

A game by Solar Designer (@solardiz)
for ZeroNights 2014 (Moscow, Russia)
written in 1994-95 ("code"), 2014 ("data")
(includes pre-1994 library code and fonts)

<http://www.openwall.com/zn2014>

Welcome to DOSBox v0.72

For a short introduction for new users type: **INTRO**

For supported shell commands type: **HELP**

If you want more speed, try **ctrl-F8** and **ctrl-F12**.

To activate the keymapper **ctrl-F1**.

For more information read the **README** file in the DOSBox directory.

HAVE FUN!

The DOSBox Team

Z:\>SET BLASTER=A220 I7 D1 H5 T6

Z:\>SET ULTRASND=240,3,3,5,5

Z:\>SET ULTRADIR=C:\ULTRASND

Z:\>mount c .

Drive C is mounted as local directory ./

Z:\>c:

C:\>_

Z:\>SET ULTRASND=240,3,3,5,5

Z:\>SET ULTRADIR=C:\ULTRASND

Z:\>mount c .

Drive C is mounted as local directory ./

Z:\>c:

C:\>dir

Directory of C:\.

.	<DIR>		25-11-2014	9:21
..	<DIR>		25-11-2014	9:22
COMMON	<DIR>		24-11-2014	1:53
PICTURES	<DIR>		25-11-2014	9:18
SCREENS	<DIR>		25-11-2014	4:44
SOUNDS	<DIR>		24-11-2014	2:59
GAME	CFG	1	24-11-2014	4:13
GAME	EXE	139,456	17-07-1995	5:38
UGA256	DRU	1,663	13-11-1995	23:00
3 File(s)		141,120	Bytes.	
6 Dir(s)		110,540,800	Bytes free.	

C:\>

Z:\>SET ULTRADIR=C:\ULTRASND

Z:\>mount c .

Drive C is mounted as local directory ./

Z:\>c:

C:\>dir

Directory of C:\.

.	<DIR>		25-11-2014	9:21
..	<DIR>		25-11-2014	9:22
COMMON	<DIR>		24-11-2014	1:53
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3 File(s)		141,120	Bytes.	
6 Dir(s)		110,540,800	Bytes free.	

C:\>game

AGL II Version 0.5 BETA Copyright (c) 1994,95 by Solar Designer

from Russia with 0-days



zeronights.org

SHALL WE PLAY A GAME?

"WarGames" (1983)

SHALL WE PLAY A GAME?

List Games

FALKEN'S MAZE
BLACK JACK
GIN RUMMY
HEARTS
BRIDGE
CHECKERS
CHESS
POKER

List Games

FALKEN'S MAZE
BLACK JACK
GIN RUMMY
HEARTS
BRIDGE
CHECKERS
CHESS
POKER
INFOSEC



IBM PRESENTS

Alley Cat™

By
Bill Williams



"Alley Cat" (1983 Atari; 1984 PC)

PRESENTS

Alley Cat™

By
Bill Williams



About F1

Load F3
Save F2

Exit Alt+X

IBM
PRESENTS

Cody™

By
Bill Williams

HI-000-0000

LOVE

THEM

9 CAT
000-0000
MOUSE

About	F1
Load	F3
Save	F2
Exit	Alt+X

IBM
PRESENTS

Wiggly Cat™

By
Bill Williams



GOTO FAIL GET POST PEEK POKE EXPLOIT PATCH

INVENTORY

TDM

Save Game

[EMPTY SLOT]

OK

Cancel

IBM PRESENTS

TM

Save Game

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

IBM
PRESENTSIBM
Save Game

3%

OK

Cancel

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

IBM
PRESENTSIBM
Save Game

3%

OK

Cancel

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

The game has been saved.

PRESENTS

Alley Cat™

By
Bill Williams



IBM PRESENTS

Alley Cat™

By
Bill Williams



IBM PRESENTS

Alley Cat™

By
Bill Williams



- Bearcat
PRESENTS

Alley Cat™

By
Bill Williams

FAIL



fear more and less!

PRESENTS

Alley Cat™

By
Bill Williams

FAIL



PRESENTS

Alley Cat™

By
Bill Williams

FAIL



IBM PRESENTS

Alley Cat™

By
Bill Williams



IBM PRESENTS

Alley Cat™

By
Bill Williams



TDM

Inventory



cat

H3

KL

1
00

TDM
Inventory

cat

H3

KL

1
00

T M

Close Alt+F3
Move Ctrl+F5

Inventory

cat

M3

KL

1
00

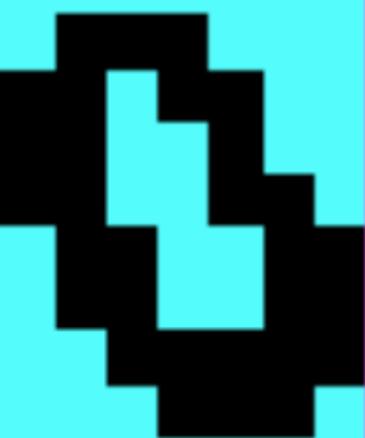
IBM PRESENTS

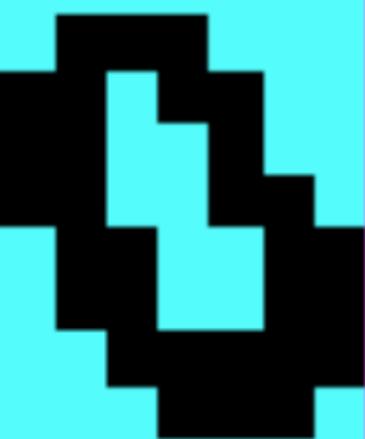
Alley Cat™

By
Bill Williams



"Star Wars episode VI" (1983)





IBM PRESENTS

Alley Cat™

By
Bill Williams



I'll take LUKE'S lightsaber
PRESENTS

*Alley Cat*TM

By
 Bill Williams



cut off 200 ~~TH~~ and it will make

PRESENTS

Alley Cat™

By
Bill Williams



a nice red laser pointer!

PRESENTS

Alley Cat™

By
Bill Williams



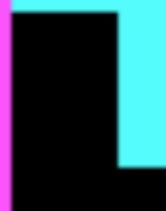
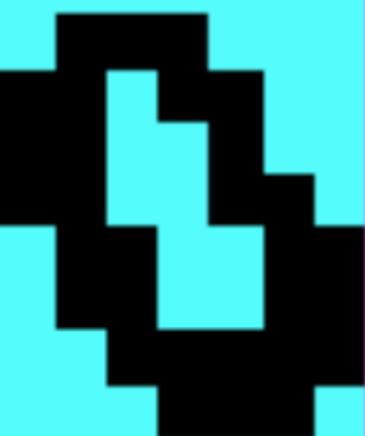
IBM PRESENTS

Alley Cat™

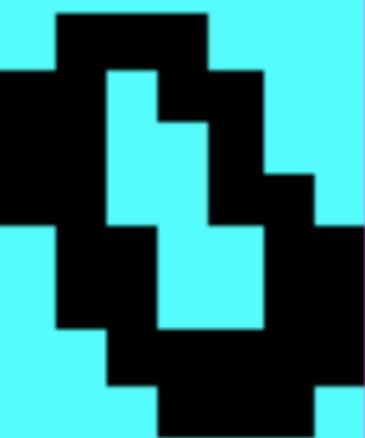
By
Bill Williams

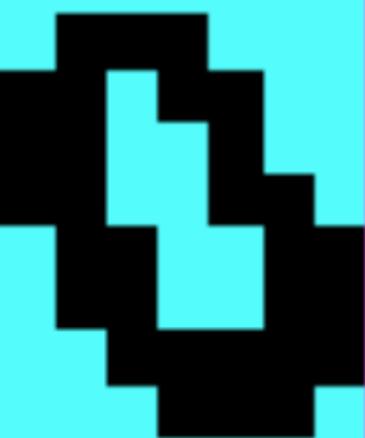


"Star Wars episode VI" (1983)



(without the wrong-colored lightsaber)





TDM
Inventory

laser pointer



cat

H3

KL

1
00

IBM PRESENTS

Alley Cat™

By
Bill Williams



"Nineteen Eighty-Four" (1949)



**BIG BROTHER IS
WATCHING YOU**

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"The Fifth Hope" artwork (2004)



**BIG BROTHER IS
WATCHING YOU**

© 2004 Electronic Arts Inc. All rights reserved.



**BIG BROTHER IS
WATCHING YOU**

© 1984 Electronic Arts Inc. All rights reserved.

IBM PRESENTS

Alley Cat™

By
Bill Williams



IBM
 PRESENTS

Alley Cat™

By
 Bill Williams



I've FOUND it
PRESENTS

Alley Cat™

By
Bill Williams



and there's a telescreen behind!

