PostgreSQL: Past, Present, and Future

BRUCE MOMJIAN,
SOFTWARE RESEARCH ASSOCIATES

July, 2003

SRA®
Software Research Associates, Inc.

Abstract

POSTGRESQL has deep roots, a wide user base, and a bright future.

PostgreSQL Past

The University of California at Berkeley

Postgres

Michael Stonebraker

Postgres95

Jolly Chen and Andrew Yu

PostgreSQL Code Base History

- Ingres — research prototype, spawned Relational Technologies, purchased by Computer Associates

- Postgres — research prototype, spawned Illustra, purchased by Informix

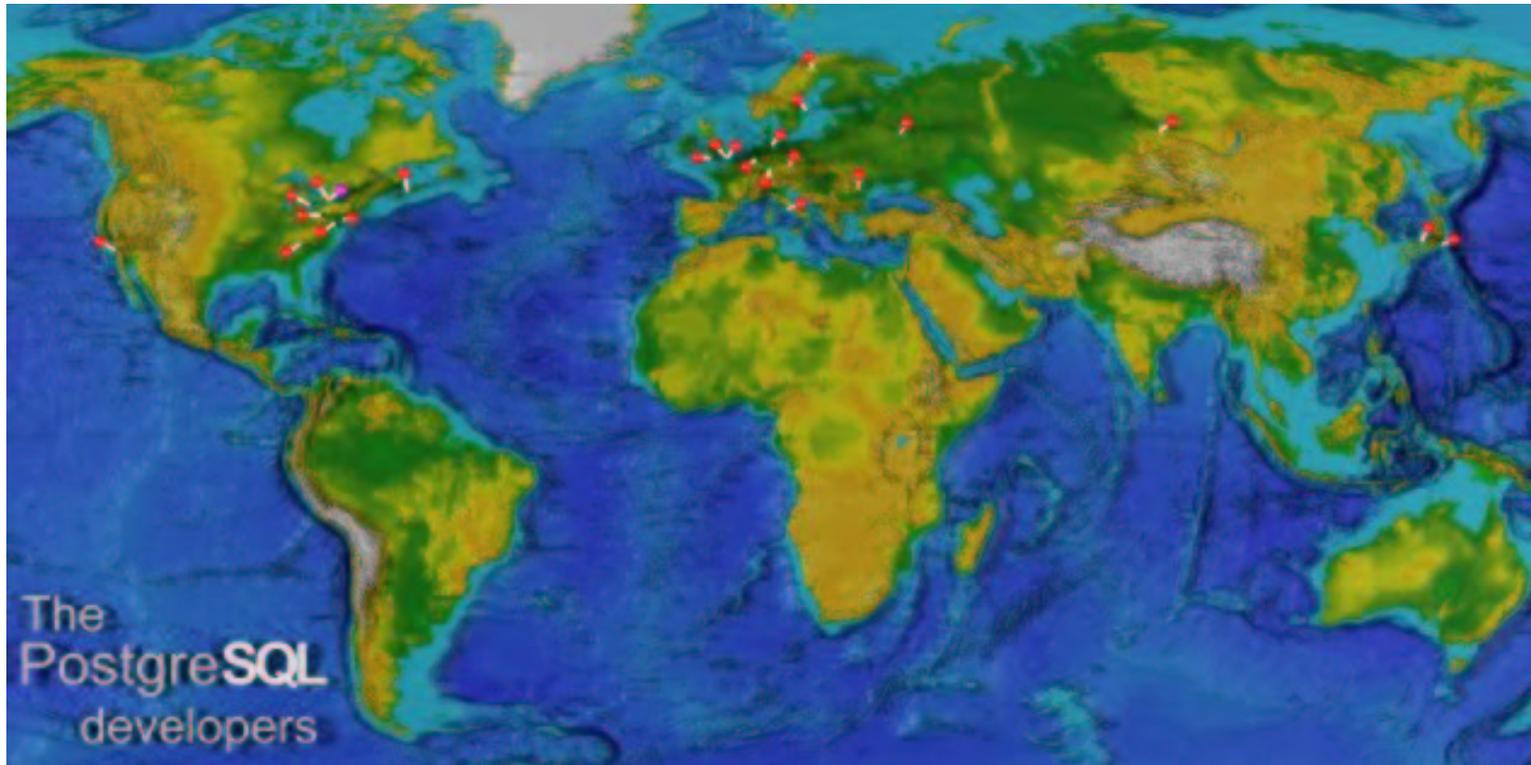- Postgres95 — added SQL, spawned PostgreSQL

