

FME, SQLite and TCL: A Powerful Cocktail



www.safe.com



Peter Laulund

Product Developer

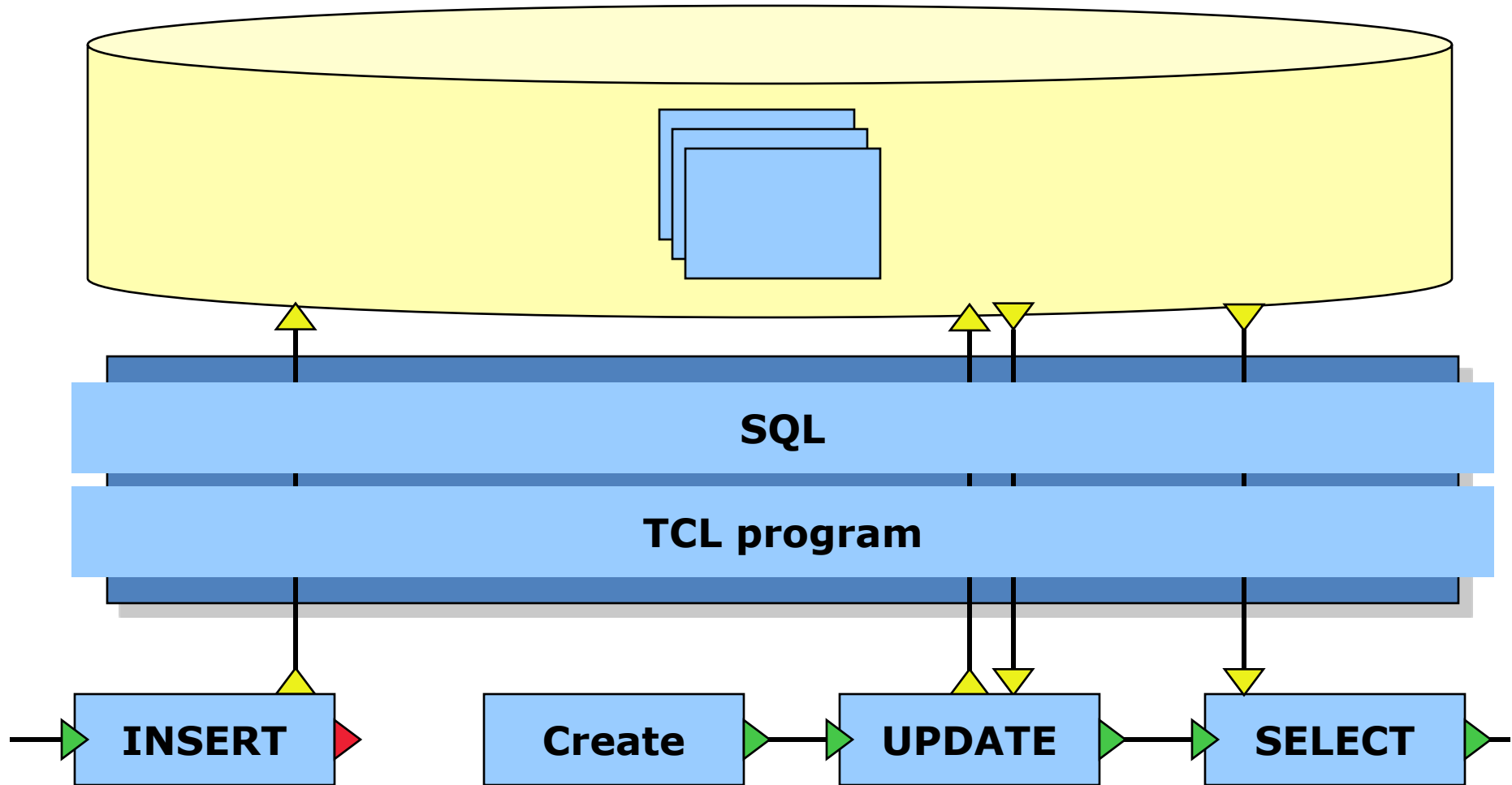
National Survey and Cadastre Denmark



- SQLite is a small free SQL database
- FME has a reader/writer for it
- Simple to use as it doesn't need a server
- Implements most of the SQL 92 standard
- It is integrated with TCL (and Python)
 - Just one command with a number of sub commands
 - Possible to create the database in memory
 - Can use TCL variables in SQL
 - Can write TCL procs and use them on the database

