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How automated testing
can help distributions

by Bernhard M. Wiedemann
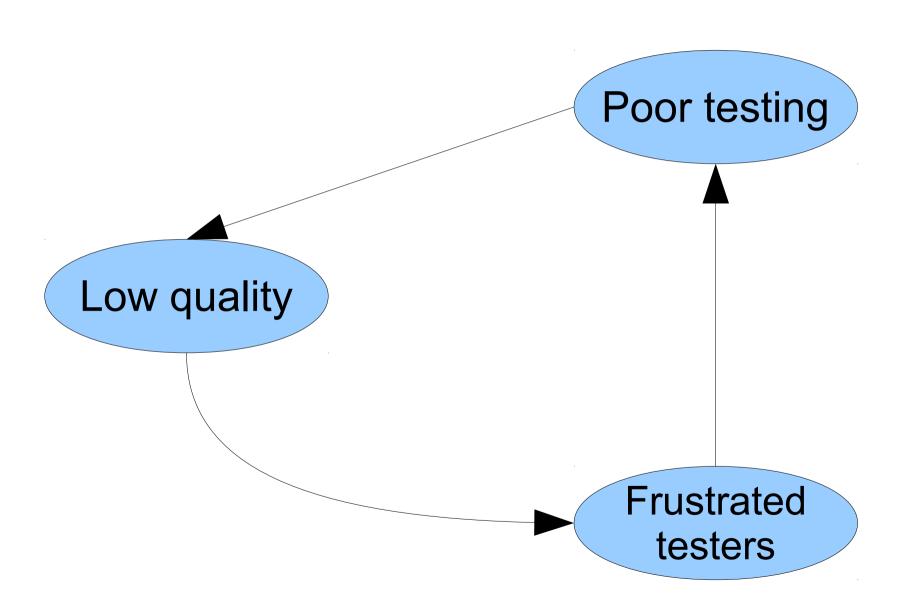
Motivation

If debugging is the process of removing bugs,
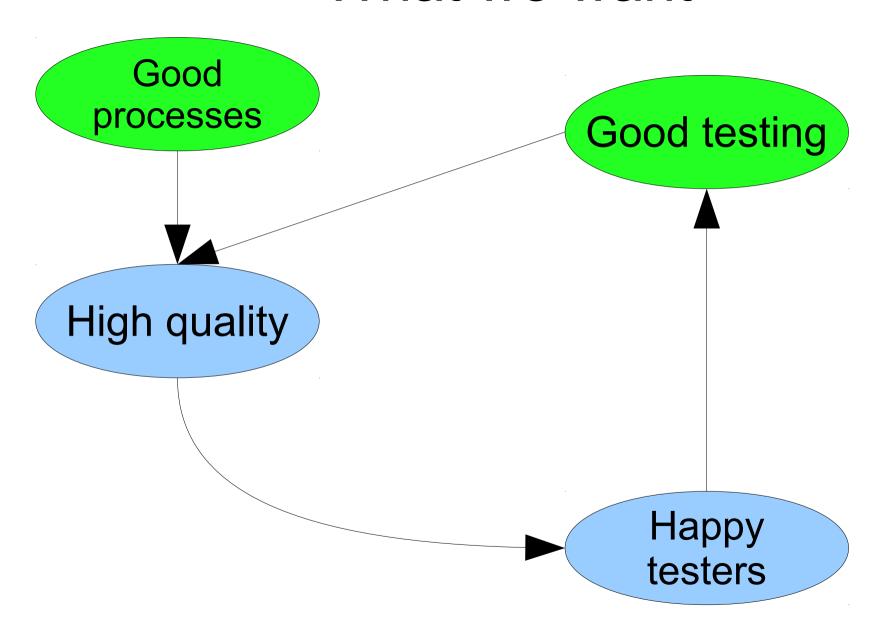then programming must be the process
of putting them in.
[Edsger W. Dijkstra?]

Problem

- Distribution is complex
  - Components interact
- Factory changes all the time

What we don't want

What we want

```
Good                          Good testing
processes
   |                         ↗
   ↓                       /
High quality  ────────────→ Happy
                            testers
                              |
                              ↓
                           Good testing
```

Motivation (cont.)

The three chief virtues of a programmer are:
Laziness, Impatience and Hubris.
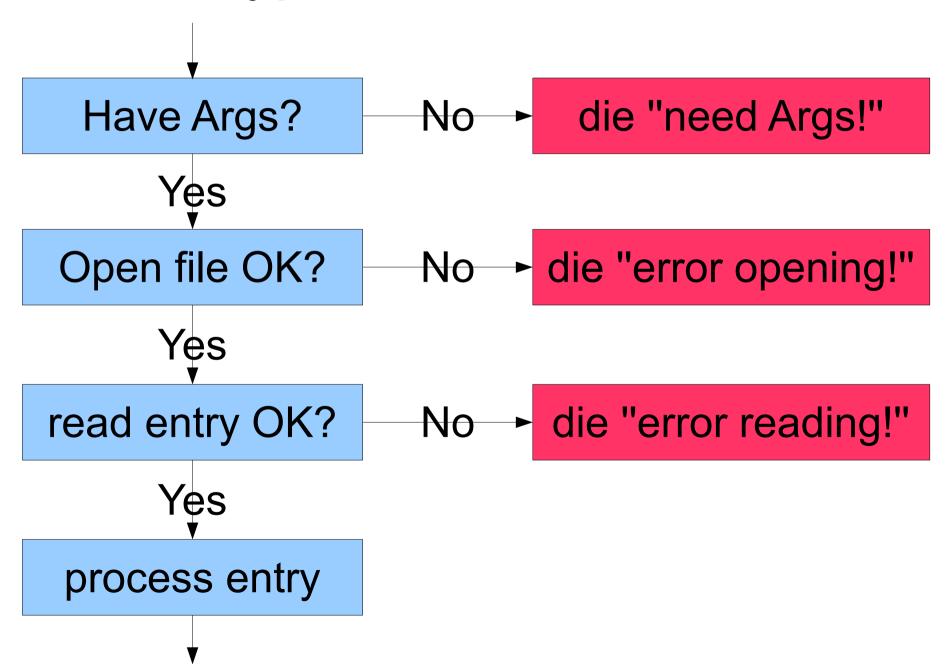[Larry Wall]

Possibilities

- install testing
- distribution upgrade testing
- application testing
- regression testing
- localisation testing
- benchmarking

Limitations

"Testing can only prove the presence of bugs,
not their absence."
[Edsger W. Dijkstra, 1969]

Typical flow chart

```
            │
            ▼
    ┌───────────────┐        No      ┌─────────────────────┐
    │   Have Args?  │──────────────▶ │   die "need Args!"  │
    └───────────────┘                └─────────────────────┘
            │
           Yes
            │
            ▼
    ┌───────────────┐        No      ┌─────────────────────┐
    │ Open file OK? │──────────────▶ │ die "error opening!"│
    └───────────────┘                └─────────────────────┘
            │
           Yes
            │
            ▼
    ┌───────────────┐        No      ┌─────────────────────┐
    │ read entry OK?│──────────────▶ │ die "error reading!"│
    └───────────────┘                └─────────────────────┘
            │
           Yes
            │
            ▼
    ┌───────────────┐
    │ process entry │
    └───────────────┘
            │
            ▼
```

Other Free Testing Software

- KVM-autotest
- Sikuli
- Selenium
- `http://en.wikipedia.org/wiki/List_of_GUI_testing_tools`

Thanks

Questions?