PostgreSQL Through the Years

1977-1985 Ingres

1986-1994 Postgres

1994-1995 Postgres95

1996-   PostgreSQL

Developer's Globe

PostgreSQL Core Team

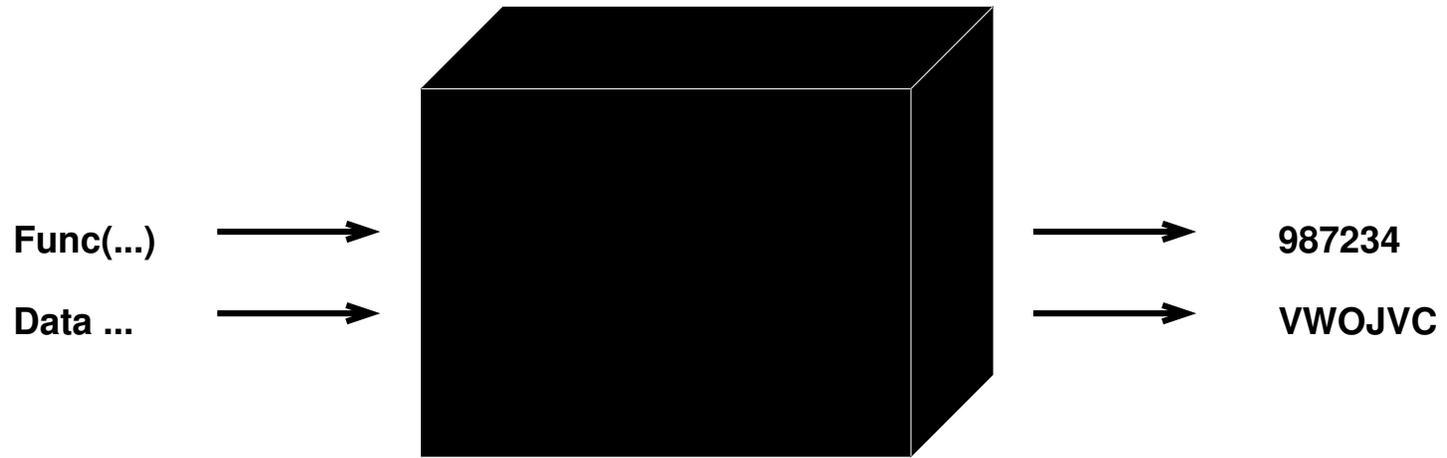Top row: Thomas Lockhart (retired), Jan Wieck, Tom Lane, Marc Fournier

