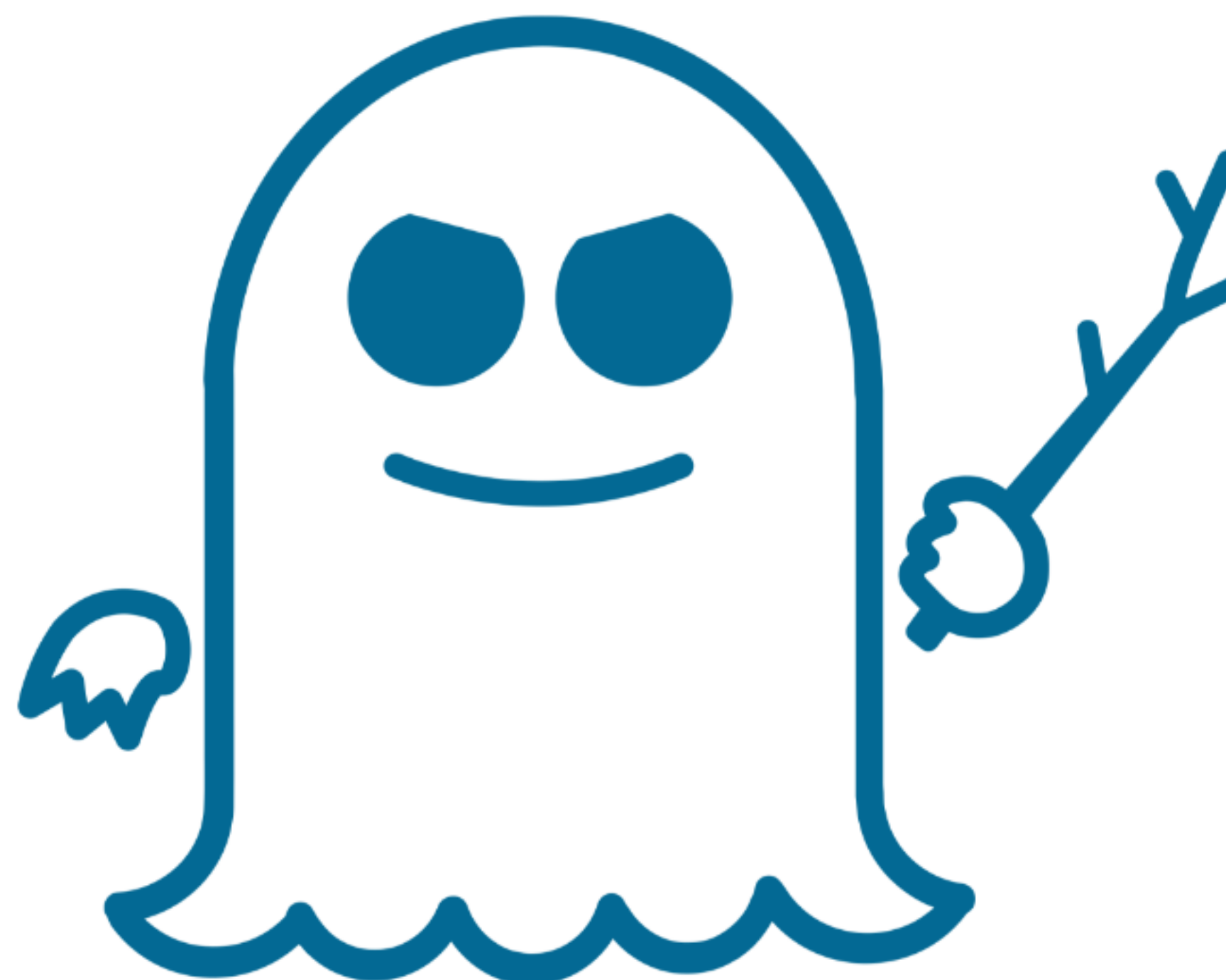
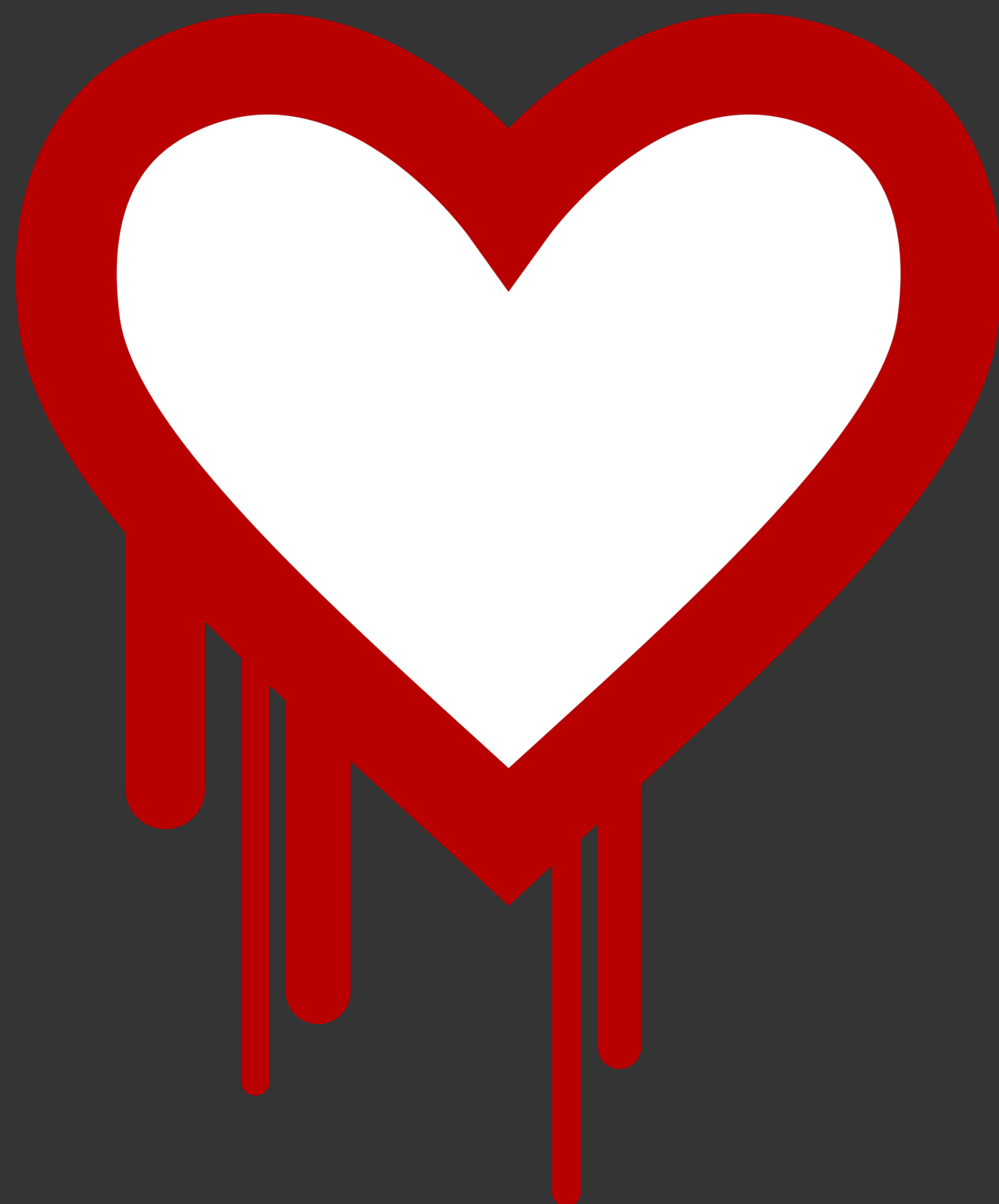