PRESENTS

*Alley Cat*TM

By
Bill Williams



IBM PRESENTS

Alley Cat™

By
Bill Williams



IBM PRESENTS

Alley Cat™

By
Bill Williams





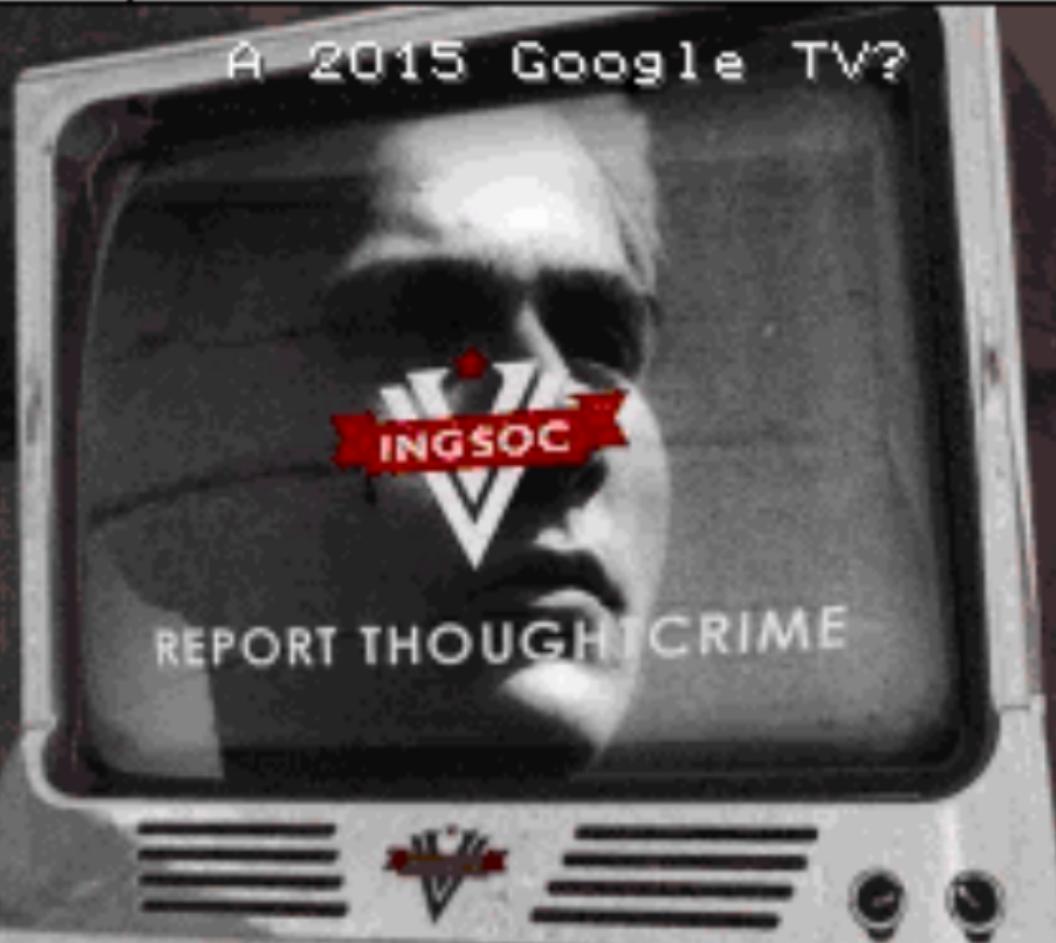
What's this?



INGSOC

REPORT THOUGHTCRIME

A 2015 Google TV?



INGSOC

REPORT THOUGHTCRIME

A 2015 Apple iFence?



INGSOC

REPORT THOUGHTCRIME

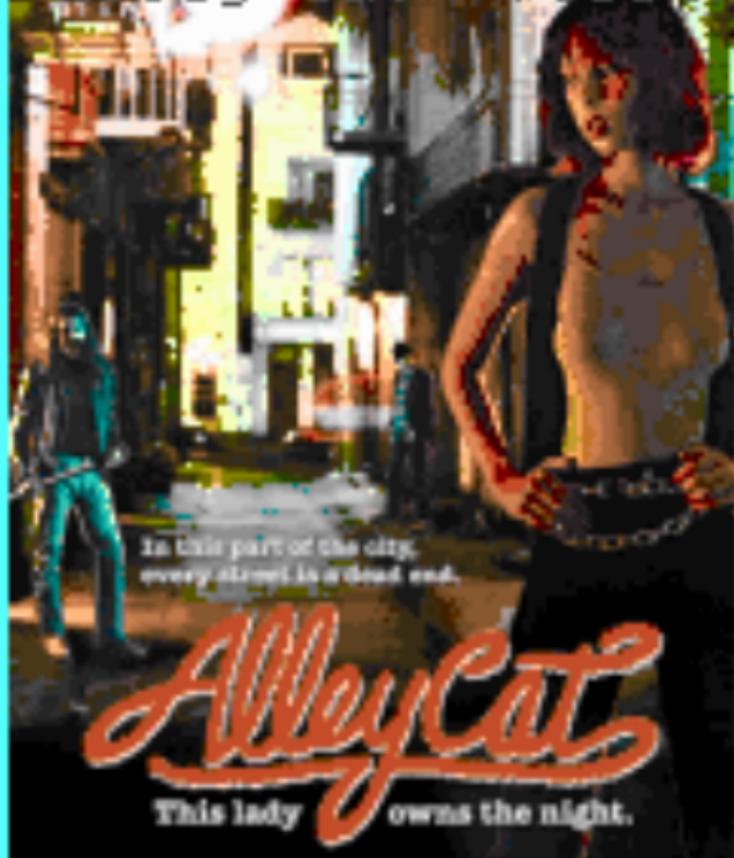
IBM PRESENTS

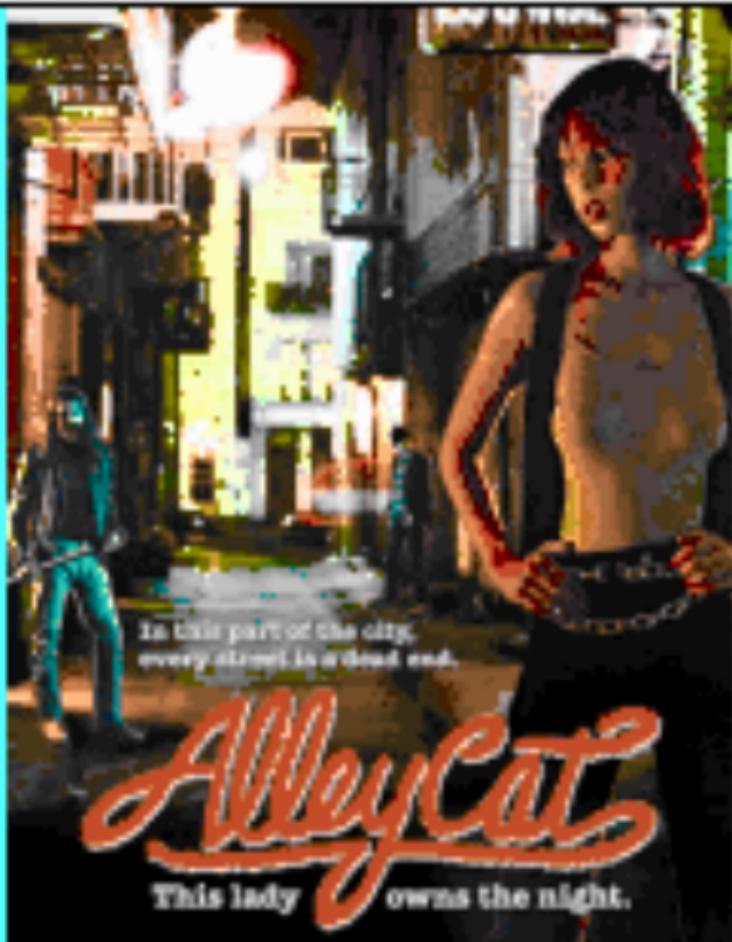
Alley Cat™

By
Bill Williams



"Alley Cat" (1984)





TBM

Save Game

[EMPTY SLOT]

3%



OK

Cancel

IBM
PRESENTSIBM
Save Game

10%

OK

Cancel

M3'0

CAT
0000

KL

M3

ES

IBM PRESENTS

Alley Cat™

By
Bill Williams

GOTO





GET



Inventory



ZeroNights matryoshka.