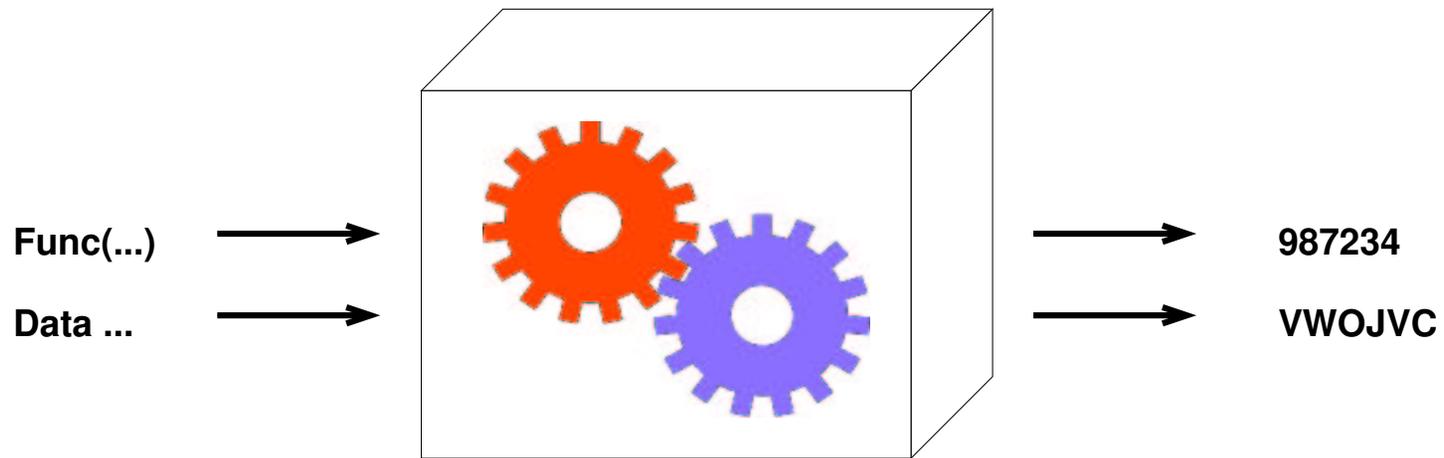Bottom row: Vadim Mikheev, Bruce Momjian

Release Dates and Sizes

Date	Release	Lines of code
1994		244,581
1996-08-01	1.02.1	
1996-10-27	1.09	178,976
1997-01-29	6.0	
1997-06-08	6.1	200,709
1997-10-02	6.2	225,848
1998-03-01	6.3	260,809
1998-10-30	6.4	297,918
1999-06-09	6.5	331,278
2000-05-08	7.0	383,270
2001-04-13	7.1	410,500
2002-02-04	7.2	394,274
2002-11-27	7.3	453,282

Why Users Choose PostgreSQL

Closed-Source Software

Func(...) →   ■   → 987234

Data ... →   ■   → VWOJVC

Open-Source Software

Func(...) → [box with gears] → 987234

Data ... → → VWOJVC

Support of Close-Source Software

Support →

Database Company
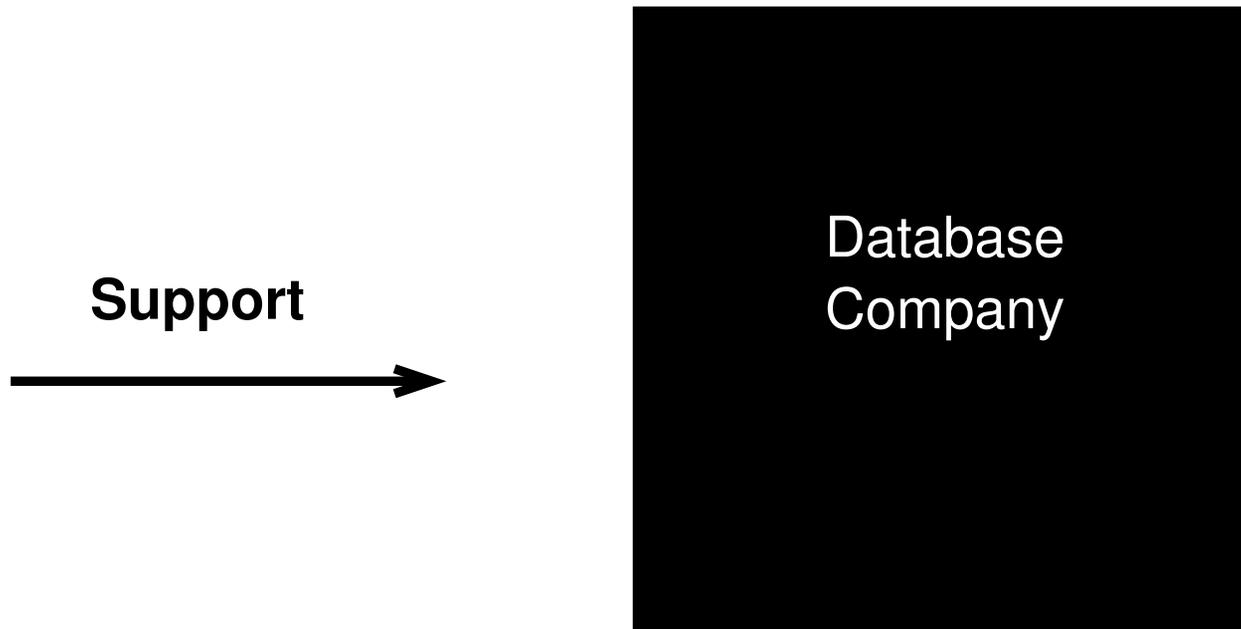
Support of Open-Source Software