UBER

001436











COM 3529

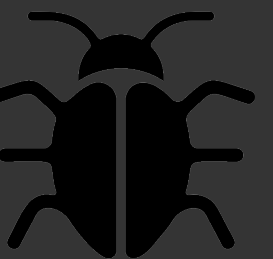
SOFTWARE TESTING & ANALYSIS

Professor Phil McMinn

Introduction

Beizer's Maturity Model

1. There's no difference between testing and debugging
2. The purpose of software testing is to show that software works
3. The purpose of software testing is to show that software doesn't work
4. The purpose of software testing is not to show anything in particular, but to reduce the risk of using software
5. Testing is a mental discipline that helps all IT professionals develop higher quality software



“ Excellent testing can make you
unpopular with almost everyone ”

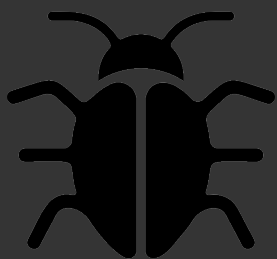




“ Software testing can only
show the presence, not the
absence of bugs ”



	Tractable problems (<i>N</i>)	Intractable problems (<i>P</i>)	Uncomputable problems
Description	Can be solved efficiently	Method for solving exists, but is hopelessly time consuming	Cannot be solved by any computer program
Computable in theory	✓ 😎	✓ 😎	✗ 😭
Computable in practice	✓ 😎	? 🤔	✗ 😭
Example	Find the shortest route on a map	Decryption	<i>Finding all bugs in computer programs</i>



Demo
(to complete)



92

9/9

0800 Antan started
 1000 " stopped - antan ✓
 1300 (032) MP-MC ~~1.582647000~~ 2.130476415 (23) 4.615925059(-2)
 (033) PRO 2 2.130476415
 conch 2.130676415

Relays 6-2 in 033 failed special speed test
 in relay " 11.00 test.

Relay
 214.5
 Relay 3370

1100 Started Cosine Tape (Sine check)
 1525 Started Mult+ Adder Test.

1545



Relay #70 Panel F
 (moth) in relay.

First actual case of bug being found.

1630 Antan started.
 1700 closed down.



Friday, 24th June.

Checking a large routine. by Dr. A. Turing.

How can one check a routine in the sense of making sure that it is right?

In order that the man who checks may not have too difficult a task the programmer should make a number of definite assertions which can be checked individually, and from which the correctness of the whole programme easily follows.

Consider the analogy of checking an addition. If it is given as:

1374
5906
6719
4337
7768
—

26104

one must check the whole at one sitting, because of the carries.

But if the totals for the various columns are given, as below:

1374
5906
6719
4337
7768
—

3974
2213
—

26104



A Promise – What You Will Get From This Module

- To complete