laser pointer



cat

GOTO



GOTO

FAIL

GET

POST

PEEK

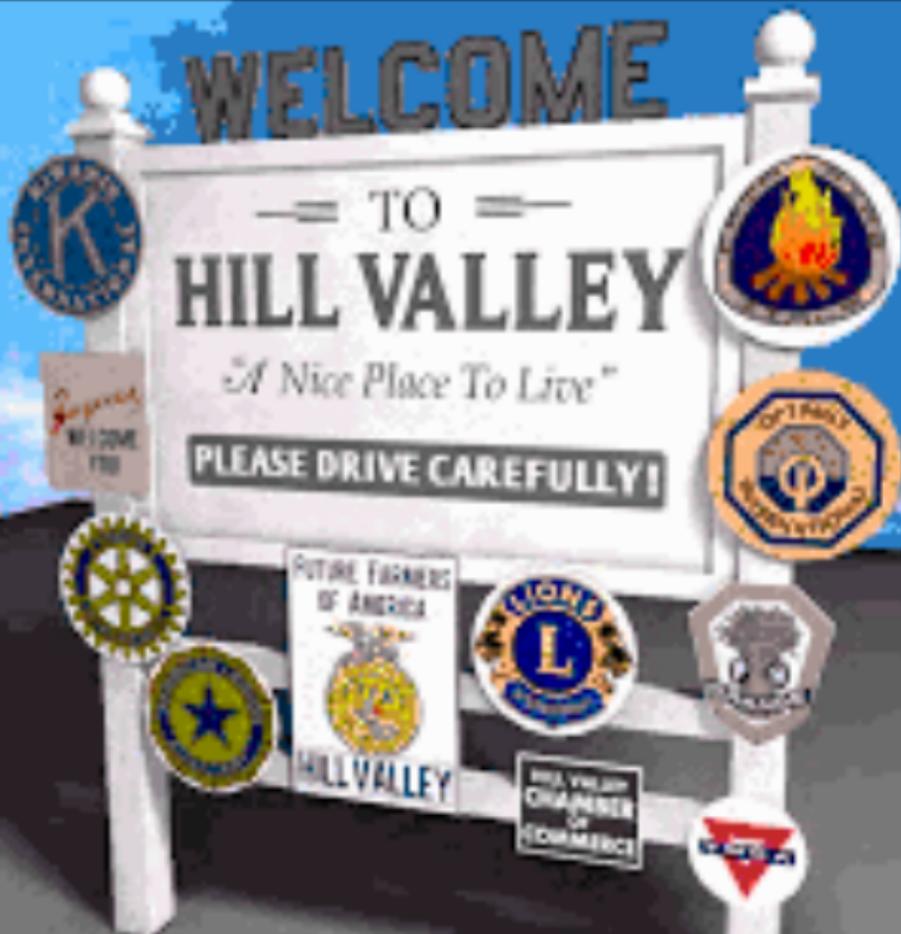
POKE

EXPLOIT

PATCH

INVENTORY

GOTO



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



EXPLOIT



EXPLOIT



It's a DeLorean.







EXPLOIT



EXPLOIT



PEEK

The driver's door is open.











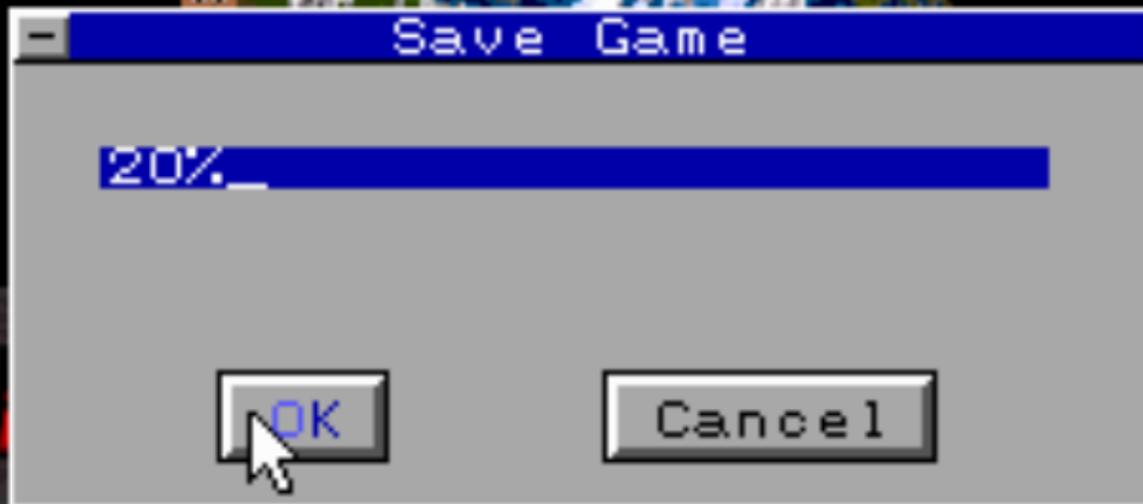


EXPLOIT

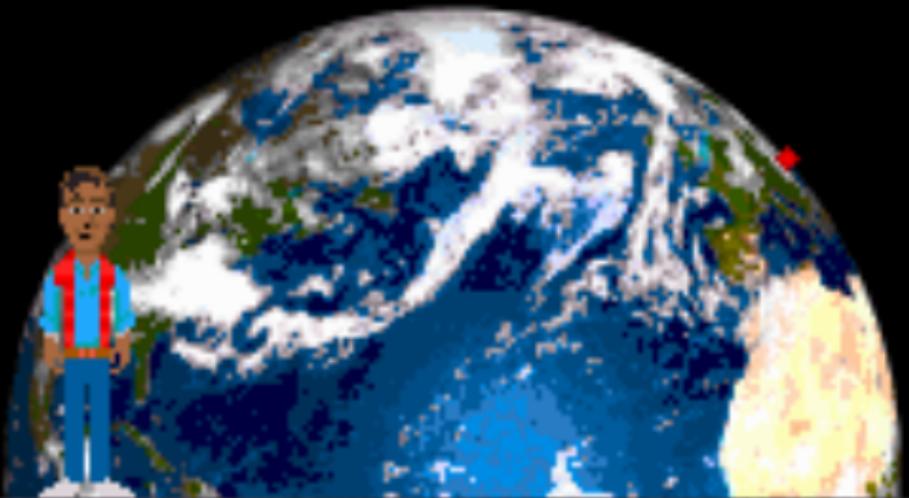
MONTH	DAY	YEAR	AM	HOUR	MIN
NOV	13	1985	PM	12	00

DESTINATION TIME





GOTO



MONTH	DAY	YEAR	AM	PM	HOURS	MIN
NOV	13	1985		<input checked="" type="radio"/>	12	00

DESTINATION TIME

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

GOTO



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

GOTO



GOTO

MONTH	DAY	YEAR	AM	HOUR	MIN
NOV	13	1999	PM	12	00
DESTINATION TIME					

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

GOTO





GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY





"All About Eve" (1950)
ALL ABOUT EVE



ALL ABOUT EVE



eve

That's eye of theater.

ALL ABOUT EVE



Who's Eye of security theater?

ALL ABOUT EVE



Is there Eve of security circus?

ALL ABOUT EVE



eve

Does security circus exist

ALL ABOUT EVE



or is it Linus' imagination?

ALL ABOUT EVE



Did the crypto Eve work for NSA

ALL ABOUT EVE



eve

all this time or only recently?

ALL ABOUT EVE



eve

ALL ABOUT EVE





Inventory



time traveler's watch



DeLorean



ZeroNights matryoshka

ZeroNights everywhere



POST



ZeroNights every time



POST



ZeroNights every spacetime!



POST





GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GET



GET

Inventory



ZeroNights matryoshka.



