

What is New in PostgreSQL 9.1

OpenStreetMap State Of The Map 2011

Denver



CC-BY-SA

Steve Singer
ssinger_pg@sympatico.ca

About Steve

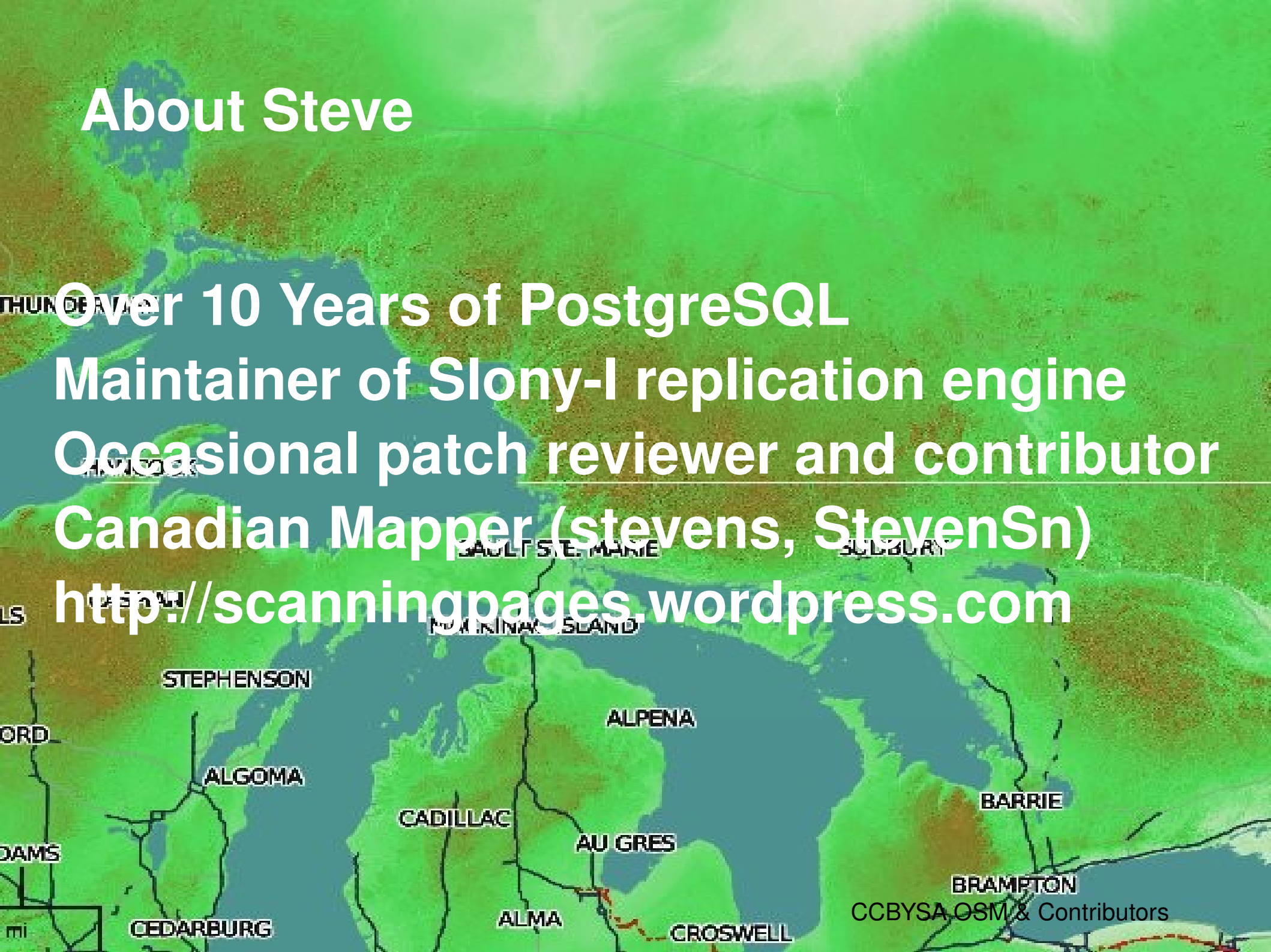
Over 10 Years of PostgreSQL

Maintainer of Slony-I replication engine

Occasional patch reviewer and contributor

Canadian Mapper (stevens, StevenSn)

