High Tech Disasters

You may be the comic relief!

Disaster #1: All Stars

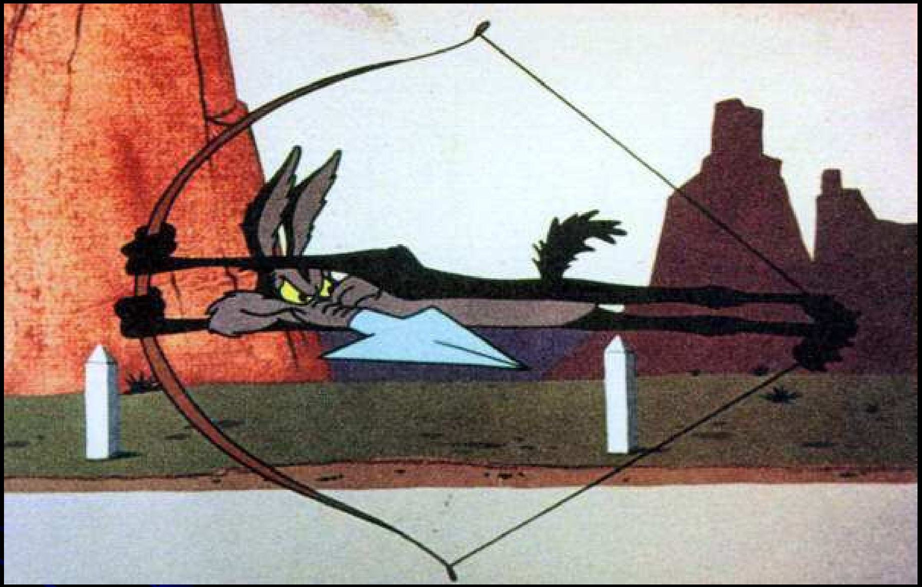
Disaster #1 – “All Stars”

- “All Stars” may not be team players
  - Everyone had to have input on every decision
  - Everyone wanted to run their own world
  - “We did it this way at XYZ”
  - Internal competition may kill the enterprise
- Inexperience is a bad teacher
  - I didn’t know what was good or bad
  - Smart people do stupid things for good reasons