time traveler's watch



Release

Inventory



time traveler's watch



DeLorean



laser pointer



cat

Inventory



time traveler's watch



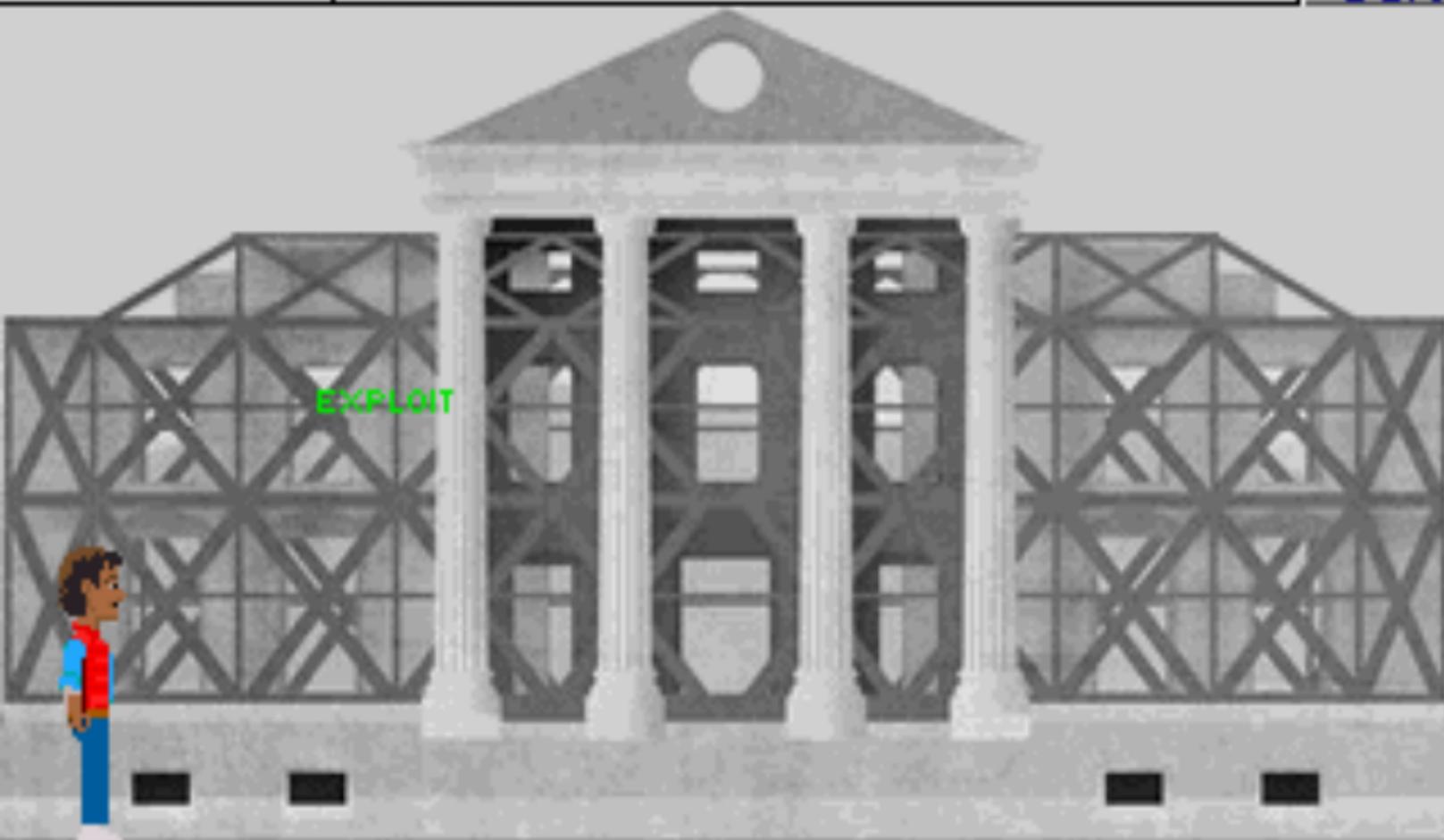
DeLorean



laser pointer



cat



Inventory



ZeroNights matryoshka.



time traveler's watch



Release



It says 2022.



PEEK

Must be 32-bit time_t under-flow.



PEEK

Let me figure this out...



PEEK

OK. It must be 1885.



PEEK

Should have used OpenBSD

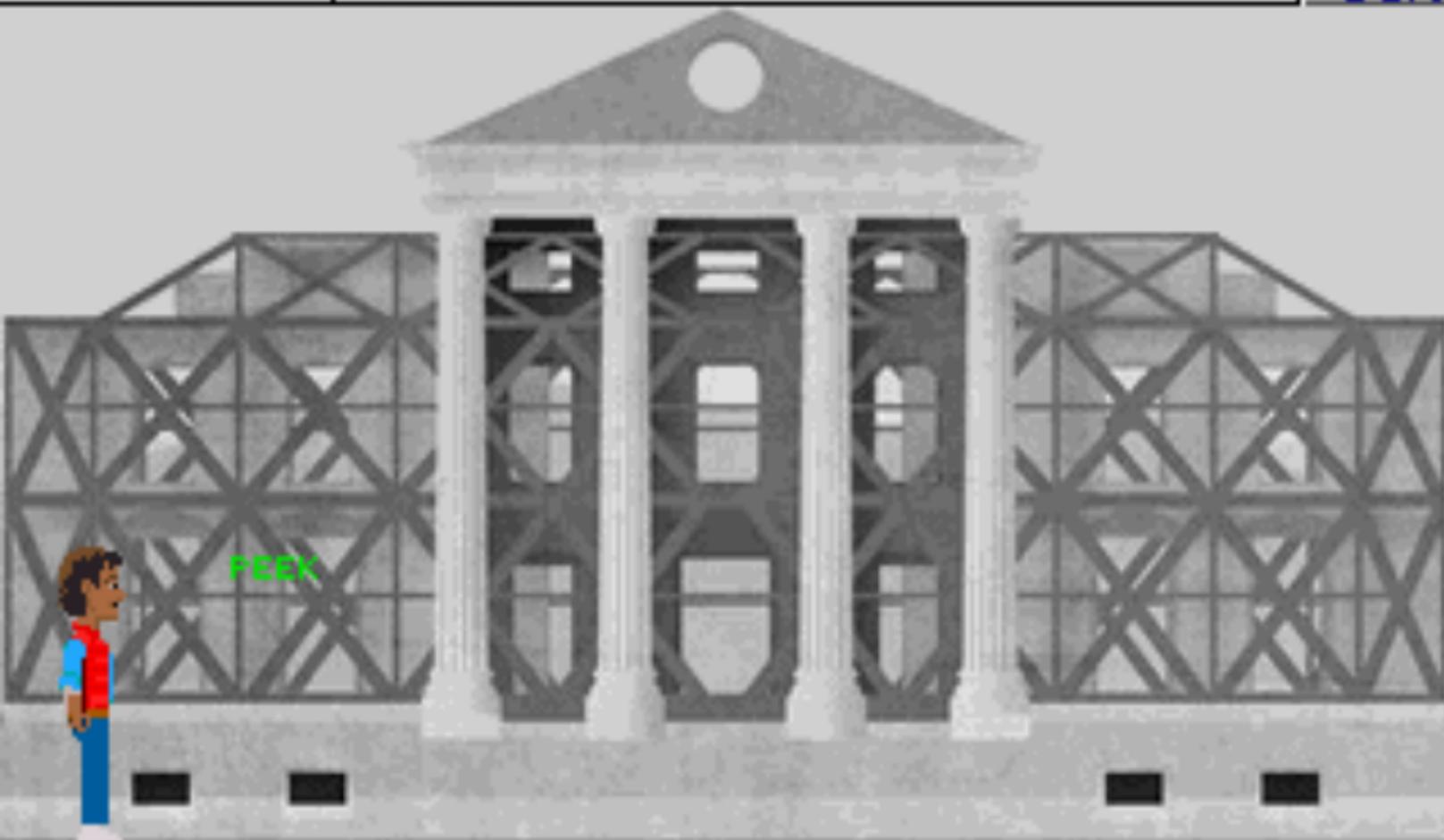


PEEK

to travel this far back.