<http://scanningpages.wordpress.com>

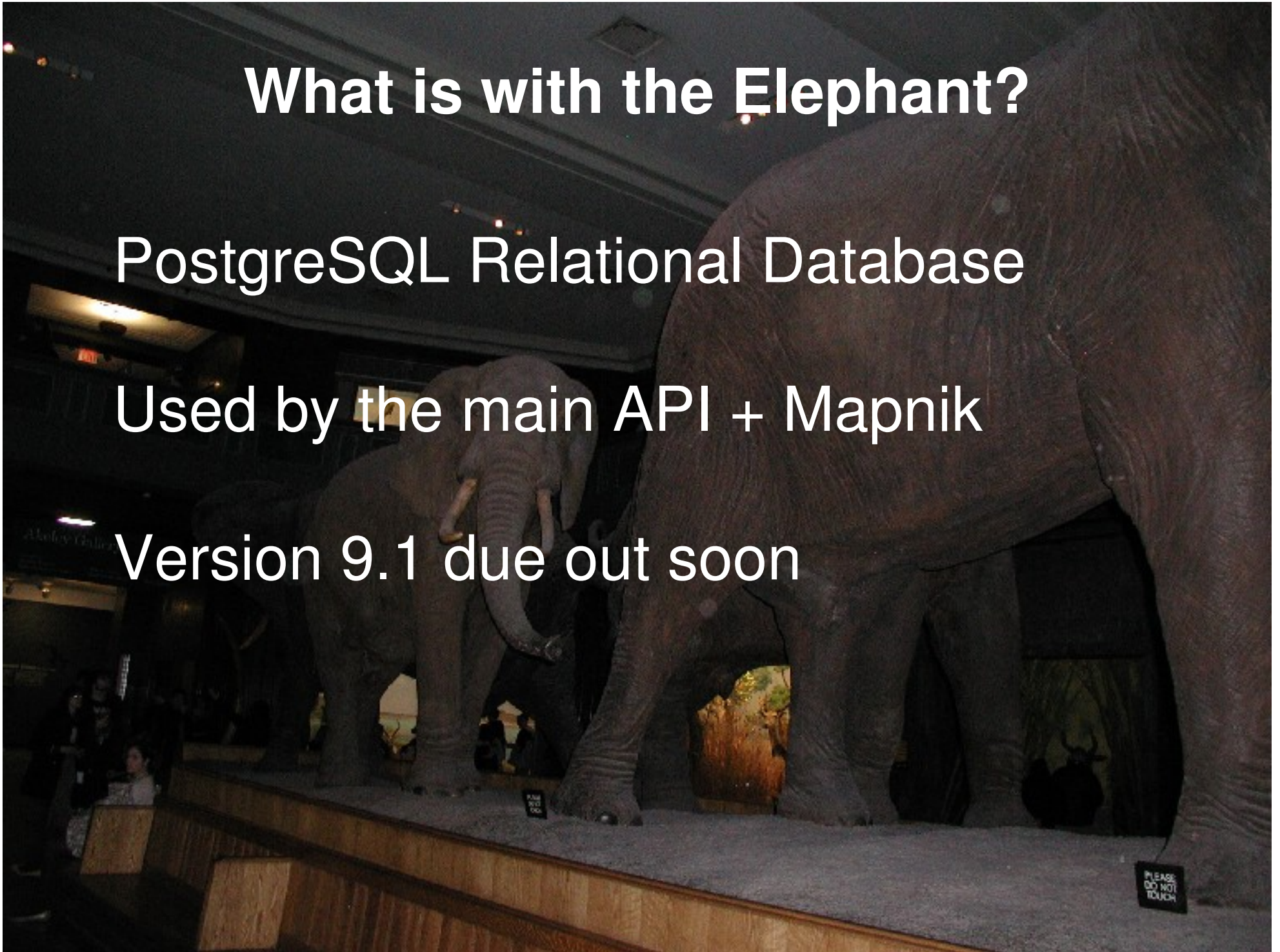


What is with the Elephant?

