# Debugging.TV

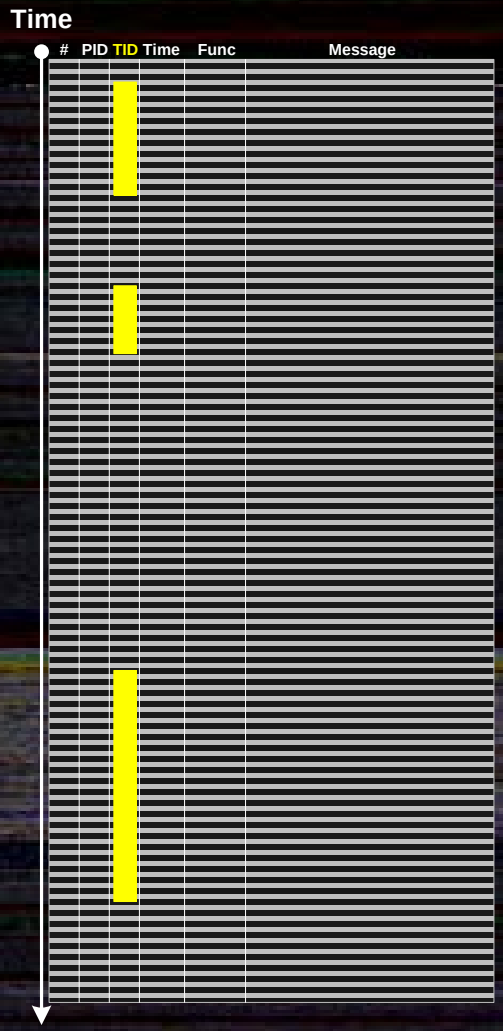
## Frame 0x14

Presenter: Dmitry Vostokov

# Topics

- Thread
- Adjoint Thread
- Software Trace Analysis Patterns
- Examples (Procmon, CDFAnalyzer, Excel)

