Dbwidget

A Rad purposal to the Tcl Community

What it is not

- Another megawidget package
- Another extension for reading or writing data to a Database
- Another extension for printing in Tcl
- Do not fight with dbwidget if you do not want to build a dbwidget application

Schedule

- A dbwidget overview
- Building an application
- Questions

Dbwidget

- The goal is to have an infrastructure for developing robust applications
  - Development
  - Documentation
  - Deploying to customers
  - Batch processing available
  - Application's maintenance
  - Upgrade strategy
  - Disaster recovery

Technology : Os

- Linux is preferred
  - Customers means also Windows
- Platform supported for development and deployment
  - Windows
  - Linux

Technology: Database

- The choice is for ISAM access method
  - Much faster
  - Robust technology
  - Simple to manage and recover
- The databases are
  - Berkeley DB
  - Faircoms Ctree
  - Open to others

Technology: Printing

- Business printing is going to Office Systems
- The choice is OpenOffice
  - No printer drivers
    - every printer work
  - No spooling problems
  - High quality output
  - Customers managed spooling system
  - An heuristic extension to OpenOffice XML
    - A pure XML processor in mind

The language

- Tcl everywhere
  - no parsers
  - no bytecode
  - just Tcl, from the Data model definition to the customer
- Dbwidget 'c' extension
  - Accessing ISAM file system
  - Formatting data

A step by step example

- Define the data model
  - How data resources are defined ?
    - Template
    - Tables
- Populate tables
- Developing the application
  - Data maintenance
  - Printing
  - Statistics

The data model customers

- Key is code
  - code is autosequence, step 5
  - never less 10000 when automated
- Some nice fields

The data model
payment

- Payment's code is for each customer
  - Foreign Key to customers
  - Autolock feature on foreign keys
    - in a customer's context, I cannot see the payments of other customers
  - A simple description

The data model category

- Category's code is for each customer
- A simple description is included

The data model orders

- Key is cust and code
  - cust is a foreign key to customers
- code starts from 1 for each customer
  - autosequence in a customer's constraint
- paycode is a foreign key to payment
- Some fields
  - with special widgets
  - with validation