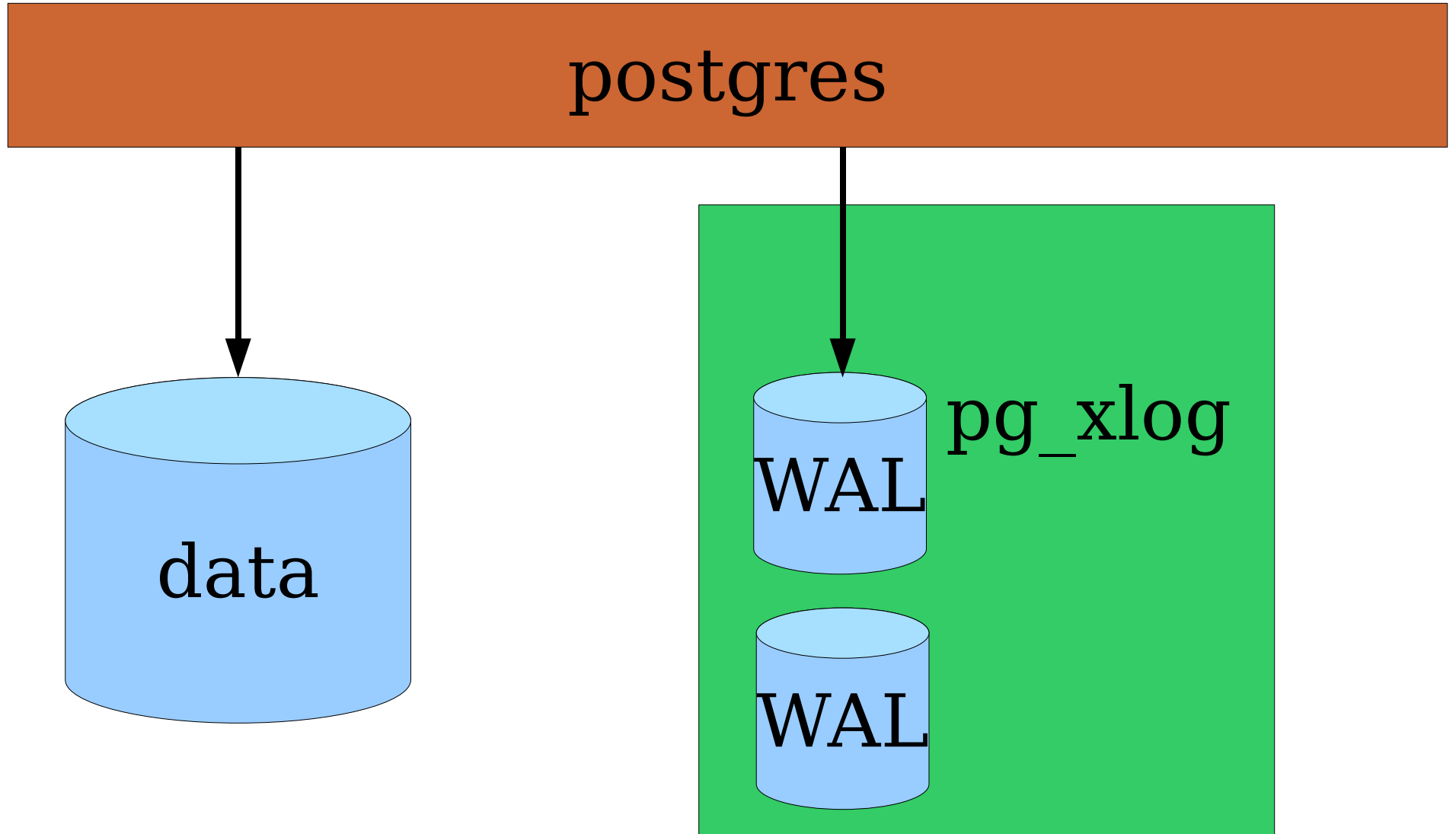
PostgreSQL Relational Database

Used by the main API + Mapnik

