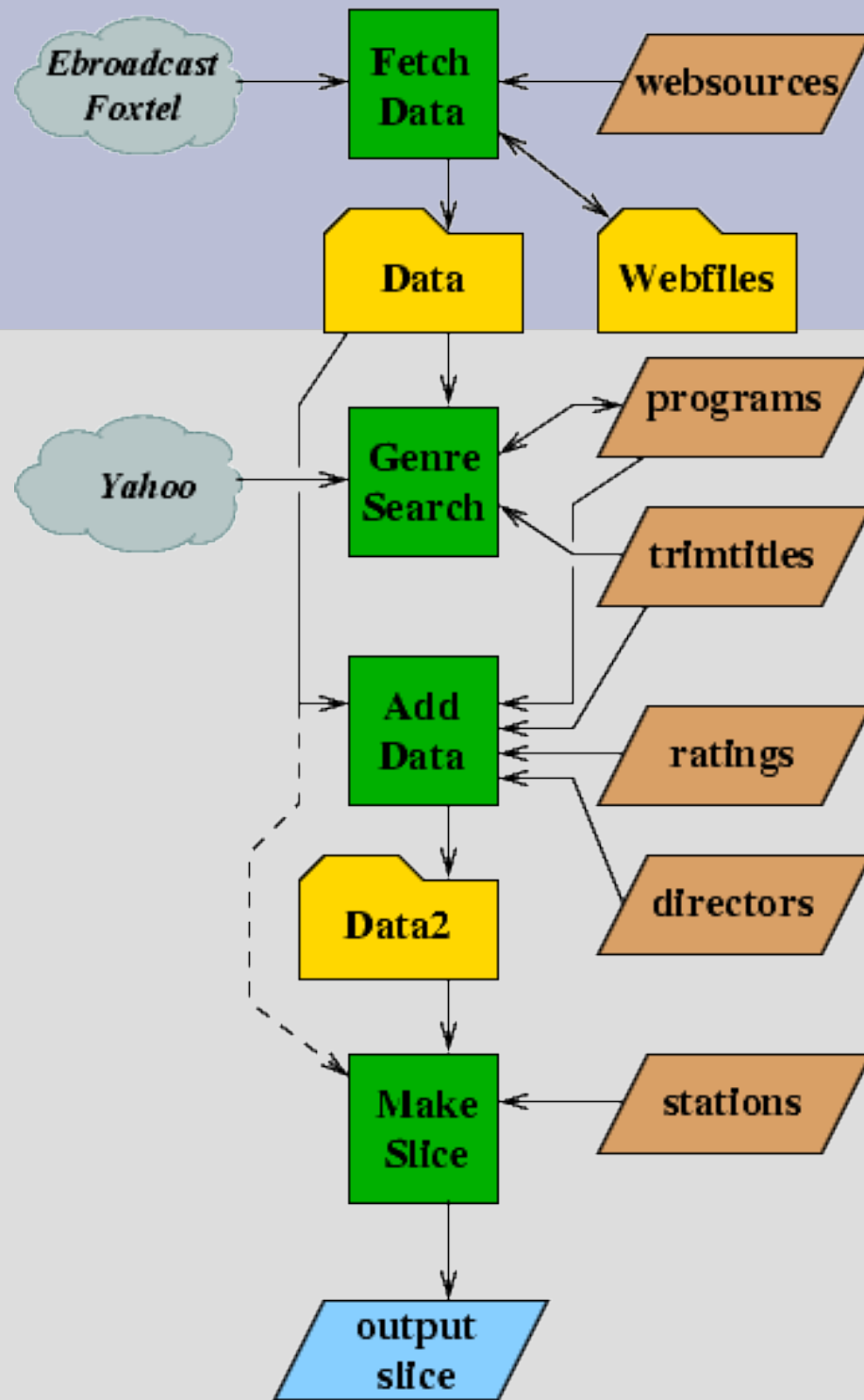# The Australian Community-Driven TV Guide

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The Guide provides Series 1 TiVos and other PVR devices with TV guide data for both FTA and Pay TV stations. The content is created and maintained by the community.