Disaster #2: Stupidity

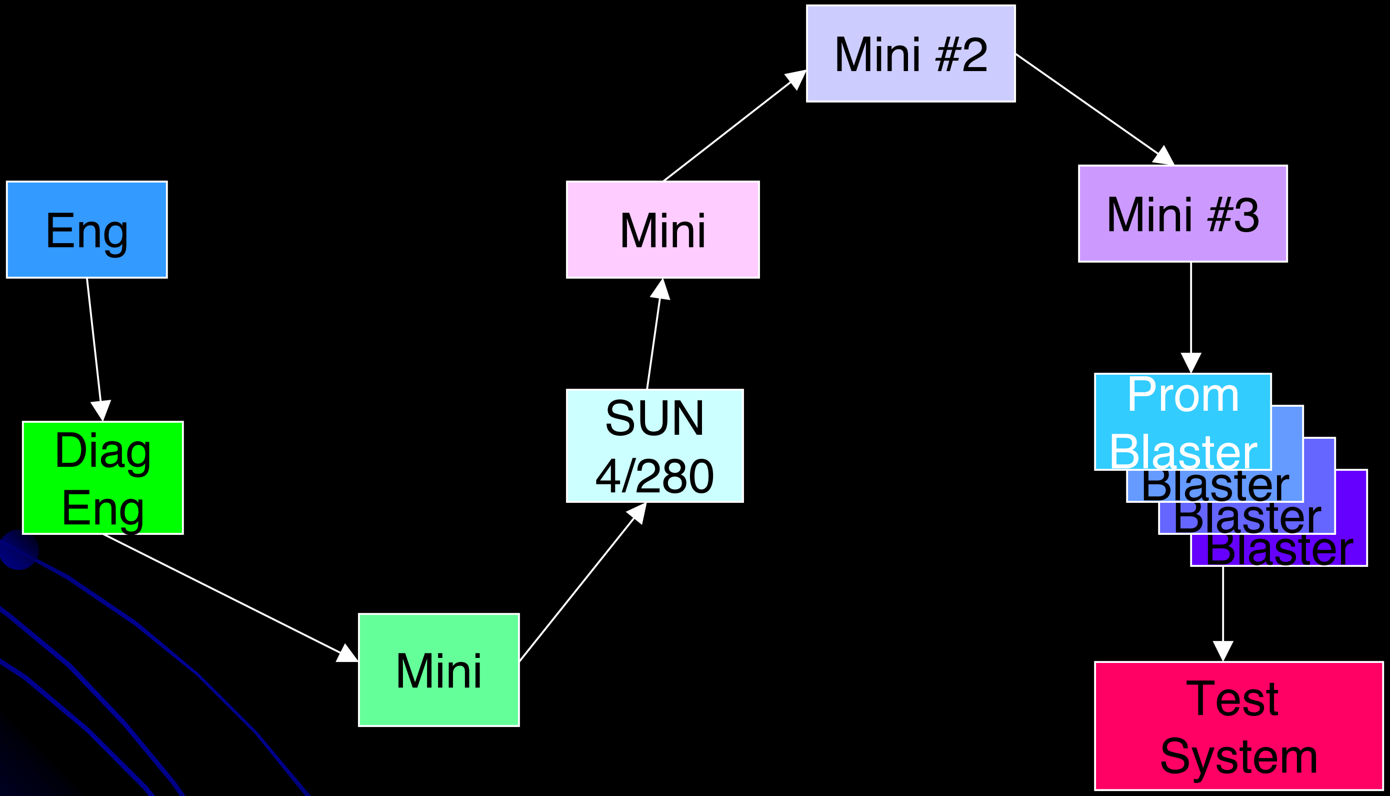
Lessons Learned

- You can’t manage something you don’t understand (at least a little).
- Attitude is more important than knowledge.
- In the land of the blind, the one eyed man is considered insane.
- Specialists aren’t generalists.
- Specialists in different areas probably can’t communicate with each other well.
- Many people need to repeat 3rd grade.
- Sometimes ‘many people’ means you.