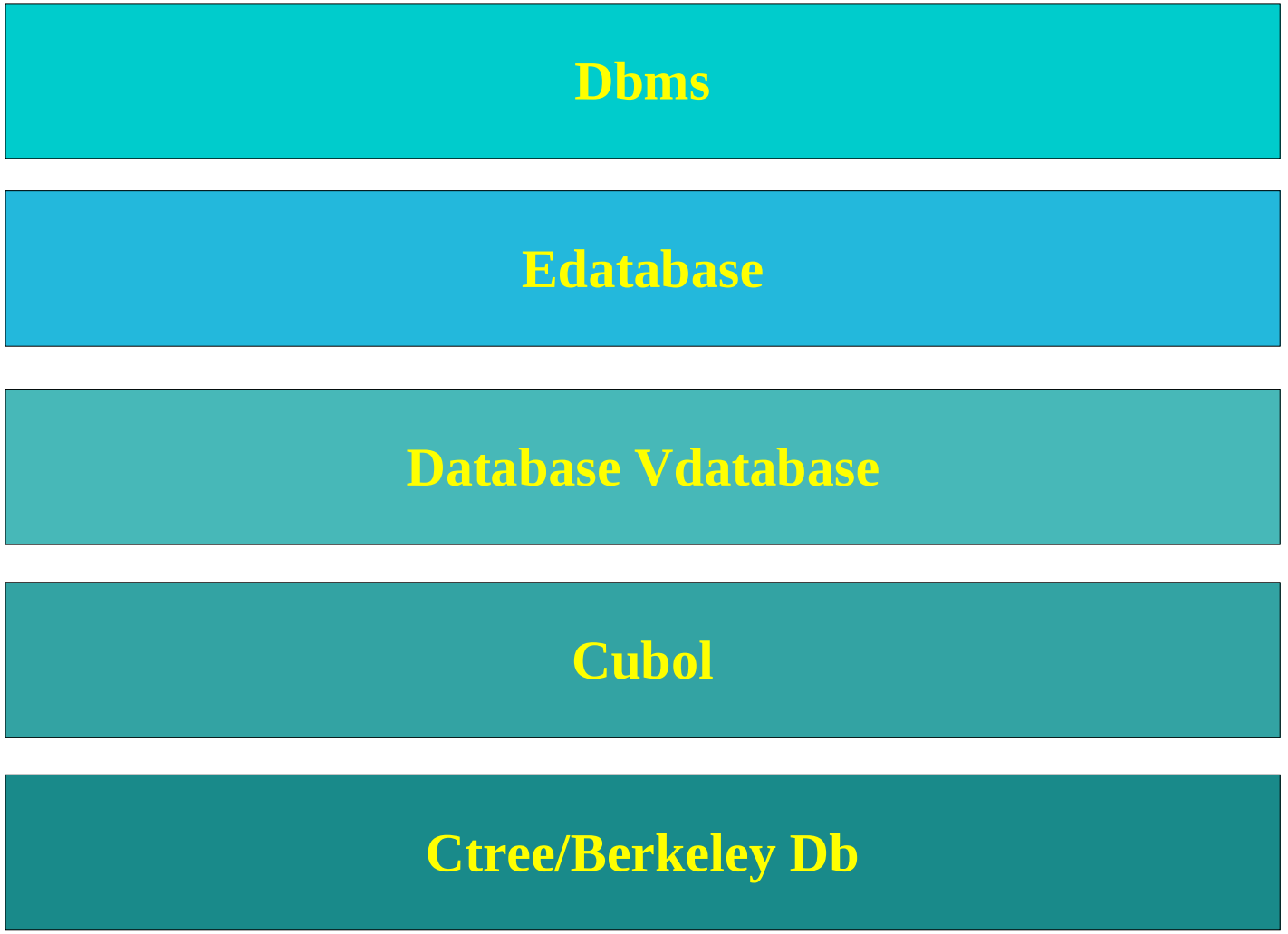
The data model
items

- It contains an example of how I can alias a table to make a self-foreign relationship
  - the field choice is a foreign key to items itself
  - The choices table is an alias for items
- An image field, file system driven
  - But we also may use blobs
- An audio field, file system driven
  - A procedure is returning the path for new recording audio