Support → (Source Code)

Support → [SRA]

Support → (Mailing Lists)
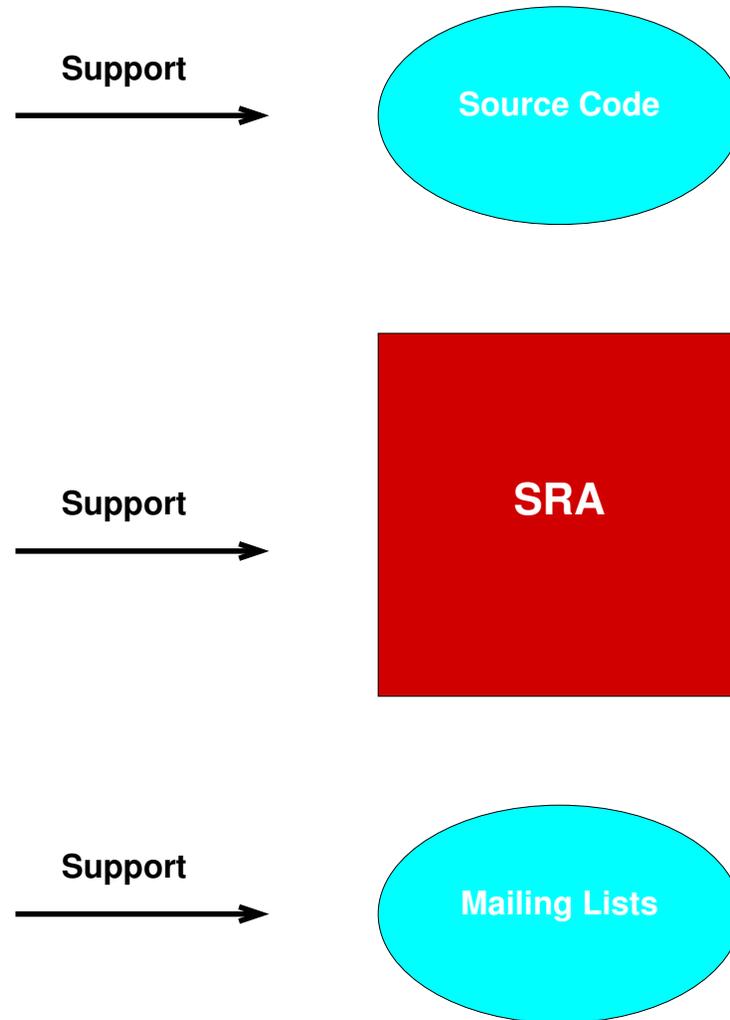
The Future of Open Source