Version 9.1 due out soon

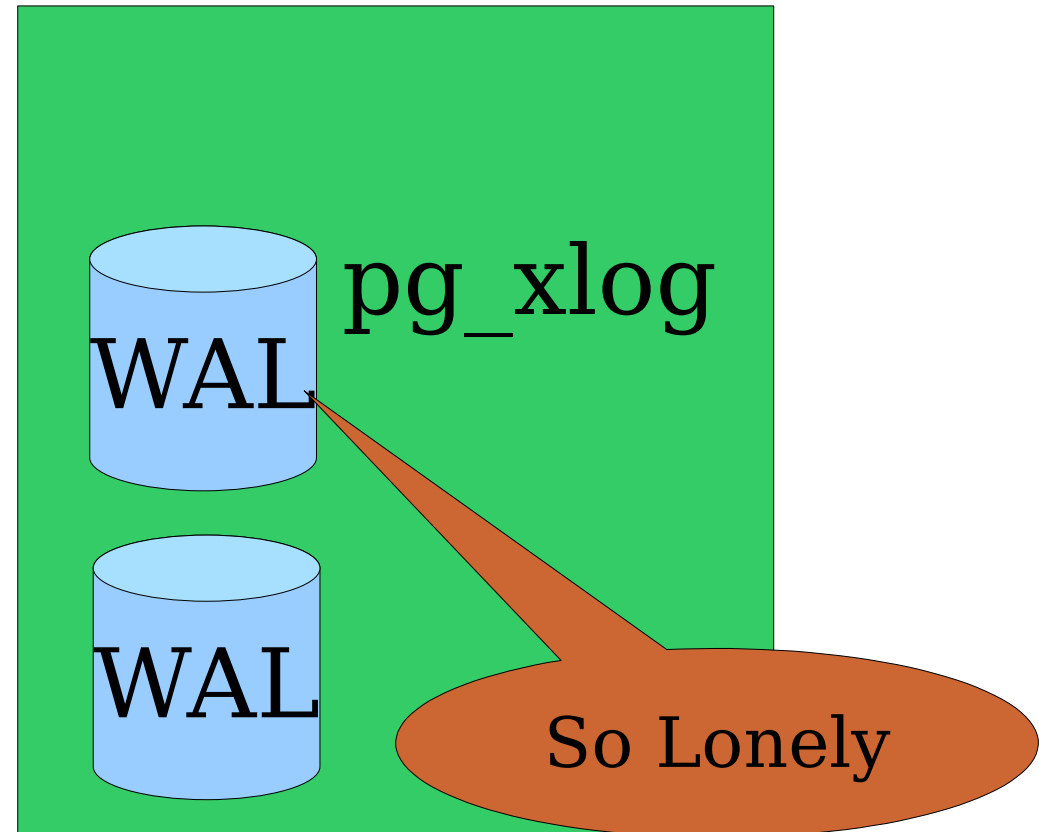
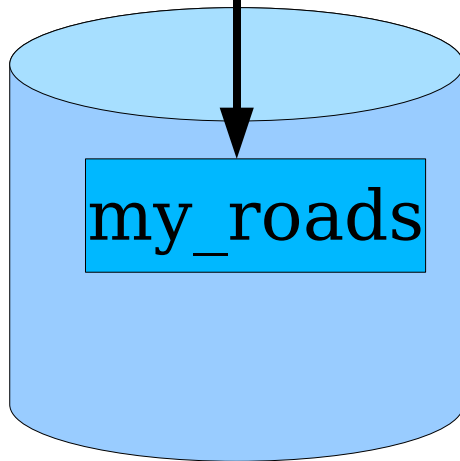