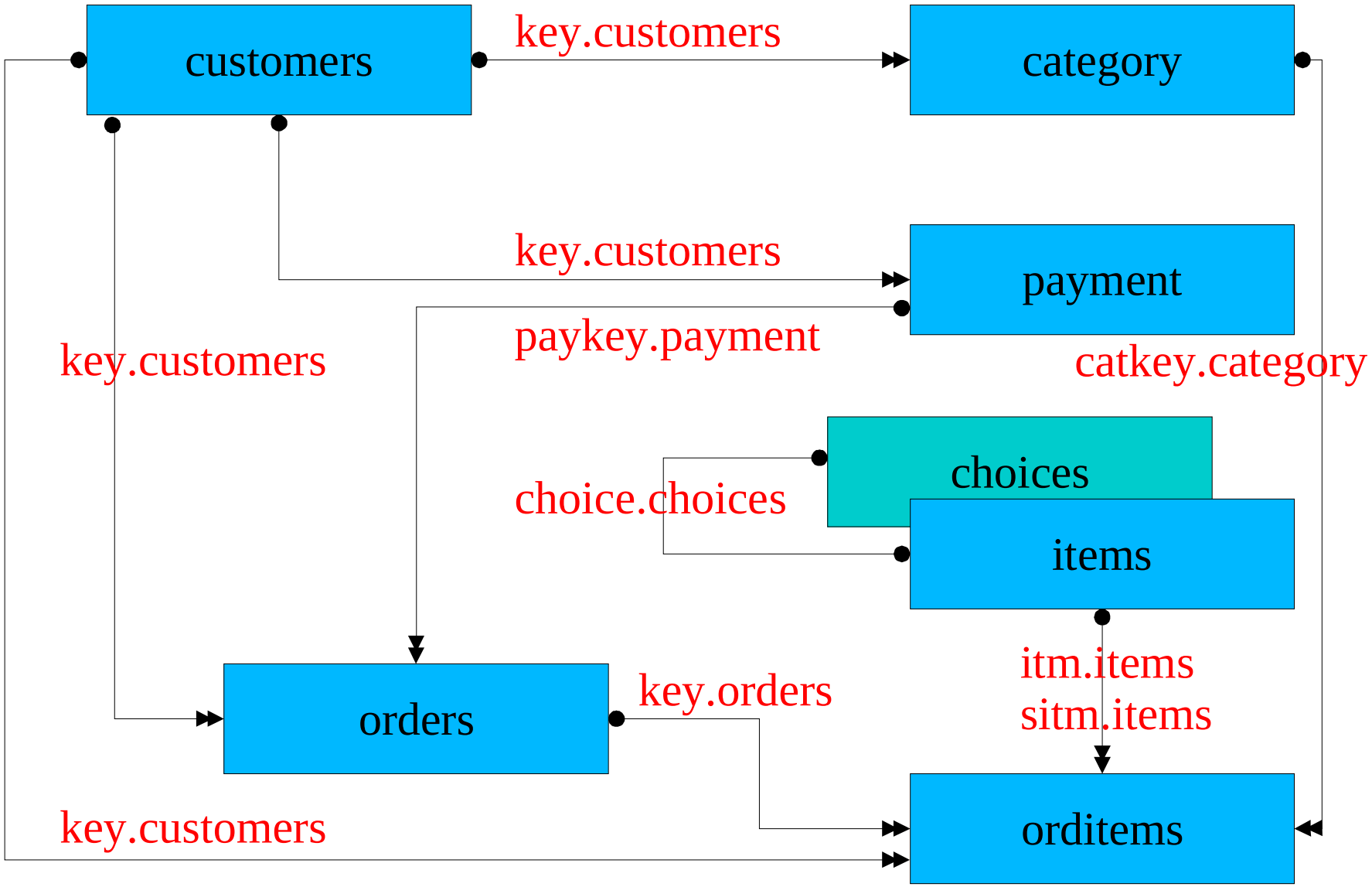
The data model
orditems

- The key is customer, order and line
  - line is sequenced on customer and order
- Each order line foreigns category
  - locking views on the customer's context
- On each line user may include a secondary item, which is optional
  - Null foreign
- Concept of pseudo field