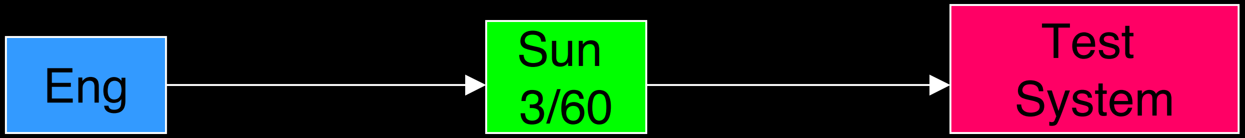
Disaster #3: Internal Competition

Server Debug Cycle



Result: 2 Turnarounds per day

Workstation Debug Cycle

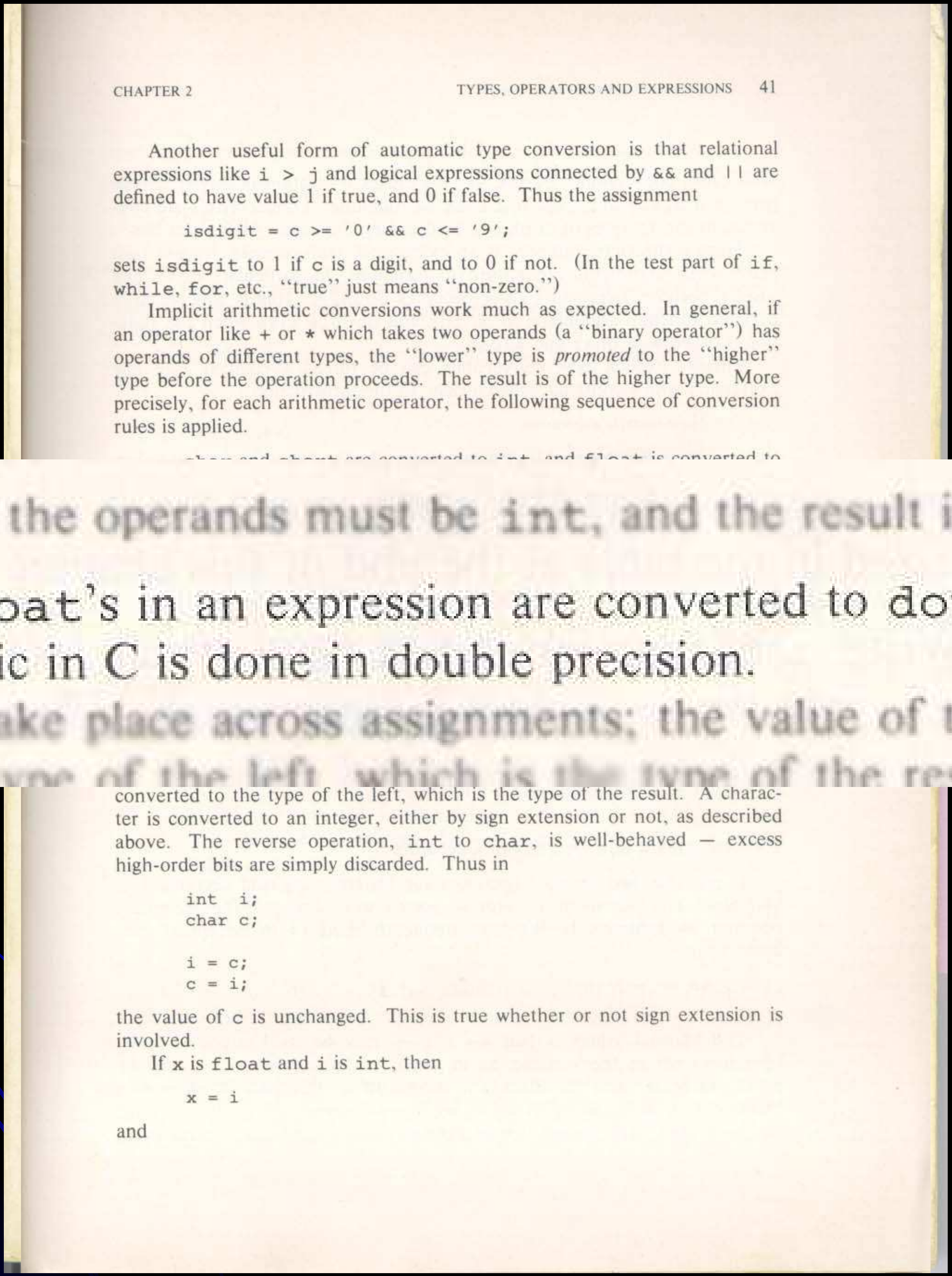


Result: 4 Turnarounds per hour

Results of Debug Disparity

- Workstation
  - Shipped on time
  - I offered to share resources & techniques
- Server manager: “That’s not fair.”
  - His veteran engineers couldn’t program
  - Tried to take away my workstations
  - Server schedule slipped by months

Disaster #4: Self Inflicted Wounds



Another useful form of automatic type conversion is that relational expressions like `i > j` and logical expressions connected by `&&` and `||` are defined to have value 1 if true, and 0 if false. Thus the assignment

```
isdigit = c >= '0' && c <= '9';
```

sets `isdigit` to 1 if `c` is a digit, and to 0 if not. (In the test part of `if`, `while`, `for`, etc., "true" just means "non-zero.")

Implicit arithmetic conversions work much as expected. In general, if an operator like `+` or `*` which takes two operands (a "binary operator") has operands of different types, the "lower" type is *promoted* to the "higher" type before the operation proceeds. The result is of the higher type. More precisely, for each arithmetic operator, the following sequence of conversion rules is applied.

`char` and `short` are converted to `int`, and `float` is converted to

Otherwise the operands must be `int`, and the result is `int`.

Notice that all `float`'s in an expression are converted to `double`; all floating point arithmetic in C is done in double precision.

Conversions take place across assignments; the value of the right side is

converted to the type of the left, which is the type of the result. A charac-

converted to the type of the left, which is the type of the result. A character is converted to an integer, either by sign extension or not, as described above. The reverse operation, `int` to `char`, is well-behaved — excess high-order bits are simply discarded. Thus in

```
int  i;
char c;

i = c;
c = i;
```

the value of `c` is unchanged. This is true whether or not sign extension is involved.

If `x` is `float` and `i` is `int`, then

```
x = i
```

and

Lessons Learned

- There is no substitute for domain-specific expertise.
- Don’t let your competitor tell you something about your own product you don’t know.
- Know when to cut your losses.

STOP
IN THE
NAME OF
HUMANITY