PEEK



PEEK

Inventory



time traveler's watch



DeLorean



laser pointer



cat





EXPLOIT

MONTH

NOV

DAY

13

YEAR

1885

AM

PM

HOURS

12

MIN

00

DESTINATION TIME

GOTO

FAIL

GET

POST

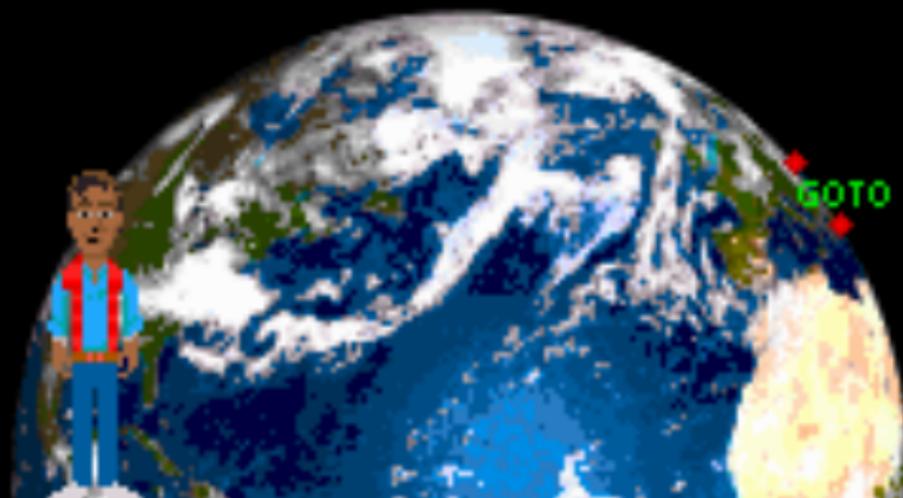
PEEK

POKE

EXPLOIT

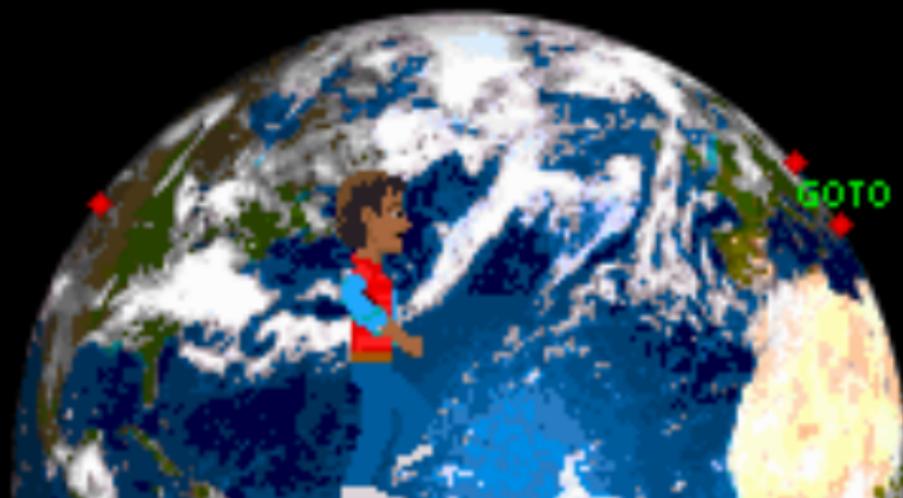
PATCH

INVENTORY



MONTH	DAY	YEAR	AM	HOURS	MIN
NOV	13	1885	PM	12	00

DESTINATION TIME



MONTH

NOV

DAY

13

YEAR

1885

AM

PM

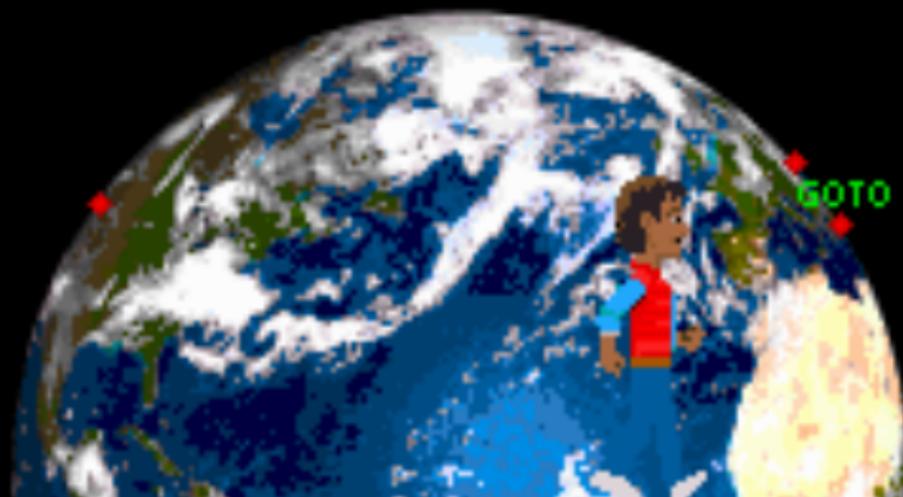
HOUR

12

MIN

00

DESTINATION TIME



MONTH	DAY	YEAR	AM	HOURS	MIN
NOV	13	1885	PM	12	00

DESTINATION TIME



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

Calcutta/Kolkata (India)

GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

Telegraph office

GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

THE INDIAN TELEGRAPH ACT, 1885.

CONTENTS.

PART I.

PRELIMINARY.

SECTIONS.

1. Short title, local extent and commencement.
2. Repeal and savings.
3. Definitions.

PART II.

PRIVILEGES AND POWERS OF THE GOVERNMENT.

4. Exclusive privilege in respect of telegraphs, and power to grant licenses.
5. Power for Government to take possession of licensed telegraphs and to order interception of messages.
6. Power to establish telegraph on land of Railway Company.
7. Power to make rules for the conduct of telegraphs.
8. Revocation of licenses.
9. Government not responsible for loss or damage.



GOTO

(Part II.—Privileges and Powers of the Government.—Sections 5-7.)

sideration of such payments as he thinks fit, to any person to establish, maintain or work a telegraph within any part of British India.

 (1) On the occurrence of any public emergency, or in the interest of the public safety, the Governor General in Council or a Local Government, or any officer specially authorised in this behalf by the Governor General in Council, may—

(a) take temporary possession of any telegraph

- (a) take temporary possession of any telegraph established, maintained or worked by any person licensed under this Act; or
- (b) order that any message or class of messages to or from any person or class of persons, or relating to any particular subject, brought for transmission by or transmitted or received by any telegraph, shall not be transmitted, or shall be intercepted or detained, or shall be disclosed to the Government or an officer thereof mentioned in the order.



If any doubt arises as to the existence of a public emergency, or whether any act done under

or from any person or class of persons, or relating to any particular subject, brought for transmission by or transmitted or received by any telegraph, shall not be transmitted, or shall be intercepted or detained, or shall be disclosed to the Government or an officer thereof mentioned in the order.

(6) If any doubt arises as to the existence of a public emergency, or whether any act done under subsection (1) was in the interest of the public safety, a certificate signed by a Secretary to the Government of India or to the Local Government shall be conclusive proof on the point.

or from any person or class of persons, or

Inventory



time traveler's watch



DeLorean



laser pointer



cat

(
publ
sub-
safel
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be c

conclusive proof on the point.

bought
or re-
trans-
ained,
ent or
er.

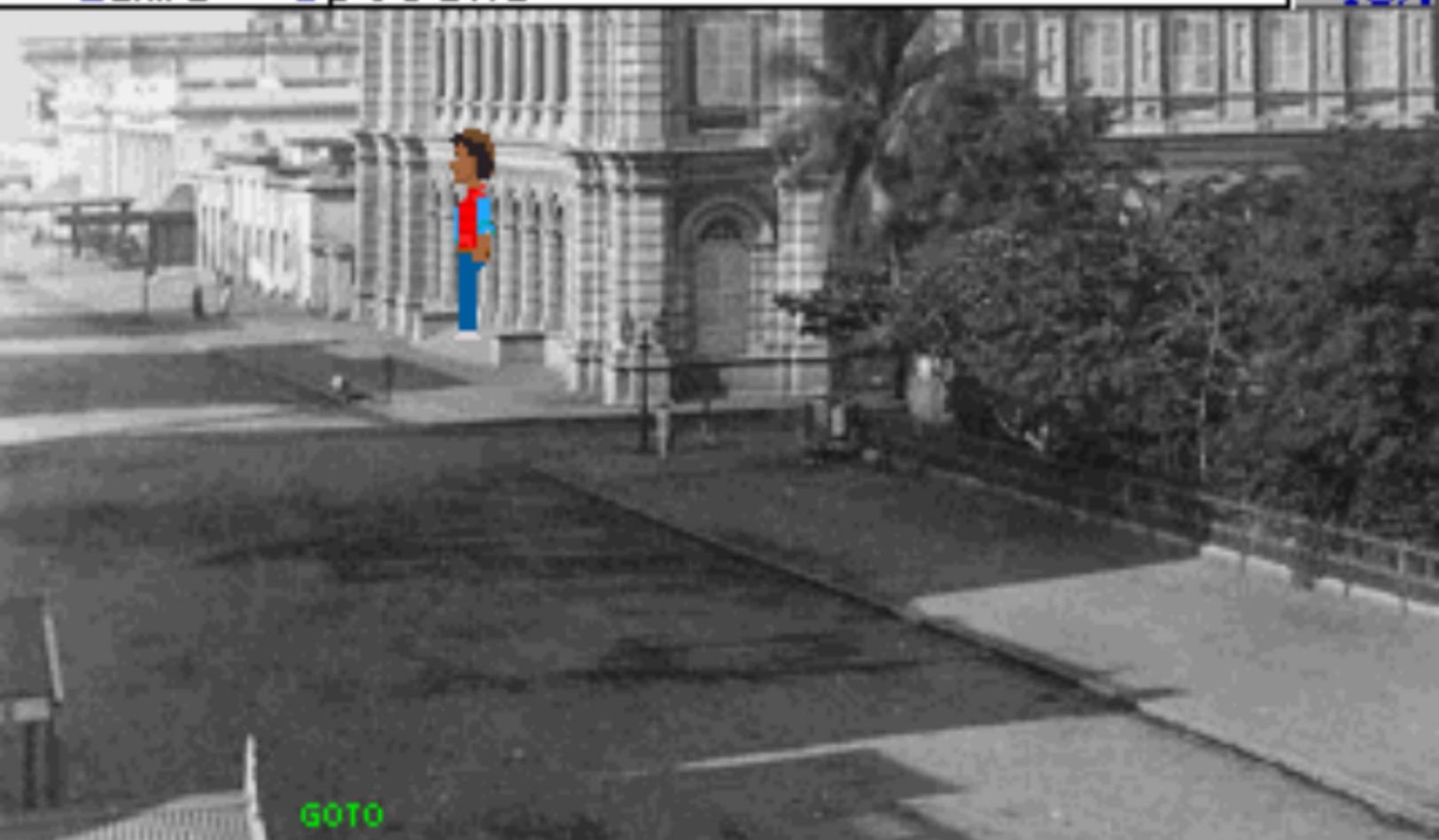
of a
nder
public
Gov-
shall

or from any person or class of persons, or relating to any particular subject, brought for transmission by or transmitted or received by any telegraph, shall not be transmitted, or shall be intercepted or detained, or shall be disclosed to the Government or an officer thereof mentioned in the order.