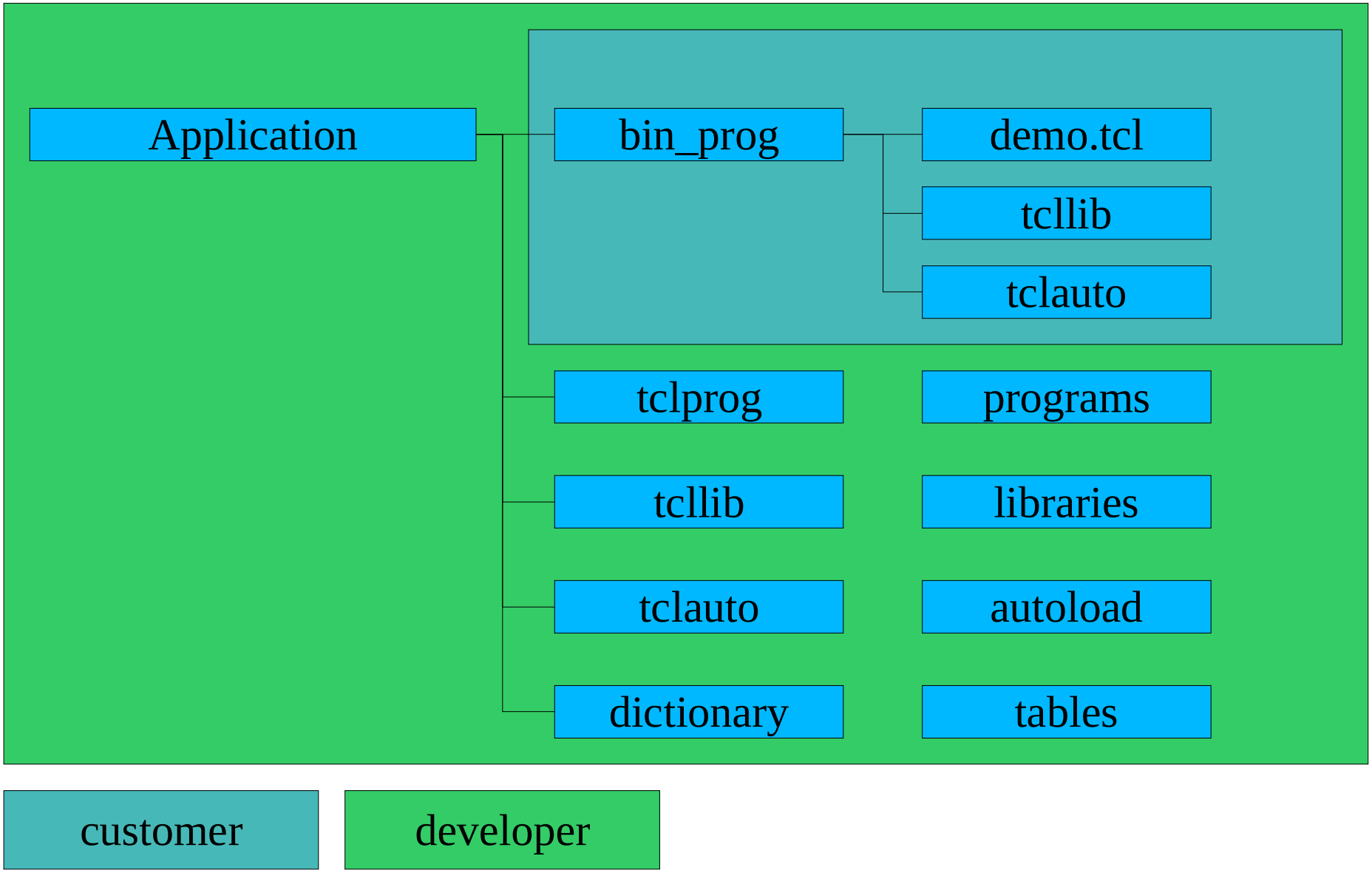
dbwidget structure



Putting all together



The application tree



The deployment tree

- You can sum different applications
  - merge bin_prog directories
- You can setup customer's specialized code
  - Creating and maintaining separate development projects
- Dbwidget is already used in the real world

Strategical choices on dbwidget

- Use of Itcl
- Event driven Database access and usage
  - I have read order 1. Is someone interested on this ?
- Optimized keyboard bindings
  - We come from Cobol
  - We use dbwidget for massive data input
- The user configure it's own working method. We just provide dbwidget's applets.

References

- www.sourceforge.net/projects/legacytcl
- www.metodo.net
- Project's management
  - Franco Violi (fvioli@metodo.net)
  - Piera Poggio (ppoggio@metodo.net)

Help

- Translating tutorials and documentation
  - From Italian to others
- A true XML extension to OpenOffice
- A 'more tested' Berkeley-Db interface

The demo room

- Compiling the application
- Populating tables
- Planning libraries and autoload commands
- Writing programs
  - Orders maintenance
  - Orders browsing
  - Orders statistics
- Do the same on Faircoms Ctree