Features

Performance

Reliability

Open Source

Close Source

Time
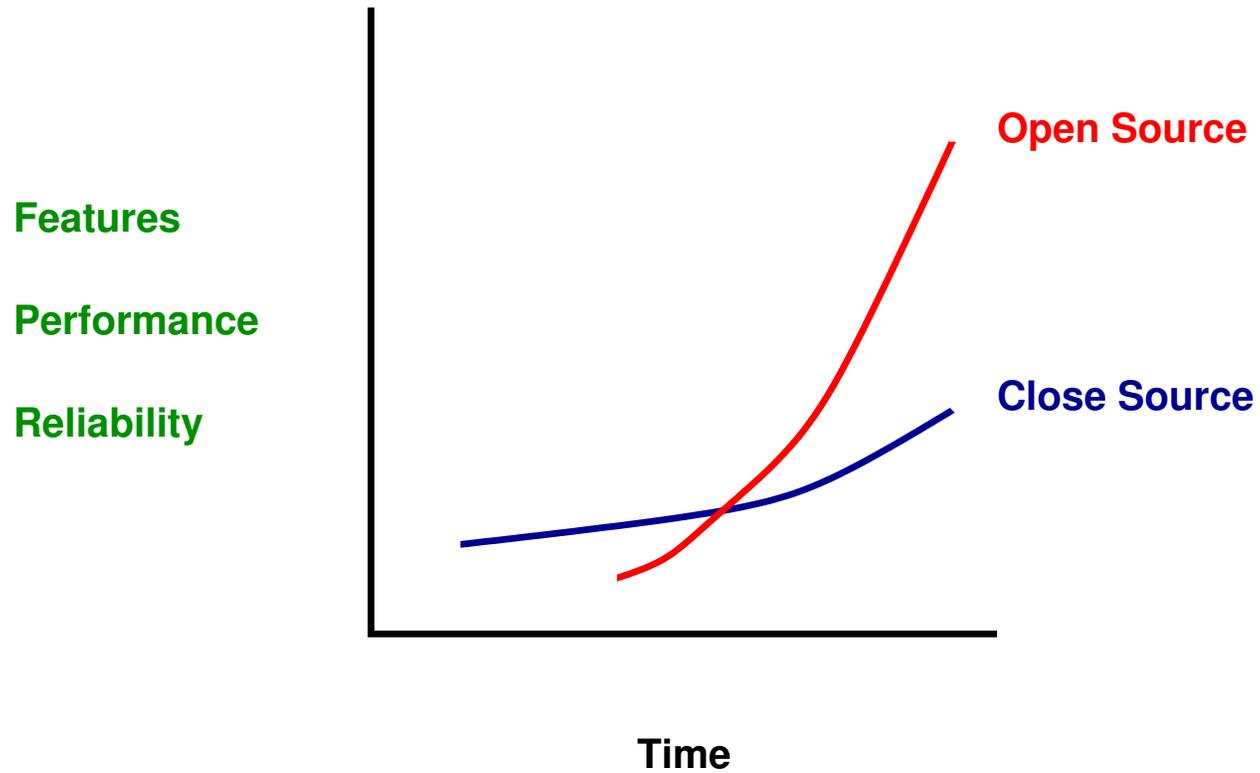
