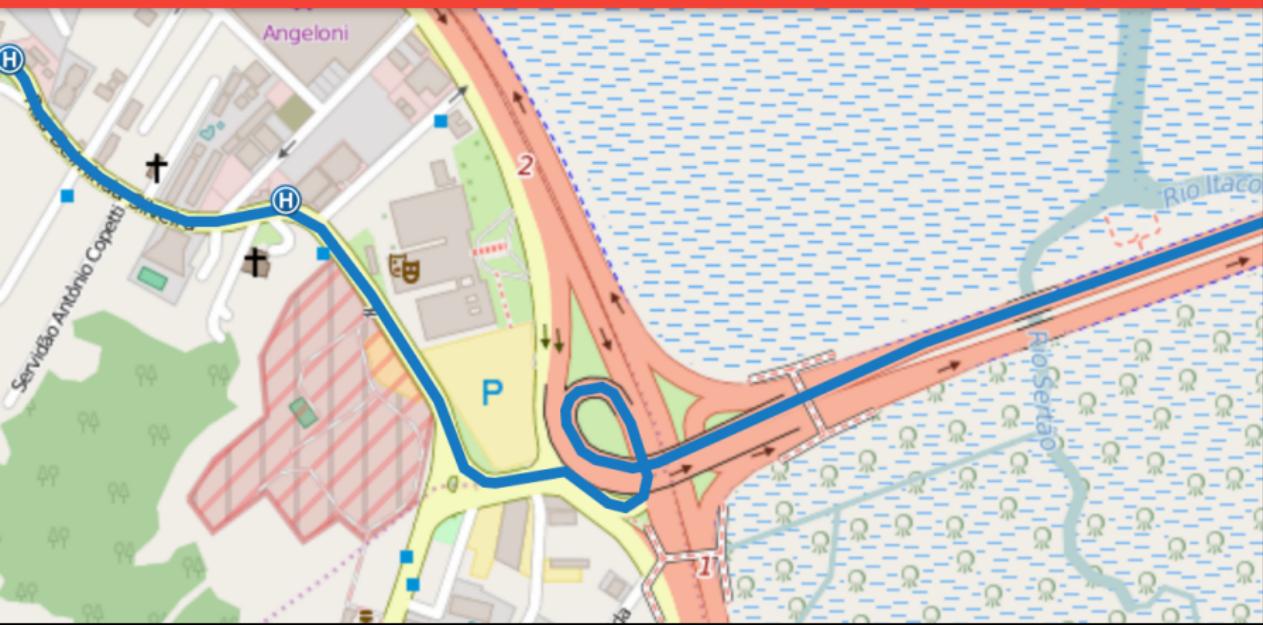
Transportr Florianópolis



13:37



Transportr Florianópolis



Take Home

1. Ask

2. Reuse

3. Persist

Take Home

1. Ask

2. Reuse

3. Persist

Take Home

1. Ask

2. Reuse

3. Persist

Take Home

1. Ask
2. Reuse
3. Persist



<https://transportr.grobox.de>

<https://github.com/grote/osm2gtfs>

Oficina

Abra seu transporte público

com OpenStreetMap e Transportr

Sexta-feira 15/07 12:00

Oficina Luiz Osório Waldow

Obrigado!

Perguntas?

Obrigado!

Perguntas?