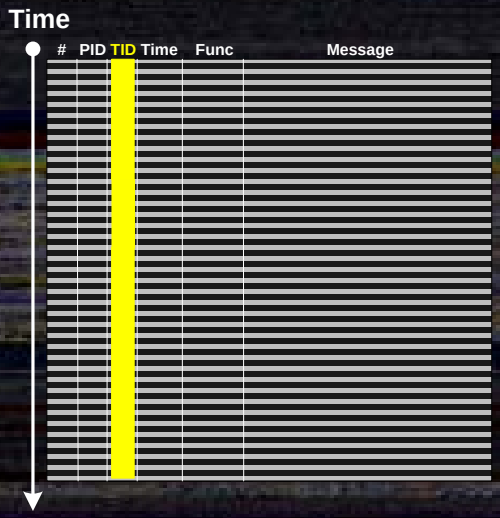
# Thread



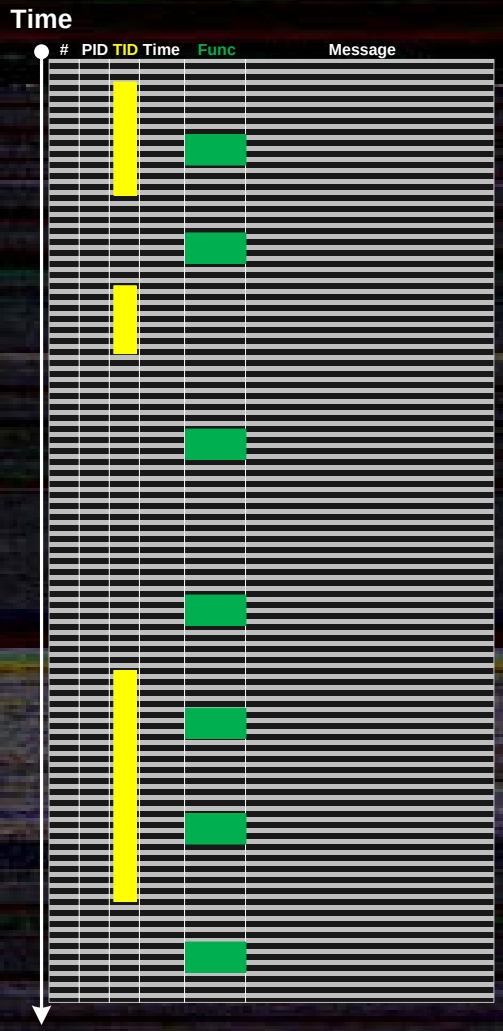

{ msg | TID = N }

SELECT * FROM Messages WHERE Messages.TID = N

<T|A> <Constant|Variable>

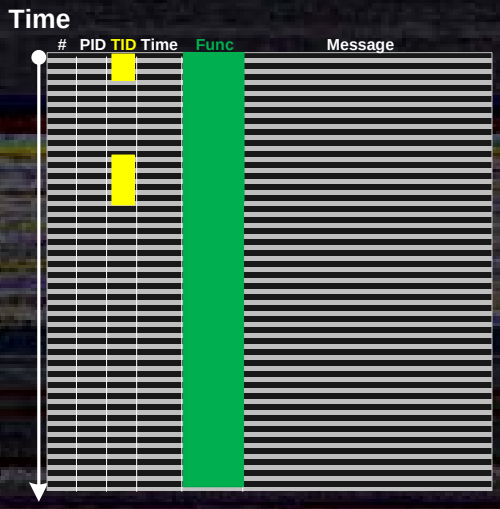


# Adjoint Thread

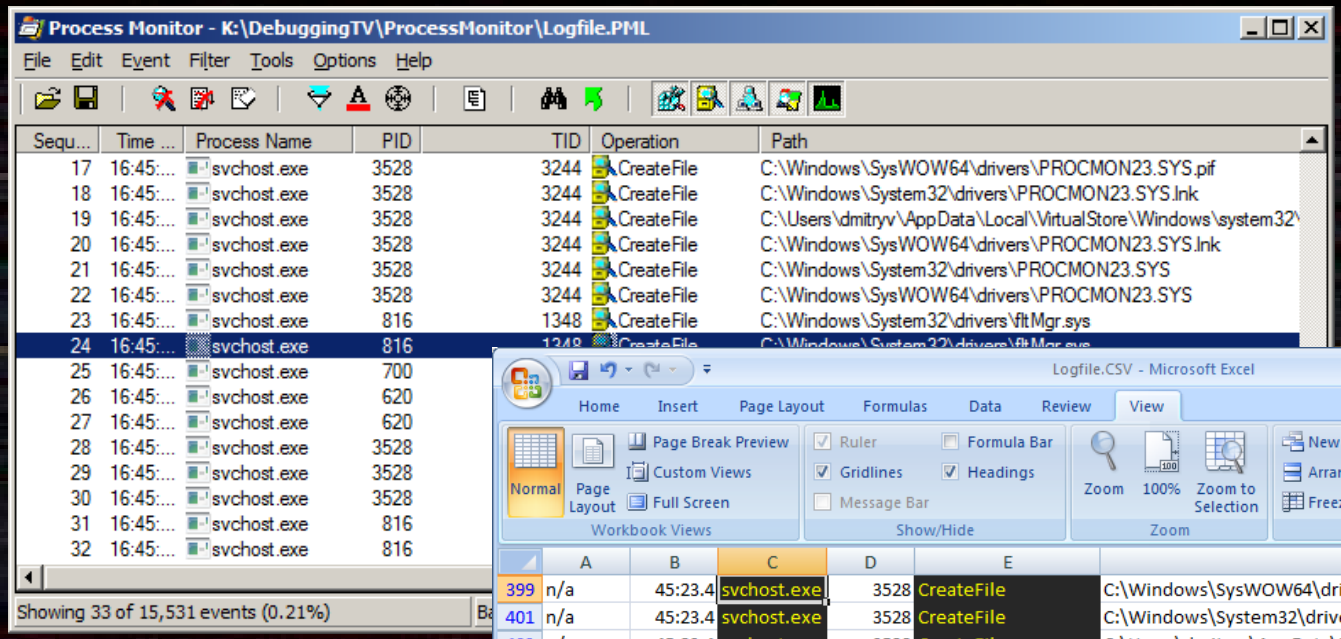


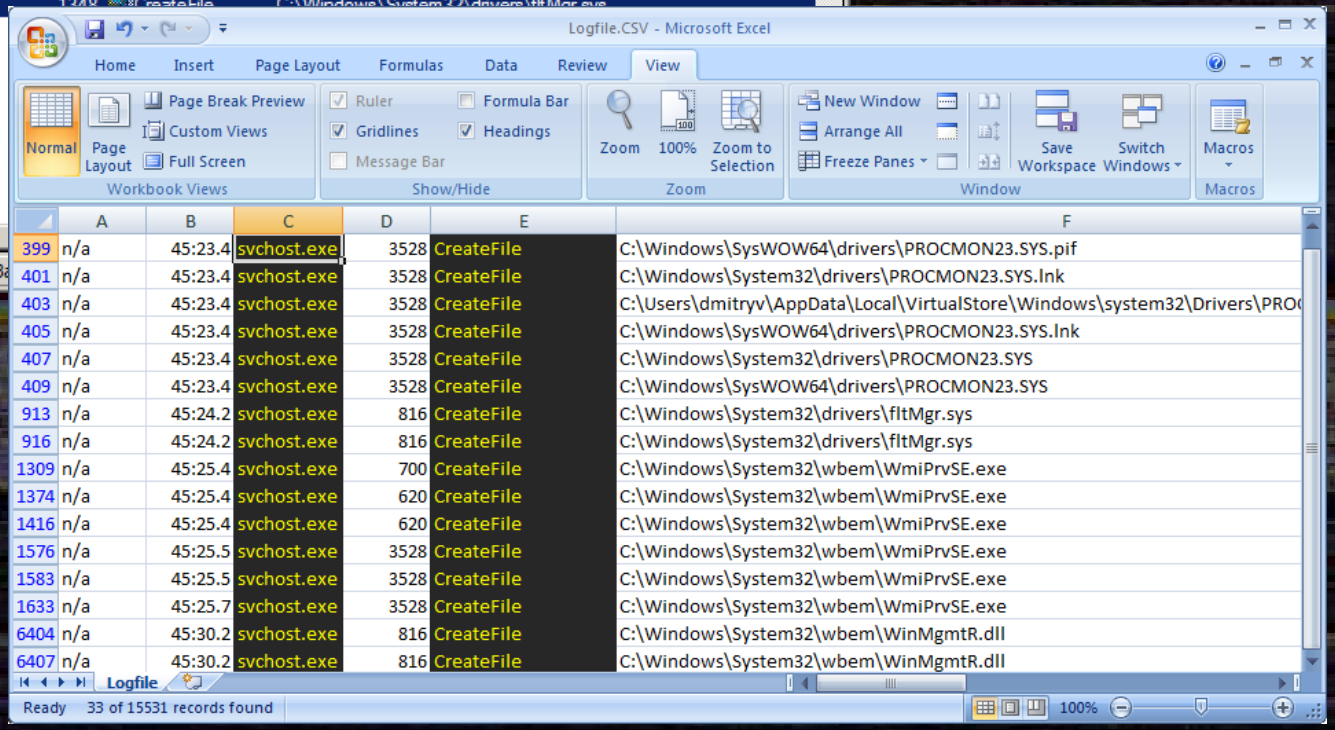

```
{ msg | Func = ‘Text’ }

SELECT * FROM Messages
    WHERE Messages.Func = ‘CreateProcess’

<T|A> <-> <A|T>
```

From mathematics: Adjoint



# Log Analysis Patterns




- Discontinuity
- Time Delta
- Anchor Messages
- Fiber Bundle

Complex adjoint threads: nested filtering

# Suggested Reading

Articles on adjoint threading:

- Extending Multithreading to Multibraiding
- What is an Adjoint Thread?

Tools supporting adjoint threading:

- Process Monitor
- Citrix CDFAnalyzer

# !Ad Hardcore Software Support Training

| | |
|---|---|
| November 2-5, 2012 | Accelerated Windows Software Trace Analysis |
| November 16-26, 2012 | Accelerated Windows Memory Dump Analysis |
| December 7-10, 2012 | Accelerated Windows Malware Analysis |
| December 17, 2012 | Philosophy of Software Diagnostics (FREE) |
| Early 2013 | The New Old Debugging |

## Debugging$^3$

Coming soon

# Debugging.TV

Now on YouTube!

http://www.youtube.com/DebuggingTV