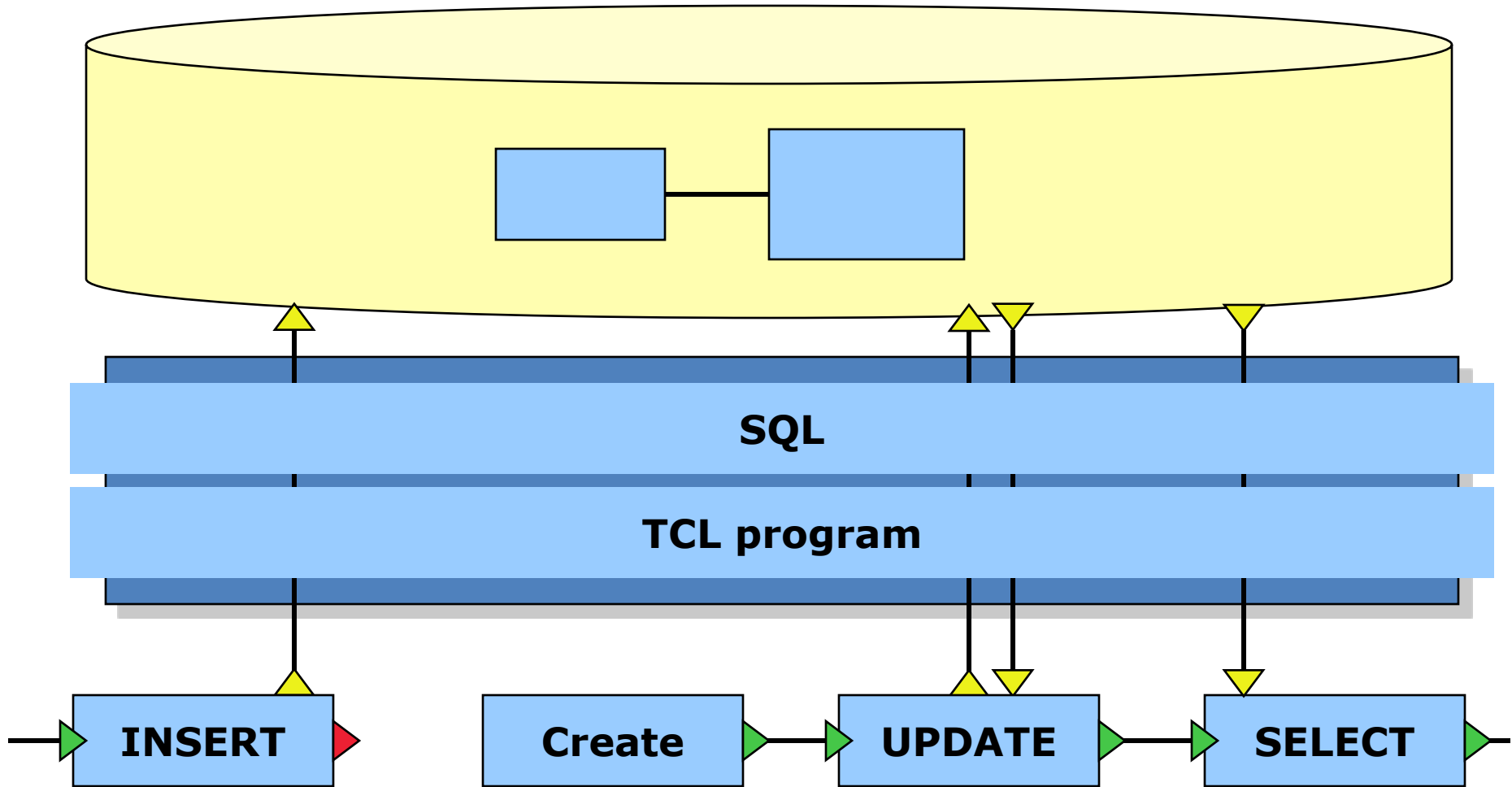
SQLite Demo#1

www.safe.com



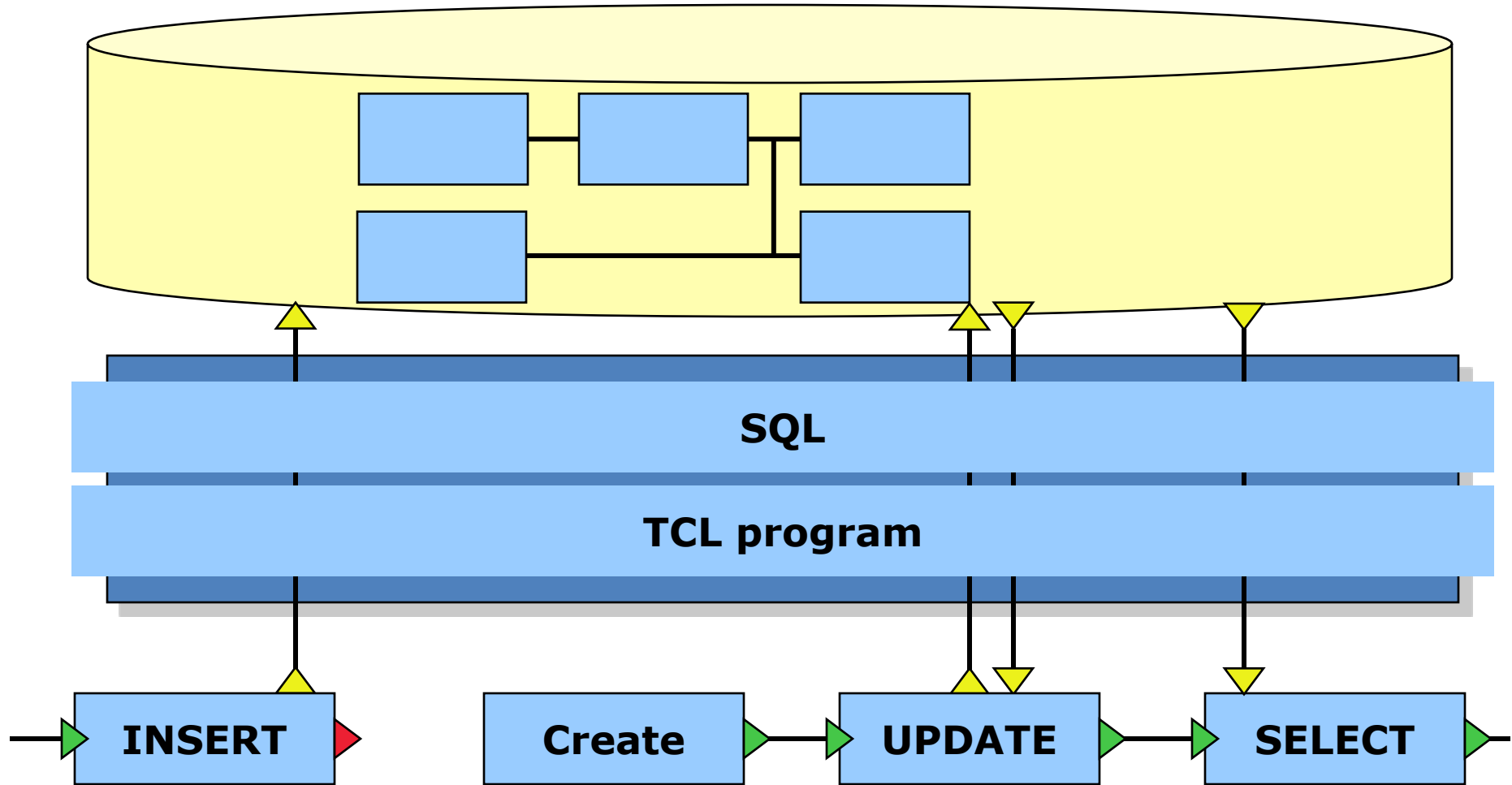
SQLite Demo#2

www.safe.com



SQLite Demo#3

www.safe.com



TCL – Create, Insert, Select

www.safe.com



```
proc sqlite::createDb {} {
    sqlite3 db :memory:
    variable colmLst [lsort [ FME_AttributeNames ]]
    set sqlCmd "create table $::FME_FeatureType ( [join $colmLst " TEXT, " ] TEXT )"
    db eval $sqlCmd
}
```

```
proc sqlite::insert {} {
    foreach att [lsort [ FME_AttributeNames ]] {
        lappend valLst \"[ FME_GetAttribute $att ]\"
    }
    set sqlCmd "insert into $::FME_FeatureType \
                ([join $colmLst "\", " ]) values ([join $valLst "\", "])"
    db eval $sqlCmd
}
```

```
proc sqlite::select {} {
    db eval { select * from LOCATION where rowid = $row } selRes {
        foreach k $selRes(*) {
            FME_SetAttribute $k $selRes($k)
        }
    }
}
```

- SQLite in combination with TCL adds a powerful extra dimension to FME
- It's relatively simple to use if you know tcl and sql
- Add a new dimension to the FME toolbox
- Storing and manipulating data in memory makes it fast and therefore improves performance

A Short Note About TCL

www.safe.com



Question: Why is Tcl syntax so weird?
Answer: It's not. Everything else is weird.

“SQLite has been eagerly embraced by PHP, Perl, and Python programmers. What most of these enthusiastic users fail to realize is that SQLite bindings for the three P-languages are an afterthought. SQLite was designed from the beginning to be used with Tcl. **SQLite wants to be programmed in Tcl, not those other languages”**

D. Richard Hipp

Thank You!

www.safe.com



- Questions?
- For more information
 - Peter Lauland: pelau@kms.dk
 - Kort & Matrikelstyrelsen: www.kms.dk
 - Please contact me here at the conference

■ SQLite

- <http://www.sqlite.org>
- <http://www.sqlite.org/lang.html>
- <http://www.tcl.tk/community/tcl2004/Papers/D.RichardHipp/drh.html>

■ SAFE

- <http://www.fmepedia.com>
- <http://blog.safe.com/>

■ TCL

- <http://www.tcl.tk/man/tcl8.5/TclCmd/contents.htm>
- <http://wiki.tcl.tk>