A Brief History

- Initially created to provide guide data for the US Series 1 TiVos being imported in 2001 onwards
- First two versions: simple Perl scripts, text file data stores, designed to provide guide data for a single "OzTiVo" box.
- Third version: more sophisticated, intelligence added to deal with inconsistent input data

Ebroadcast
Foxtel

Fetch
Data

websources

Data

Webfiles

Yahoo

Genre
Search

programs

trimtitles

Add
Data

ratings

Data2

directors

Make
Slice

stations

output
slice

Data Inconsistencies

- Data was originally scraped from several web sites. Data issues included:
- Misspellings of show titles
- No length or end times: these have to be deduced by the next start time
- Shows broken across midnight or 6am, i.e. when one day's web data ends
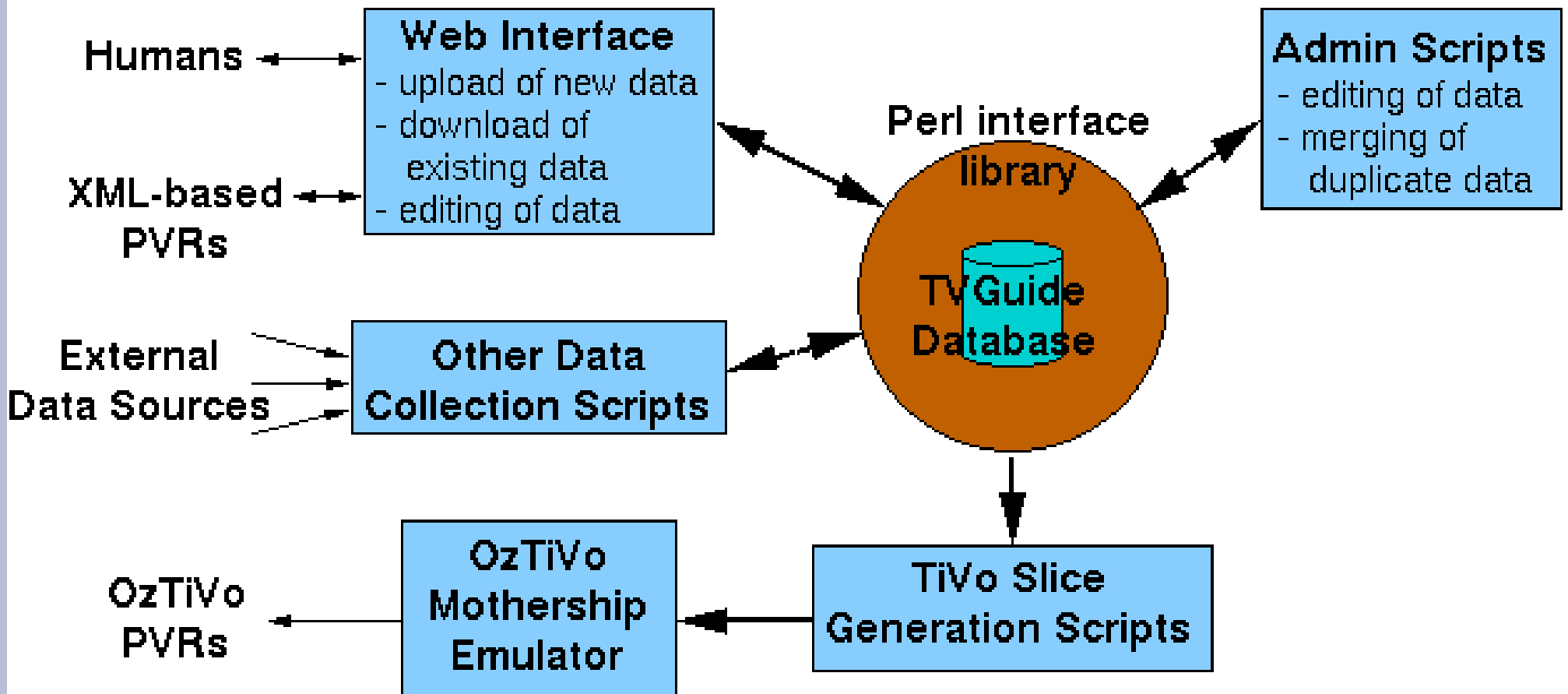- No "genre" information about shows. Little of no indication of episodic or one-off etc.

V3: Rise and Fall

- By 2003/2004, enough OzTiVos that there was demand that a central site scrape, massage data & roll guide "slices"
- Scaling up showed large weaknesses, especially in the use of text files for data storage, but also in other areas
- Once we were rolling out guide slices, HWW asked us to cease scraping from the web sites they supply data to, i.e. most of the main Australian TV websites

V4: Modular + Database

- 4th version rewritten from scratch in 2005/2006. Much more modular, with a database & many tables.
- Various phases now separated.
- Web frontend introduced to visualise guide data
- Data upload format defined, so users can add data which has not been scraped
- Better code for time issues, to deal with multiple programs with the same title