Unlogged Tables



Unlogged Tables

postgres



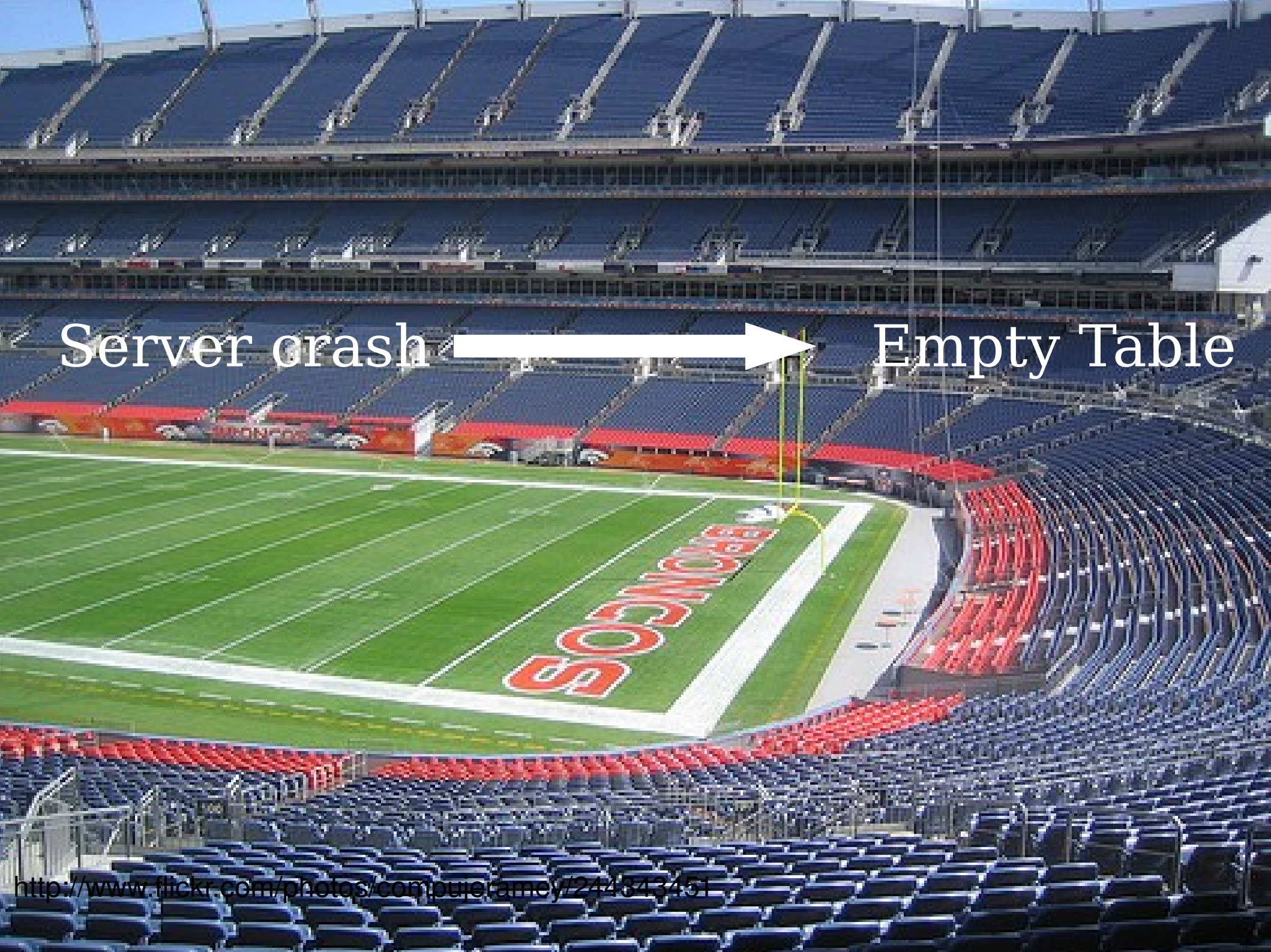
A close-up photograph of several stacked logs, showing the circular cross-sections of the wood. The wood has a warm, golden-brown hue with visible growth rings and a slightly rough, weathered texture. The logs are piled together, creating a dense, textured background.

```
CREATE UNLOGGED TABLE my_roads
AS SELECT osm_id FROM planet_osm_ways
WHERE .....
```

Server crash



Empty Table





CAUTION

GIST Indexes
Not Supported

Extensions



Installing Extensions

```
CREATE EXTENSION hstore;
```

Extensions

PL

PL/Python
PL/Perl
PL/TCL

contrib

hstore
pg_buffercache
intagg
intarray

.