(2) If any doubt arises as to the existence of a public emergency, or whether any act done under subsection (1) was in the interest of the public safety, a certificate signed by a Secretary to the Government of India or to the Local Government shall be conclusive proof on the point.

or from any person or class of persons, or relating to any particular subject, brought for transmission by or transmitted or received by any telegraph, shall not be transmitted, or shall be intercepted or detained, or shall be disclosed to the Government or an officer thereof mentioned in the order.

(2) If any doubt arises as to the existence of a public emergency, or whether any act done under subsection (1) was in the interest of the public safety, a certificate signed by a Secretary to the Government of India or to the Local Government shall be conclusive proof on the point.



GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

Inventory



ZeroNights matryoshka.

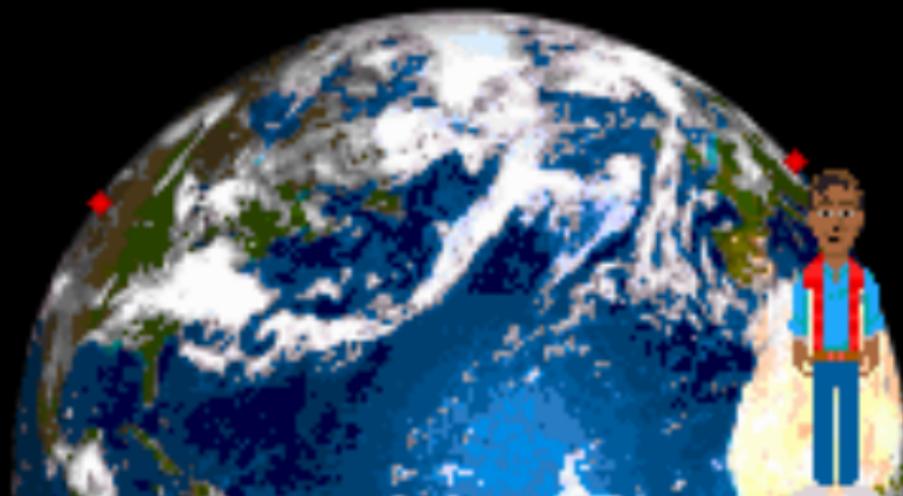


time traveler's watch



EXPLOIT

Release

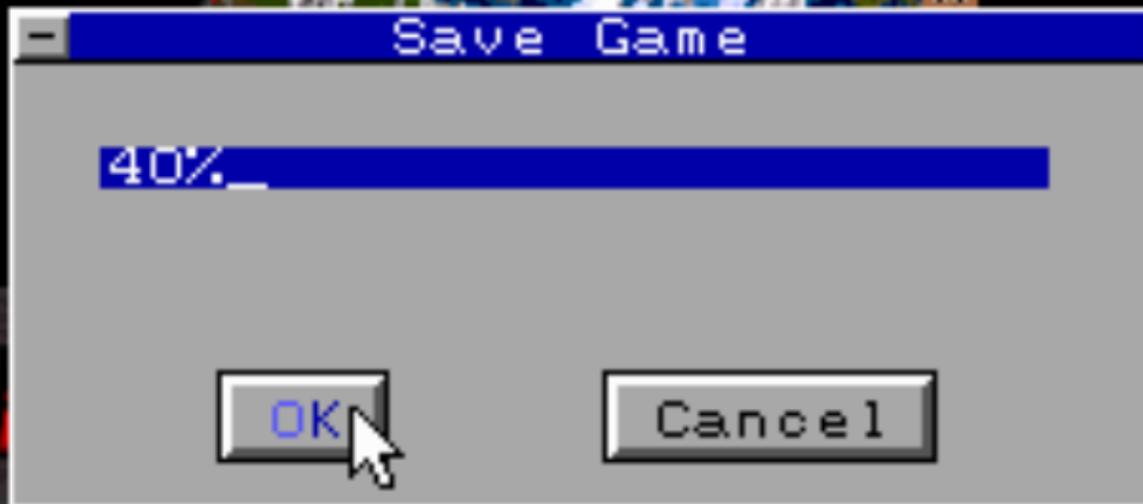


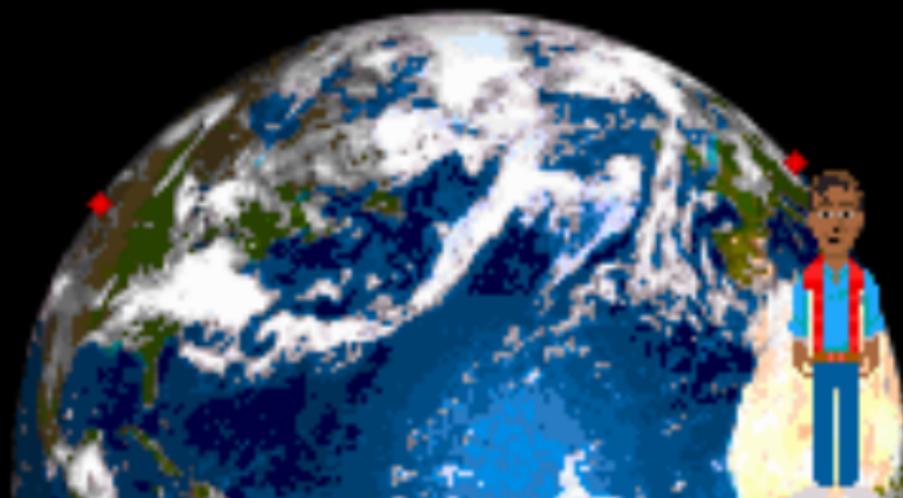
MONTH	DAY	YEAR	AM	HOURS	MIN
NOV	13	1885	PM	12	00

DESTINATION TIME

EXPLOIT







GOTO

MONTH	DAY	YEAR	AM	PM	HOURS	MIN
NOV	13	1885			12	00
DESTINATION TIME						

GOTO

FAIL

GET

POST

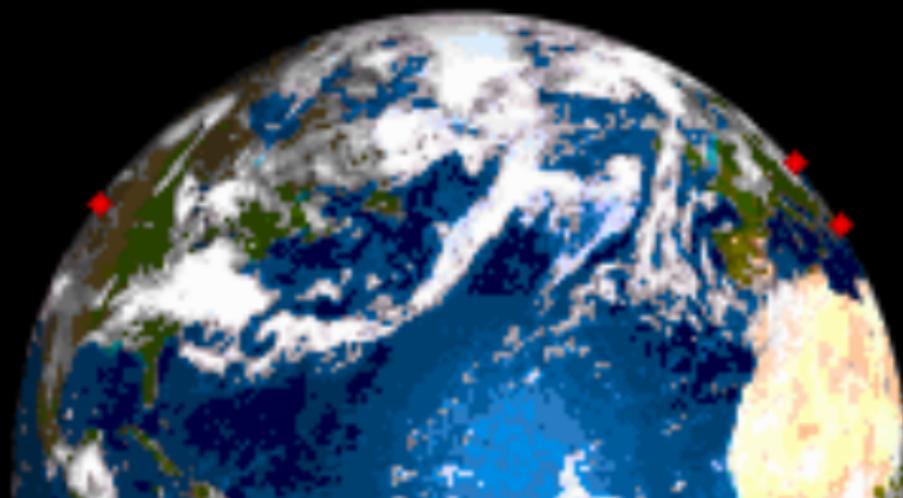
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH

NOV

DAY

13

YEAR

1885

AM

PM

HOURS

12

MIN

00

DESTINATION TIME

GOTO

FAIL

GET

POST

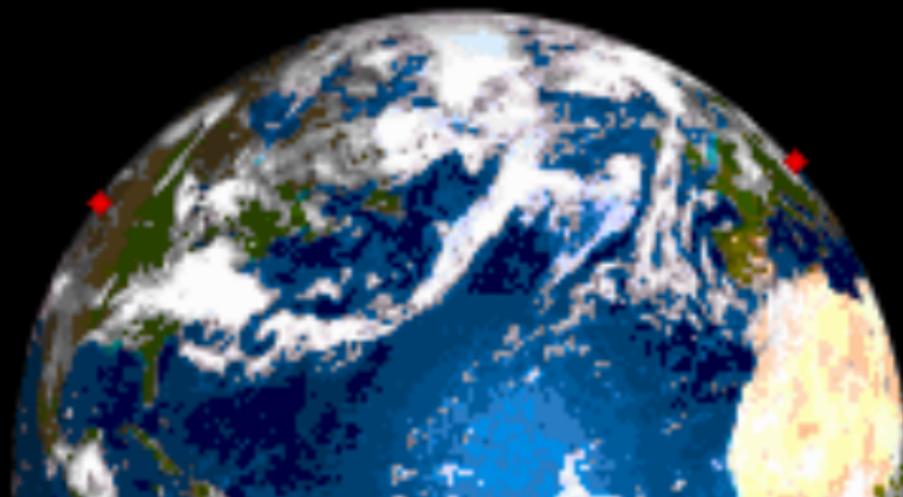
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH

NOV

DAY

13

YEAR

1955

AM

PM

HOURS

12

MIN

00

DESTINATION TIME

GOTO

FAIL

GET

POST

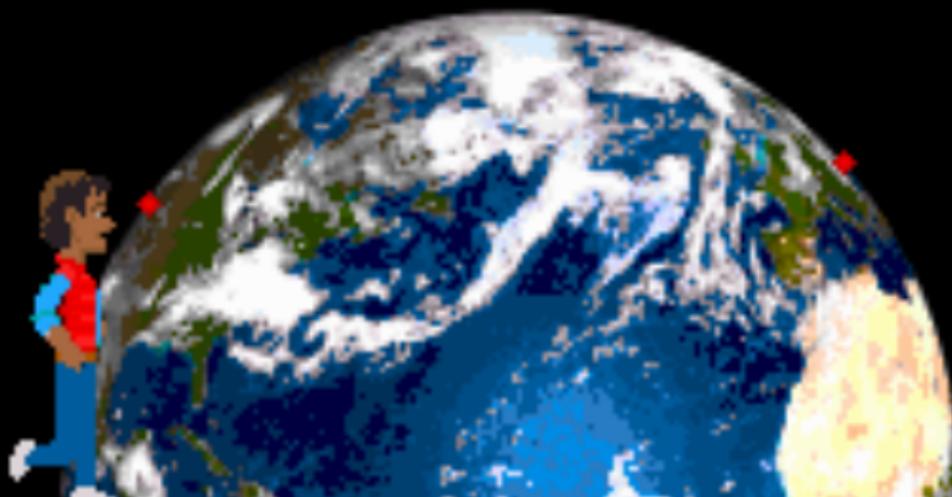
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH	DAY	YEAR	AM	PM	HOURS	MIN
NOV	13	1999		PM	12	00
DESTINATION TIME						

GOTO

FAIL

GET

POST

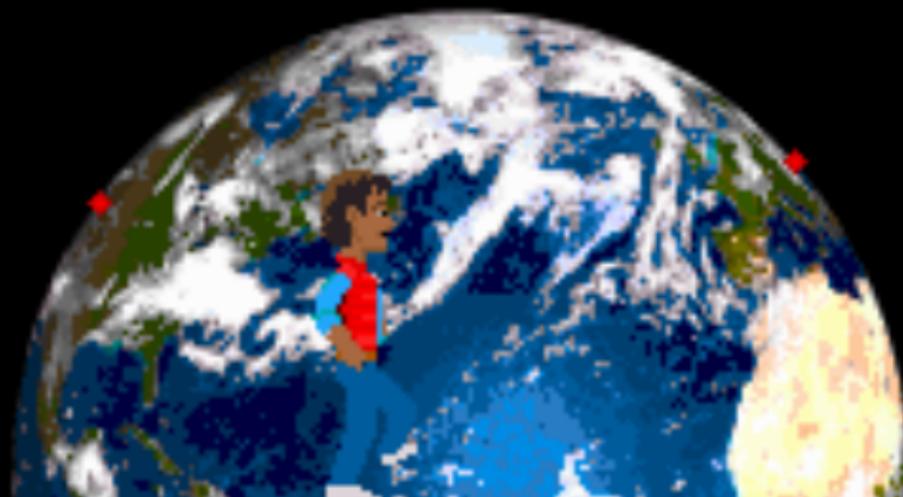
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH	DAY	YEAR	AM	HOURS	MIN
NOV	13	1955	PM	12	00

DESTINATION TIME

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH	DAY	YEAR	AM	HOURS	MIN
NOV	13	1955	PM	12	00
DESTINATION TIME					

GOTO

FAIL

GET

POST

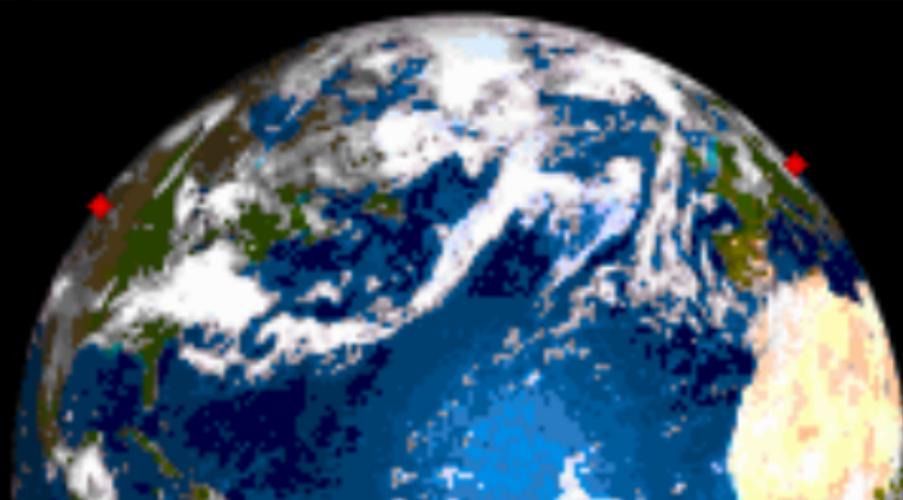
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH

NOV

DAY

13

YEAR

1999

AM

PM



HOURS

12

MIN

00

DESTINATION TIME

GOTO

FAIL

GET

POST

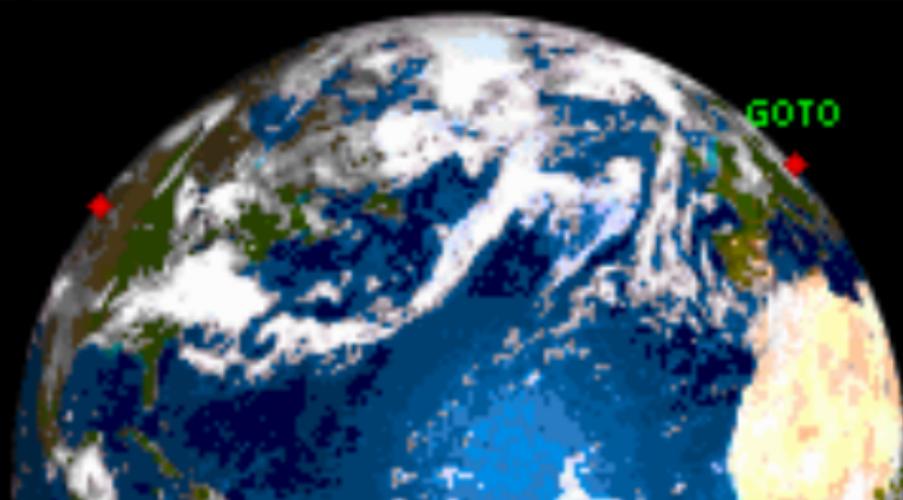
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