Savings

Performance - AS3AP

AS3AP Test, 1-100 Users
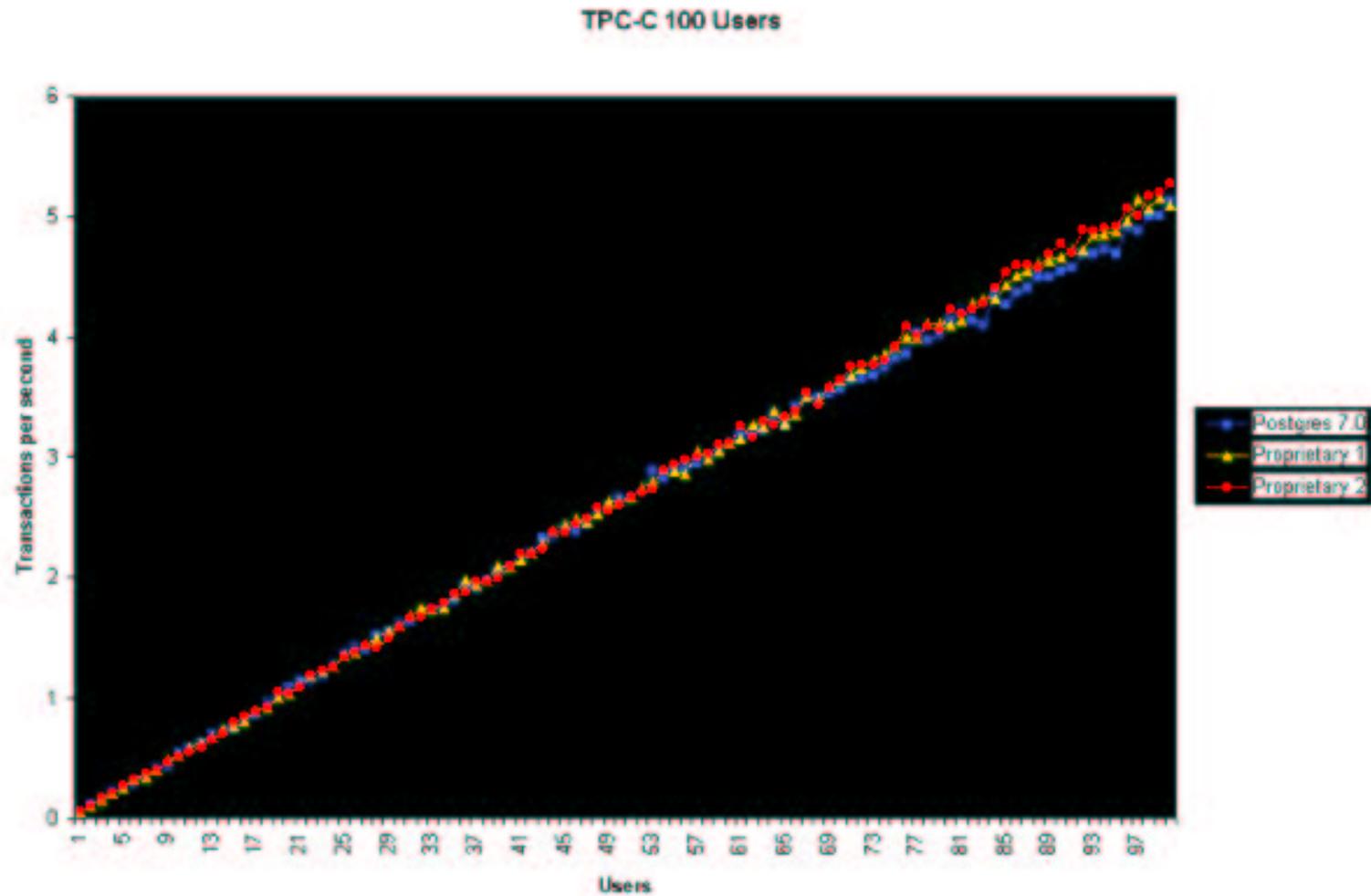
Performance - TPC-C