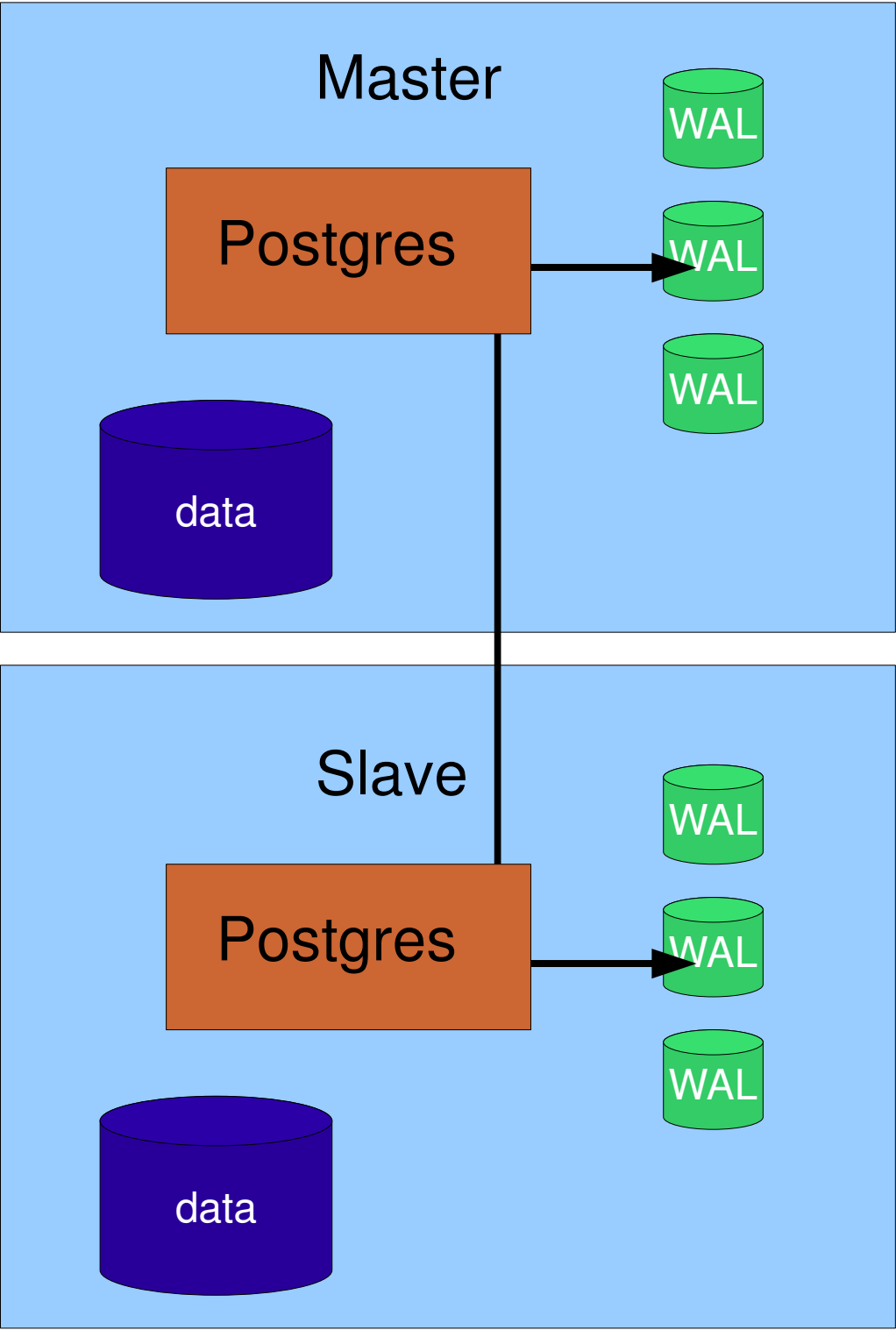
<http://www.pgxn.org>

Amazon S3 fdw
PI/Parrot
.
.

Other (not yet extensions)