Internal Structure

Main Phases of Operation

- Ongoing: upload of new data by users, editing of existing data via web interface
- Daily: fill in data gaps via web fetches
- Fill gaps, add directors and star ratings
- Creation of data for each lineup, in both OzTiVo slice format and in XMLTV format
- Convert slices into binary format, compress and move slices and XML data into web area to be downloaded
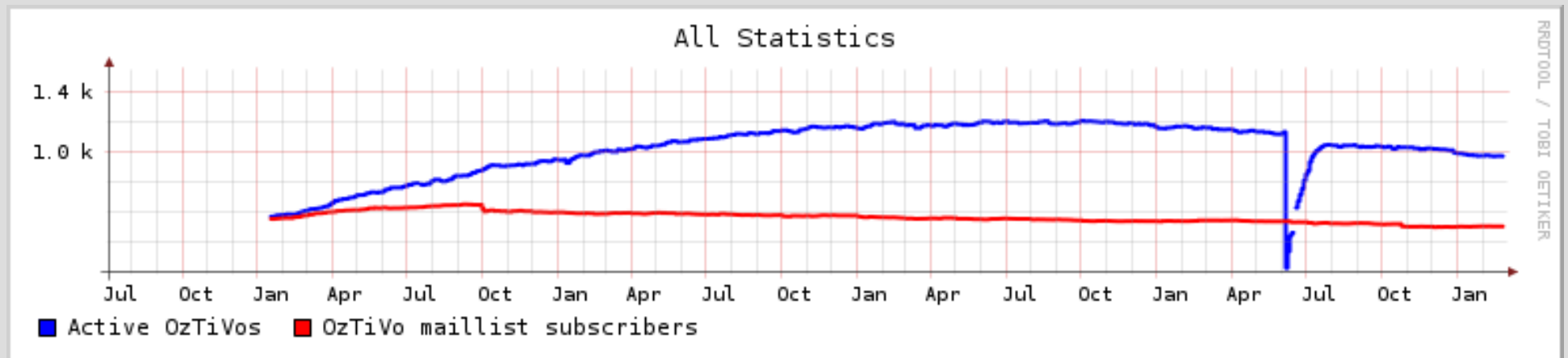
What's a Station? What's a Lineup?

- A *station* is a source of TV content transmitting in a specific timezone
- A *channel* is where the TV content is received, possibly in another timezone
- A *lineup* is a set of channels which can be received by FTA or Pay TV in a specific region
- At present, we have 280 stations and 110 lineups
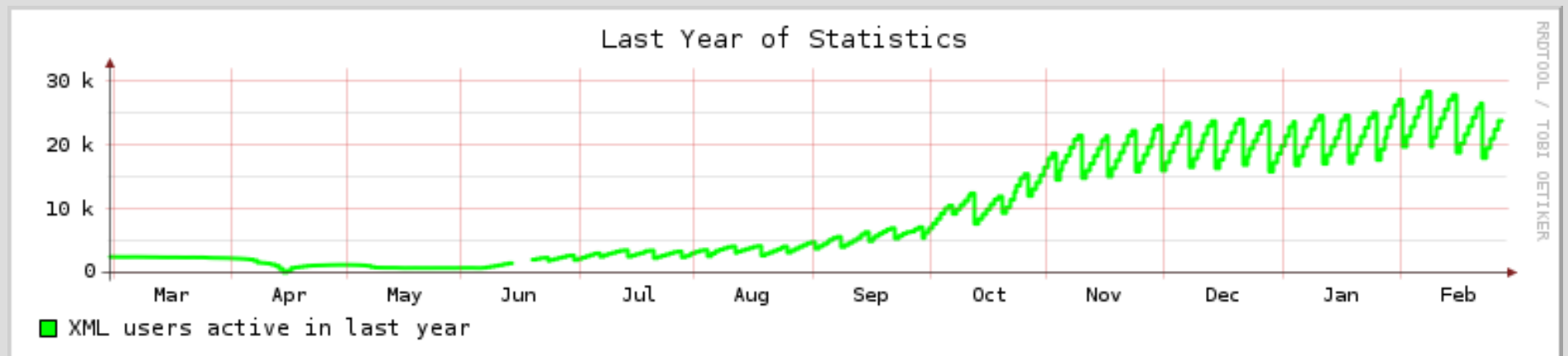
V5: More Tables, Web 2.0

- Maintenance & development transitioned to Kevin Lentin + a few others in 2007: thanks Kevin!!!
- Javascript, some AJAX, more data heuristics, more database tables to drive the heuristics
- In 2008, we started to provide data in XML format to XMLTV and similar. They are now the bulk of the end-users.
- But, only a handful of people actually upload and guide data :-(

Recent Statistics

Graph of OzTiVo numbers since Jan 2006

Graph of XML users in the last 12 month

Lessons Learned

- MVC: separate UI from code, separate data stores from code, separate specific logic from data semantics
- Don't hardwire logic either, write "table-driven" logic: allows non-programmers ability to alter program behaviour
- Don't use local time, use UT and map to timezones where appropriate
- Web data is **ALWAYS** dirty, and the level & type of dirt varies with time!

Questions?