

THE HISTORY OF POSTGRESQL OPEN-SOURCE DEVELOPMENT

BRUCE MOMJIAN, GREAT BRIDGE LLC

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ABSTRACT

POSTGRESQL is successful only because of its vibrant open-source development community. This presentation chronicles the building of that community.

POSTGRESQL HISTORY

POSTGRESQL THROUGH THE YEARS

1977-1985 INGRES

1986-1994 POSTGRES

1994-1995 POSTGRES95

1996- POSTGRESQL

THE UNIVERSITY OF CALIFORNIA AT BERKELEY



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

POSTGRES



MICHAEL STONEBRAKER

POSTGRES95



JOLLY CHEN AND ANDREW YU

TRANSITION FROM SINGLE MAINTAINER TO INTERNET DEVELOPMENT

- ❖ GETTING APPROVAL
- ❖ SCOURING THE MAILING LIST
- ❖ TODO LIST
- ❖ FAQ
- ❖ HOW DOES THIS THING WORK?

POSTGRESQL CORE TEAM



TOP ROW: THOMAS LOCKHART, JAN WIECK, TOM LANE, MARC FOURNIER
BOTTOM ROW: VADIM MIKHEEV, BRUCE MOMJIAN

ASSISTING OUR DEVELOPERS

❖ DEVELOPER EDUCATION

- ❖ DEVELOPER'S FAQ

- ❖ SOURCE CODE FLOWCHART

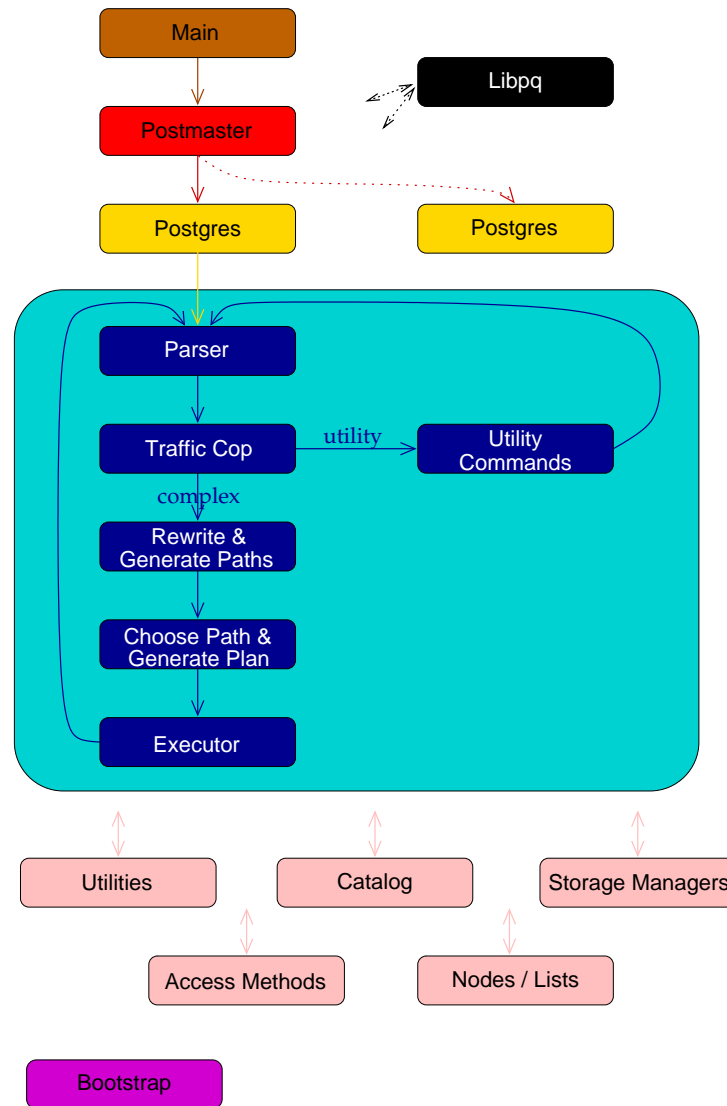
- ❖ EMPHASIZE CODE CLARITY AND PEOPLE WILL RESPOND