postgis
PL/R

Synchronous Replication



Per Column Collations

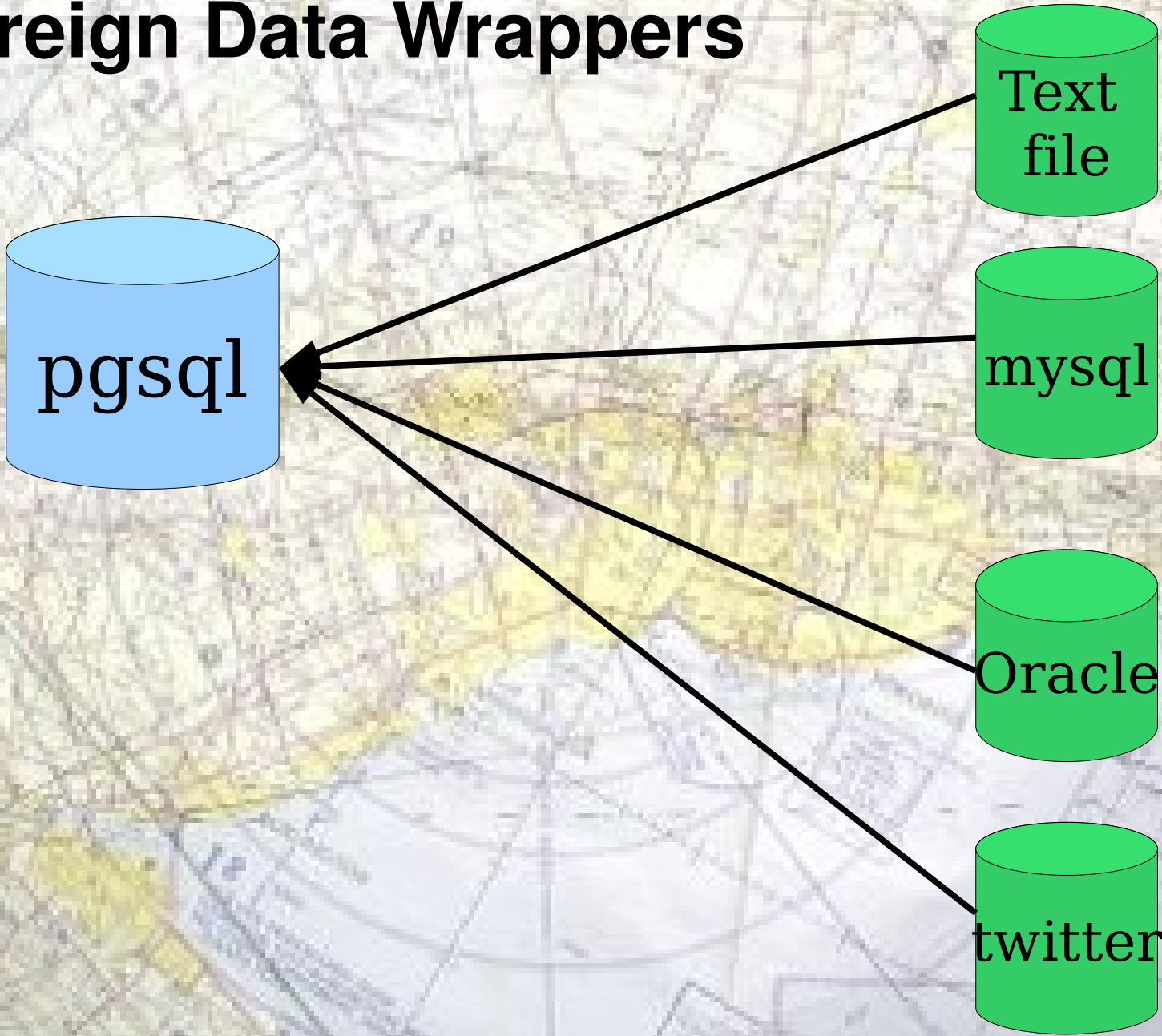
city			
id	name_en	name_sr	
1	London	London	
2	Ljubljana	Ljubljana	

```
select * FROM city order by name_en;
id | name_en | name_sr
----+-----+-----
  2 | Ljubljana | Ljubljana
  1 | London | London
(2 rows)
```

```
select * FROM city order by name_sr;
id | name_en | name_sr
----+-----+-----
  1 | London | London
  2 | Ljubljana | Ljubljana
(2 rows)
```

```
create table city (  
    id int4,  
    name_en text collate "en_CA.utf8",  
    name_sr text collate "sr_RS.utf8"  
);
```

Foreign Data Wrappers



pubs.txt

Ale & Tale,48.1627705,7.3167324
Elephant & Meat,8.05131,-71.97998
Cat & Mouse,36.4478892,127.31703

mapdata



```
CREATE EXTENSION file_fdw;

CREATE SERVER file_fdw_server
  FOREIGN DATA WRAPPER file_fdw;

CREATE FOREIGN TABLE pubs
  (name text,
   lat float,
   lon float)
  server file_fdw_server
  OPTIONS
  (filename '/tmp/pubs.txt',
   delimiter ',');
```

```
select * FROM pubs;
```

name	lat	lon
Ale & Tale	48.1627705	7.3167324
Elephant & Meat	8.05131	-71.97998
Cat & Mouse	36.4478892	127.31703

(3 rows)