TPC-C 100 Users
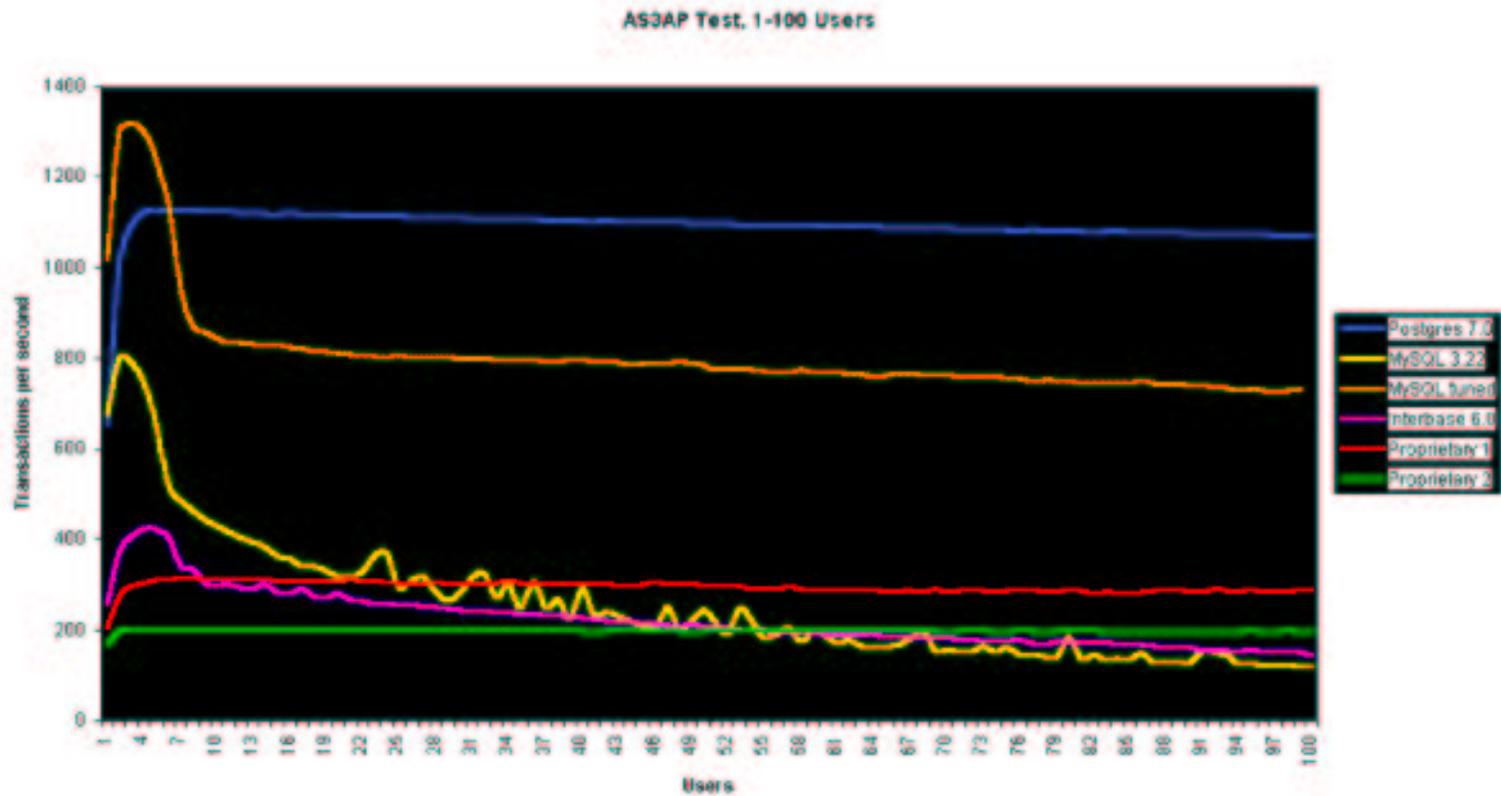
PostgreSQL
in the Real World

Database Migration

- Oracle

- IBM's DB2

- Microsoft-SQL

- Microsoft Access

- Informix

- Interbase

- Dbase/FoxPro

- MySQL

PostgreSQL Usage

- Order Entry, Inventory, Billing

- Customer Relations Management (CRM)

- Data warehouse, data analysis

- Medical/Hospital records storage

- Genetics

- Financial Accounting, Banking, Payroll

- Military

- Government, Social services, Elections

- Education

- Publishing

- Geography (GIS)