❖ DEVELOPER RECRUITMENT

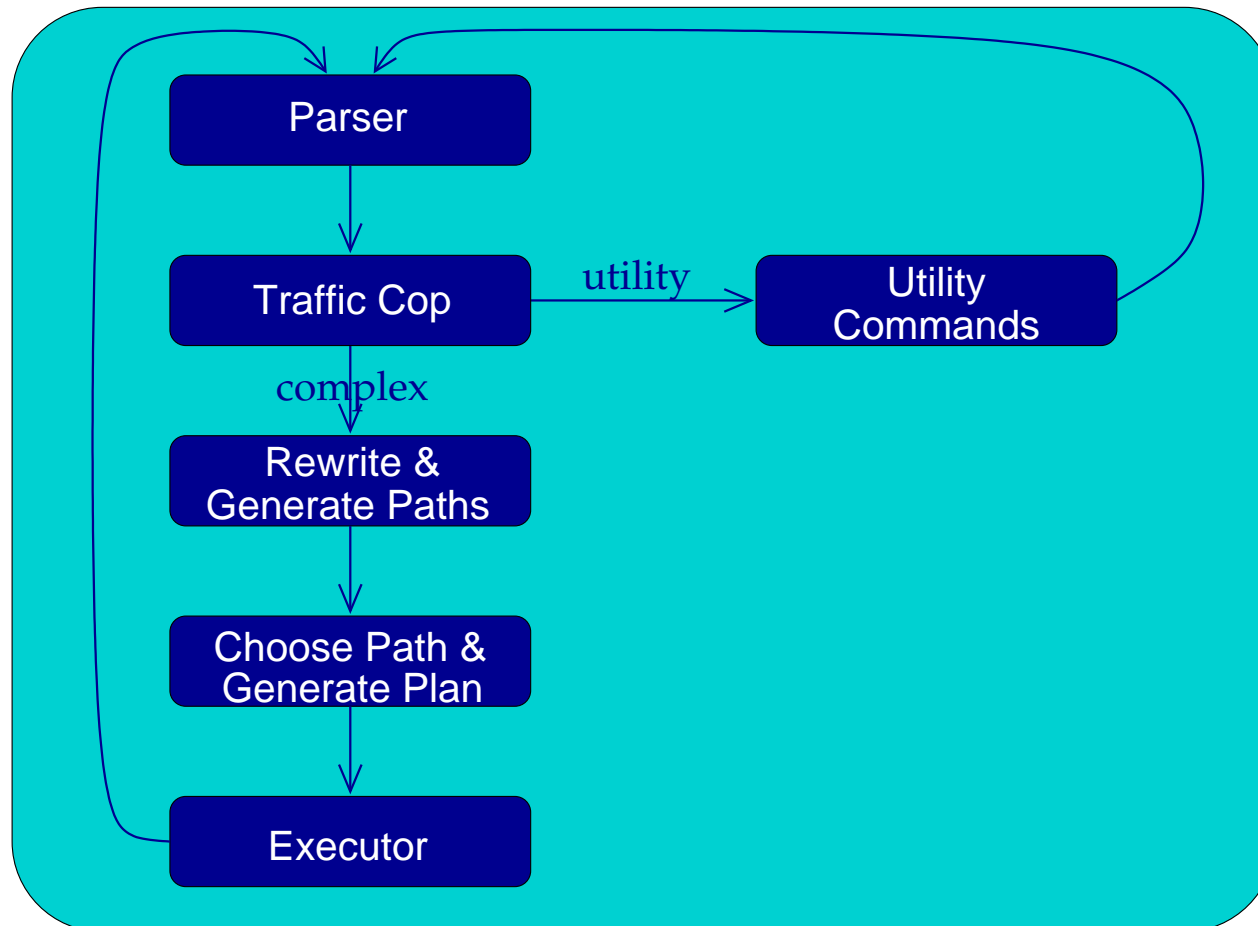
❖ CVSUP, REMOTE CVS

❖ MANAGING AN INCREASING INSTALLED BASE

INTERNALS FLOWCHART



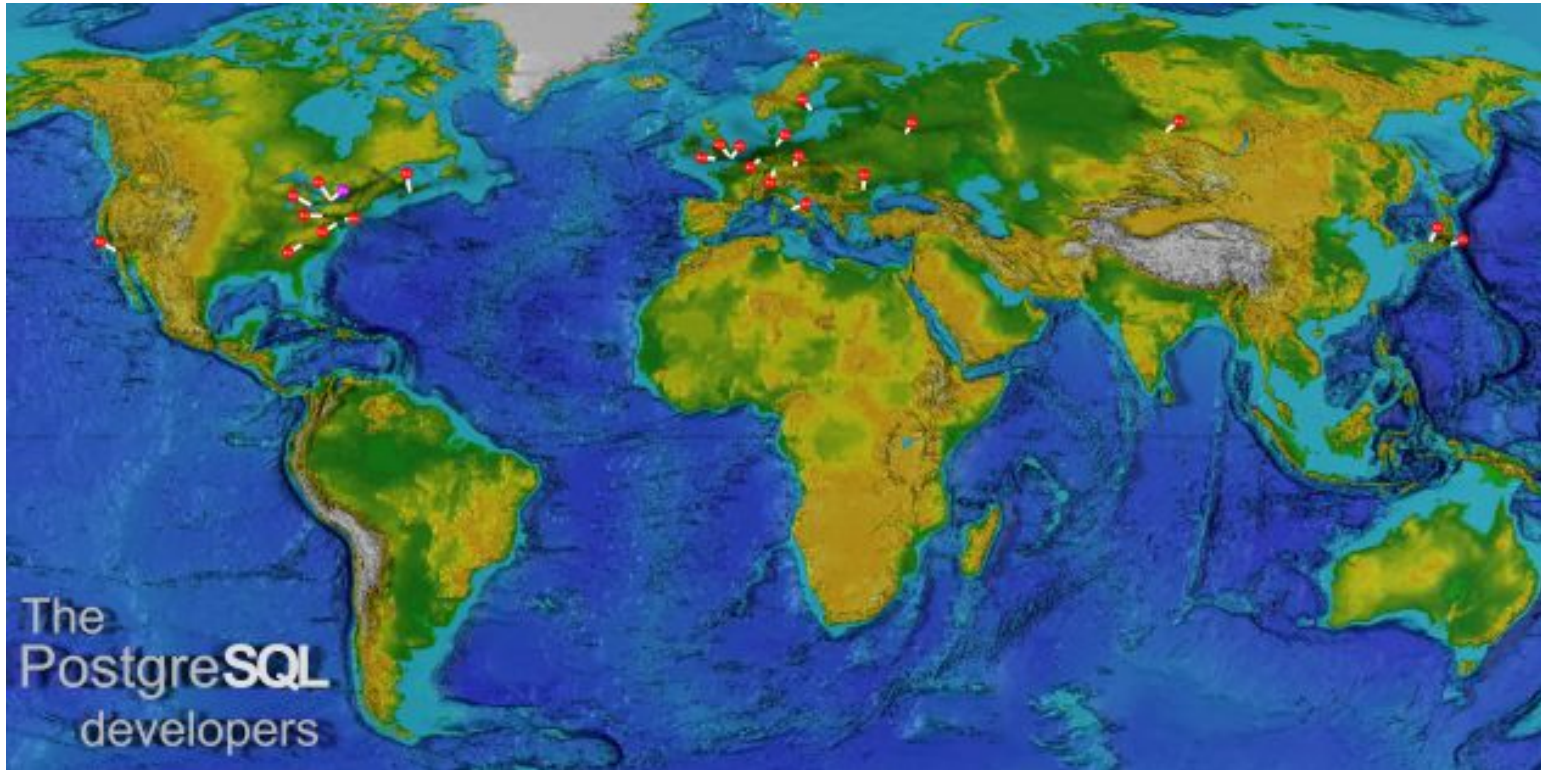
INTERNALS FLOWCHART (MAGNIFIED)



KEEPING THE CODE CLEAN

- ❖ AUTOMATIC FORMATTING
- ❖ REMOVE UNUSED FUNCTIONS
- ❖ MARK SINGLE-FILE FUNCTIONS AS STATIC
- ❖ RENAME VARIABLES AND FUNCTIONS
- ❖ REQUIRE PATCHES TO BE OF ACCEPTABLE QUALITY

DEVELOPER'S GLOBE



DAILY CHORES

❖ MAILING LIST

- ❖ ANSWER SIMPLE QUESTIONS
- ❖ IDENTIFY VALID BUG REPORTS
- ❖ WORK WITH USERS TO TEST BUG FIXES
- ❖ COLLECT FEATURE REQUESTS
- ❖ ENCOURAGE TECHNICAL DISCUSSIONS

❖ PATCH APPLICATION

❖ ENCOURAGE

❖ MARKETING

PACKAGING A RELEASE

- ❖ COLLECT UNAPPLIED PATCHES
- ❖ RESOLVE OUTSTANDING ISSUES
- ❖ REGRESSION TESTING
- ❖ ENTER BETA
- ❖ RESOLVE ALL BUG REPORTS
- ❖ FINAL RELEASE
- ❖ COLLECT AND APPLY SAFE PATCHES
- ❖ ISSUE SUBRELEASES

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
2000-?	7.1	407,203

DEVELOPMENT DIRECTIONS

- ❖ FEATURES
- ❖ PERFORMANCE
- ❖ RELIABILITY
- ❖ CODE SIMPLICITY
- ❖ STANDARDS CONFORMANCE
- ❖ DOCUMENTATION
- ❖ PACE OF RELEASES

CONCLUSION



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