Wrappers Available

Oracle

ODBC

mysql

couchdb

redis

Twitter

files

LDAP

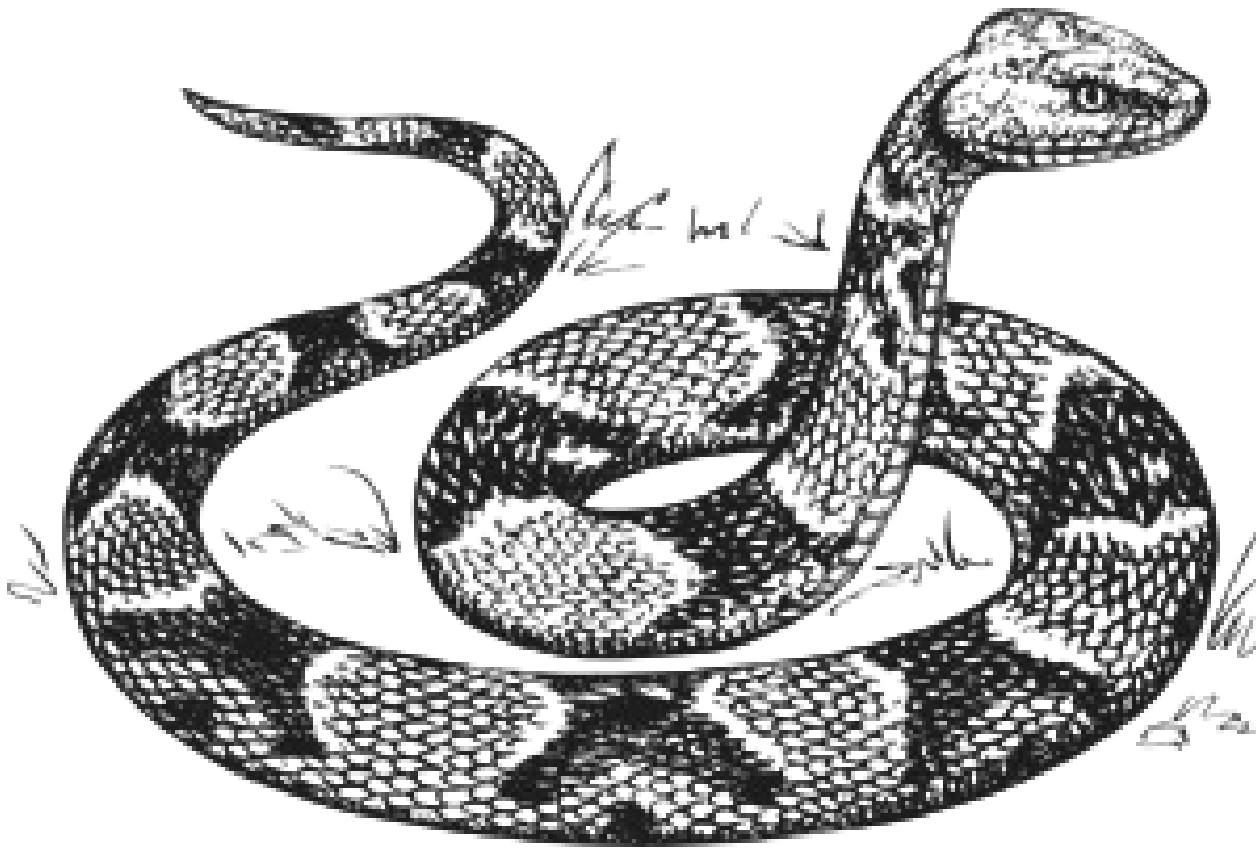
http://wiki.postgresql.org/wiki/Foreign_data_wrappers

Someone in this room might create?



ESRI Shapefile

PL/Python



Explicit Subtransactions

```
CREATE FUNCTION addtag(id) RETURNS void AS
$$
try:
    x=1
    Plan = plpy.prepare("INSERT INTO
tag(id,name,value) VALUES ($1,$2,$3),
["integer","text","text"]);
    while x < 10:
        with plpy.subtransaction():
            plpy.execute(plan,[id,'type_'
x,"foo"]);
            x=x+1
        except spiexceptions.UniqueViolation:
            x=x+1
$$ LANGUAGE plpythonu;
```

More Python Features

Syntax checking at CREATE FUNCTION time

Traceback information

Multiple OUT parameters

Scenic Attractions

K-Nearest Neighbour Indexing	5 KM
Primary Keys from existing index	24 KM
True Serializability	30 KM
Triggers on Views	38 M
SE Linux Support	80 KM

Release RoadMap

Release Candidate 1 / Aug 2011

Final Release Sept 12 2011



See <http://www.postgresql.org> for the latest news