

# Goldfish



Mac OS X live forensics tool

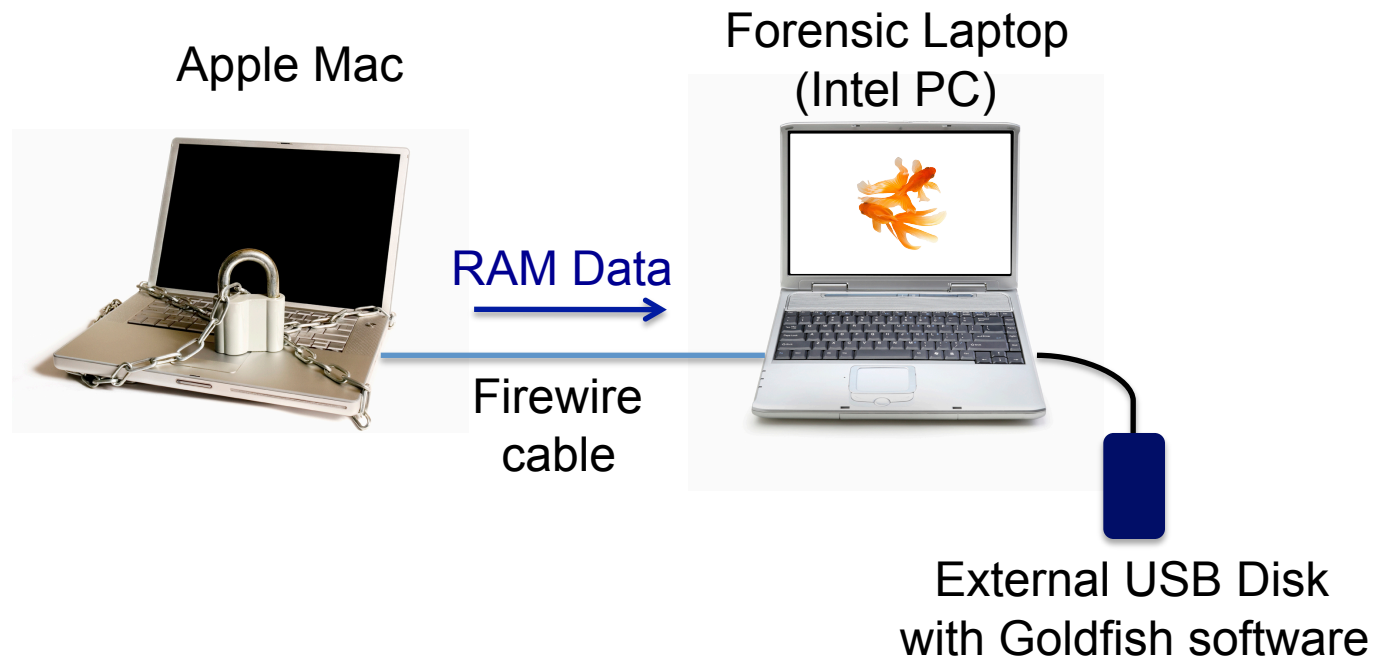


# What is Goldfish?

- Goldfish is a MAC OS X live forensic tool.
- It dumps the system RAM of the target computer using a firewire cable.
- It extracts login password and any open AIM conversation fragments.
- Costs basically nothing except 15 minutes to get the results.
- Started as MSc project of Ms. Afrah Almansoori at UCD Centre for Cybercrime Investigation.



# How it works?





# Snapshots

```
afrah@ucd: ~  
File Edit View Terminal Tabs Help  
afrah@ucd:~$ su root  
Password:  
ucd:/home/afrah# perl Goldfish.pl  
Please connect to MAC OS X via firewire and press Enter
```

Starting  
Goldfish  
script

Imaging  
RAM...

```
afrah@ucd: ~  
File Edit View Terminal Tabs Help  
Node(number=1, nodeid=0xffc1)  
ConfigROM(  
  Length : 16 bytes  
  CRC Length : 16 bytes  
  CRC : 0xf356 (Valid)  
  Bus ID : "1394"  
  GUID : 0x002500fffea4e1c8  
  Vendor : 0x00002500 ()  
  Link Speed : 3 (Unknown)  
  Max Record Size : 11 (4096 bytes)  
  Isochronous Capable : 1 (Yes)  
  Bus Master Capable : 0 (No)  
  Cycle Master Capable : 1 (Yes)  
  Cycle Master Clock Accuracy : 0 ppm  
  Isochronous Resource Manager Capable : 1 (Yes)  
  Root Directory: 36 bytes, crc: 0x938e (Valid)  
    0 (Immediate Value), 56 (Unknown 56): 0x9  
    0 (Immediate Value), 3 (Module Vendor ID): 0xa27 (Apple Computer, Inc.)  
  ./1394memimage 0 1 mac2009-6-1-14-22-27-717854/imac.img 0-1G  
  1394memimage v1.0 Adam Boileau, 2006. <adam@storm.net.nz>  
  Init firewire, port 0 node 1  
  Reading 0x11200000 (280576KiB) at 4167 KiB/s...
```



# Results

```
alrah@ucd: ~
File Edit View Terminal Tabs Help
)
Node(number=1, nodeid=0xffc1)
ConfigROM(
  Length           : 16 bytes
  CRC Length       : 16 bytes
  CRC              : 0xf356 (Valid)
  Bus ID          : "1394"
  GUID            : 0x002500fffea4e1c8
  Vendor         : 0x00002500 ( )
  Link Speed     : 3 (Unknown)
  Max Record Size : 11 (4096 bytes)
  Isochronous Capable : 1 (Yes)
  Bus Master Capable : 0 (No)
  Cycle Master Capable : 1 (Yes)
  Cycle Master Clock Accuracy : 0 ppm
  Isochronous Resource Manager Capable : 1 (Yes)
  Root Directory: 36 bytes, crc: 0x938e (Valid)
    0 (Immediate Value), 56 (Unknown 56): 0x9
    0 (Immediate Value), 3 (Module Vendor ID): 0xa27 (Apple Computer, Inc.)
./1394memimage 0 1 mac2009-6-1-14-22-27-717854/imac.img 0-1G
1394memimage v1.0 Adam Boileau, 2006. <adam@storm.net.nz>
Init firewire, port 0 node 1
Reading 0x3fe00000 (1046528KiB) at 4072 KiB/s...
1073741824 bytes read
Elapsed time 257.46 seconds
Writing metadata and hashes...
mac2009-6-1-14-22-27-717854
please wait..
please wait....
possible password: hangisi
The AIM conversation fragments found: almansoorisony 14:00:31 TESTING MSG: HELLO THERE

The AIM conversation fragments found: coolbanana164 14:01:22 today is a nice day

The AIM conversation fragments found: almansoorisony 14:02:01 Dublin's weather is always nice

The AIM conversation fragments found: almansoorisony 14:02:47 The temperature is around 17 degrees
```

Login password

AIM Messgaeas

hangisi

almansoorisony 14:00:31 TESTING MSG: HELLO THERE  
coolbanana164 14:01:22 today is a nice day  
almansoorisony 14:02:01 Dublin's weather is always nice  
almansoorisony 14:02:47 The temperature is around 17 degrees