

## Quindos overview

### What is Quindos ?

- It's a CMM software.
- Originally written for Leitz measuring machines.
  - written in Fortran under the VMS operating system
  - now mostly ported to C, runs under unix and windows.
  - very powerful & complex.

## Quindos structure

- Quindos has a strong object-oriented flavor, although it was written in the early 80's.
- A series of databases are maintained, and a "program" will perform operations on these databases, akin to macros.

*SDB, HDB, GDB, LDB, WDB*

- The above are the main databases we'll use.

## Types of Objects (a subset)

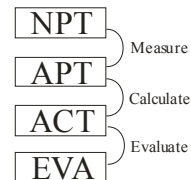
- PRB            probe information
- CSY            coordinate systems
- CMM            machine parameters
- CHS, REA     character and real variables
- TXT, MSG     plain-text elements
- PRC            procedures
- ELE            geometric elements, more about these next.

## Elements (ELE)

- Contain different subtypes:
  - NPT *these are the nominal (programmed) points*
  - APT *these are the actual (measured) points*
  - ACT *this is the actual (calculated) element*
  - EVA *this contains the evaluation (reporting) information*

## What operations affect elements?

- Usually we're concerned with measuring features, calculating parameters (e.g. diameter), and reporting these results.



- Measuring commands allow you to select which of these are performed ('Mode' option).

## The databases - (1 of 2)

- SDB: The *system* database. This is Quindos, contains commands, etc.
- HDB: The *help* database. Contains help texts and language specific info.
- GDB: The *global* database. Objects stored in the GDB are usually created by the user.

## The databases - (2 of 2)

- LDB: The *local* database. This is the area in which we work.
- WDB: A workpiece database. This is a measurement program. It is copied to the LDB, and then we execute the program.

## The command buffer

- This is the area (in the LDB) where the text of our program lives. It is displayed on the screen when we're running Quindos.
- **Important:** Quindos is different from almost all other measuring languages in that the text of the program doesn't tell us everything that's happening.

## A typical language

```
PLANE1 = GEOMETRIC/PLANE;
        MANUAL/; 3
        DONE/;

TOP = GEOMETRIC/PLANE;
     MEASURE/; 5.0, 0, 1.0, 0, 0, -1
     MEASURE/; 0, -5.0, 1.0, 0, 0, -1
     MEASURE/; 0, 5.0, 1.0, 0, 0, -1
     MEASURE/; -5.0, 0, 1.0, 0, 0, -1
     DONE/;

HOLE = GEOMETRIC/CIRCLE; TOP, IS, 6, 0, 0, -1.0, 6.0
      MOVE/BY; 0, 0, 0.5
      DONE/;
```