- Hotel Reservations, Restaurants

- Telephone billing, call tracking

- Helpdesk problem report tracking
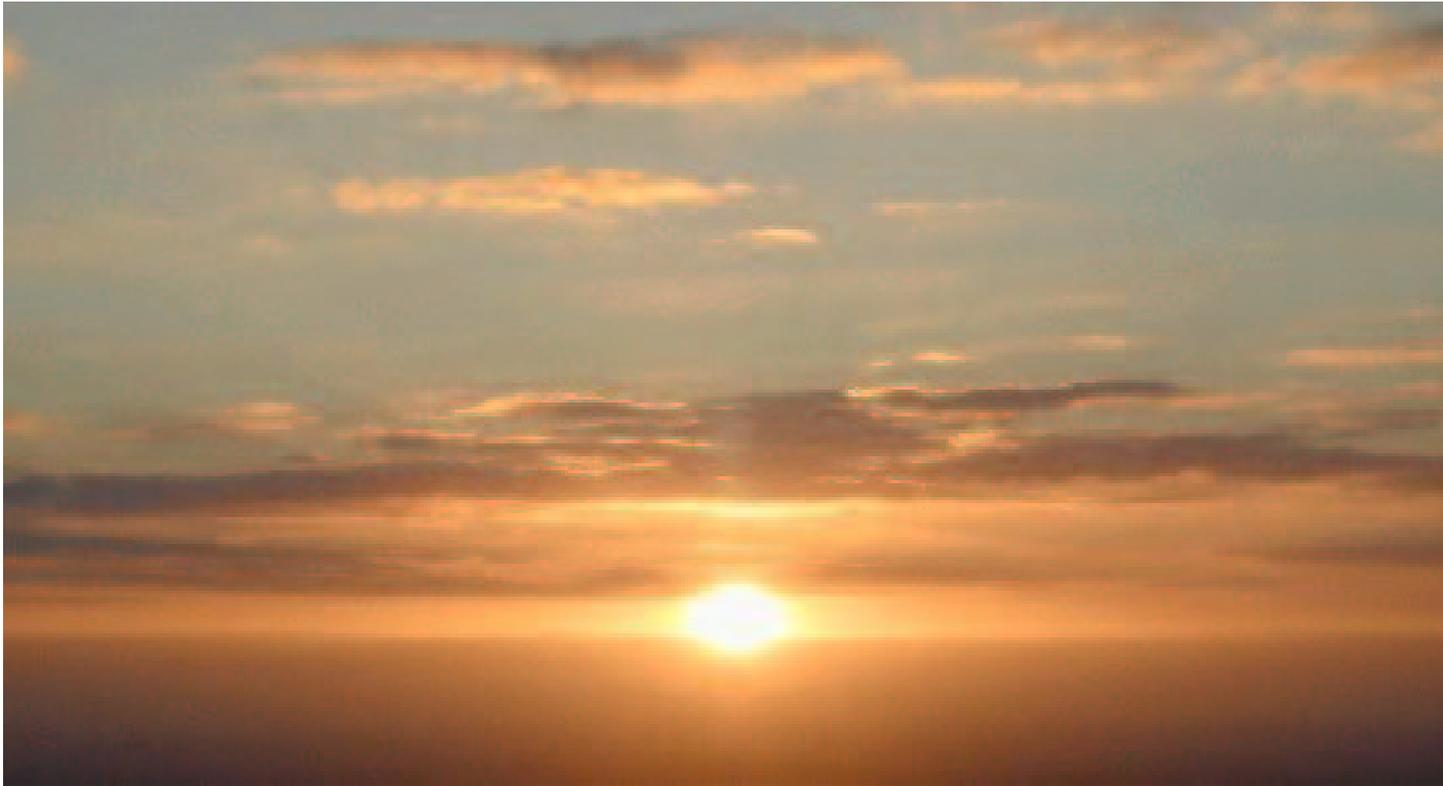
- Sales tracking

- Business to business commerce

PostgreSQL Web Site Usage

- Product purchase

- User preferences

- Job listings

- Auctions

- Real estate listings

- Community building

- Dynamic content

- Text indexing

Users

- DaieiOMC

- Tsutaya

- BASF

- The American Chemical Society

- .Org

Future Directions

Upcoming 7.4 Release

- Point-in-time recovery

- Win32 port

Conclusion