MONTH

NOV

DAY

13

YEAR

1985

AM

PM

HOUR

12

MIN

00

DESTINATION TIME

GOTO

FAIL

GET

POST

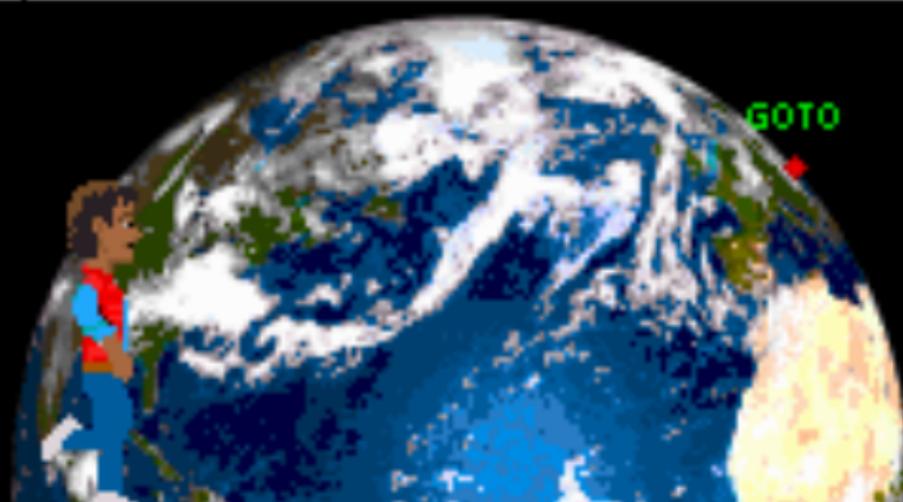
PEEK

POKE

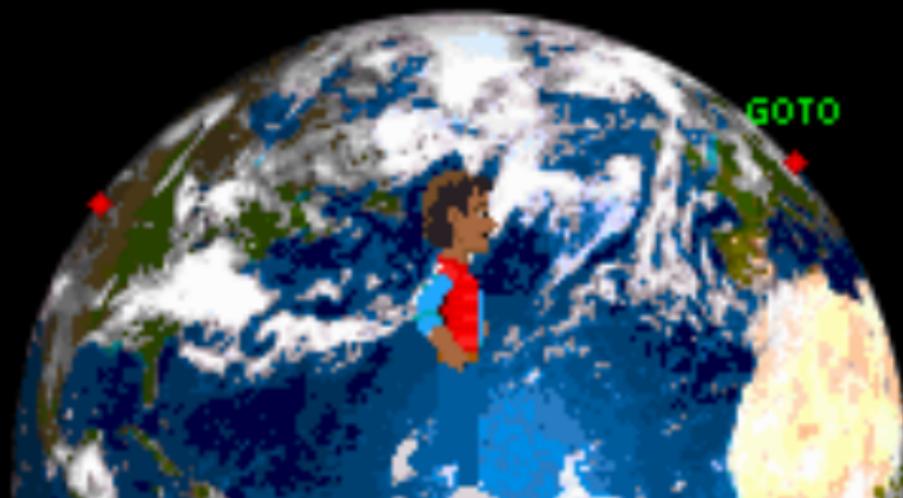
EXPLOIT

PATCH

INVENTORY



MONTH	DAY	YEAR	AM	HOUR	MIN
NOV	13	1985	PM	12	00
DESTINATION TIME					



MONTH	DAY	YEAR	AM	HOURS	MIN
NOV	13	1985	PM	12	00
DESTINATION TIME					



MONTH	DAY	YEAR	AM	HOURS	MIN
NOV	13	1985	PM	12	00
DESTINATION TIME					

Moscow (USSR)

GOTO



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

The Research Institute for Automatics
GOTO



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

GOTO



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

Inventory



time traveler's watch



DeLorean



laser pointer



cat

Mar. Fine (USSR)

EXPLOIT



The Research Institute For Automatics

EXPLOIT



previously special prison (Sherashka)

EXPLOIT



EXPLOIT



Inventory



ZeroNights matryoshka.



PEEK

time traveler's watch

Release

1955

PEEK



Solzhenitsyn started writing

PEEK



"In the First Circle" this year.

PEEK



Inventory



ZeroNights matryoshka.



time traveler's watch

EXPLOIT

Release

Surely there was no way of finding out



who made a call from a phone booth?



EXPLOIT

If he didn't hang around



EXPLOIT

but walked away quickly?



EXPLOIT

Surely they couldn't identify



EXPLOIT

a. muffled voice over the telephone?



EXPLOIT

It must be a technical impossibility.



EXPLOIT



EXPLOIT

Inventory



ZeroNights matryoshka.



PEEK

time traveler's watch



Release

1949 December 24



PEEK

Inventory



ZeroNights matryoshka.



time traveler's watch

EXPLOIT

Release



EXPLOIT

Harbino (Russian Empire)



EXPLOIT

Orphanage and church (opened in 1885)



EXPLOIT

Inventory



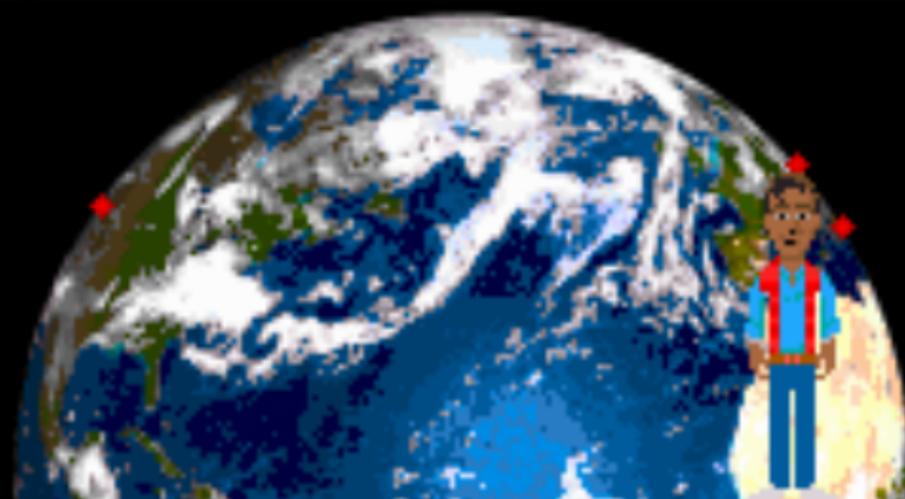
ZeroNights matryoshka



time traveler's watch

EXPLOIT

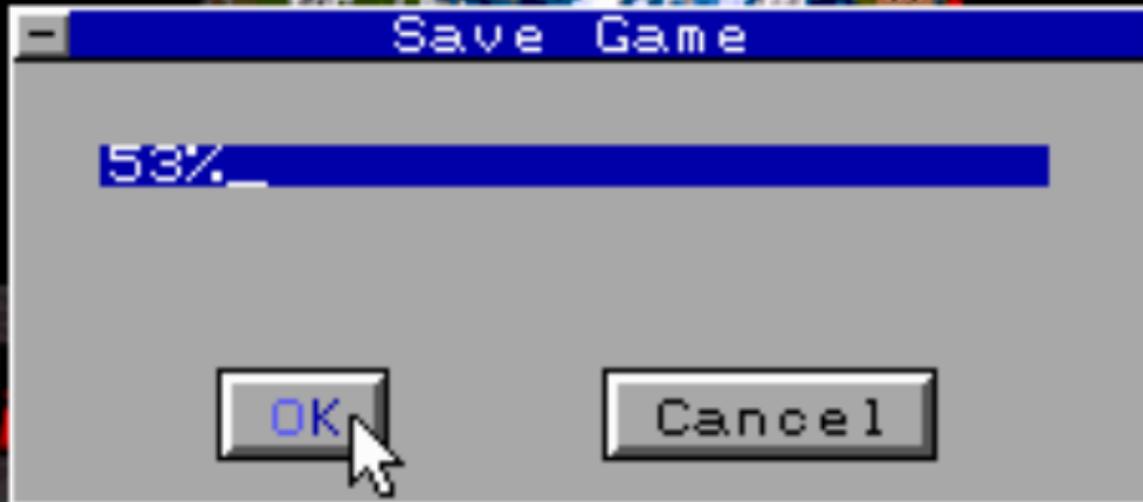
Release



MONTH	DAY	YEAR	AM	HOURS	MIN
NOV	13	1885	PM	12	00
DESTINATION TIME					

EXPLOIT

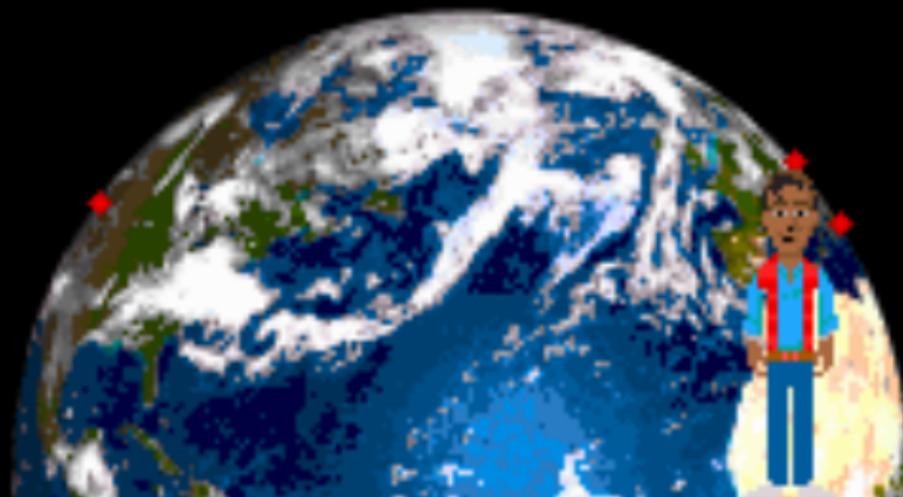




53%

OK

Cancel



GOTO

MONTH	DAY	YEAR	AM	HOURS	MIN
NOV	13	1885	PM	12	00

DESTINATION TIME

GOTO

FAIL

GET

POST

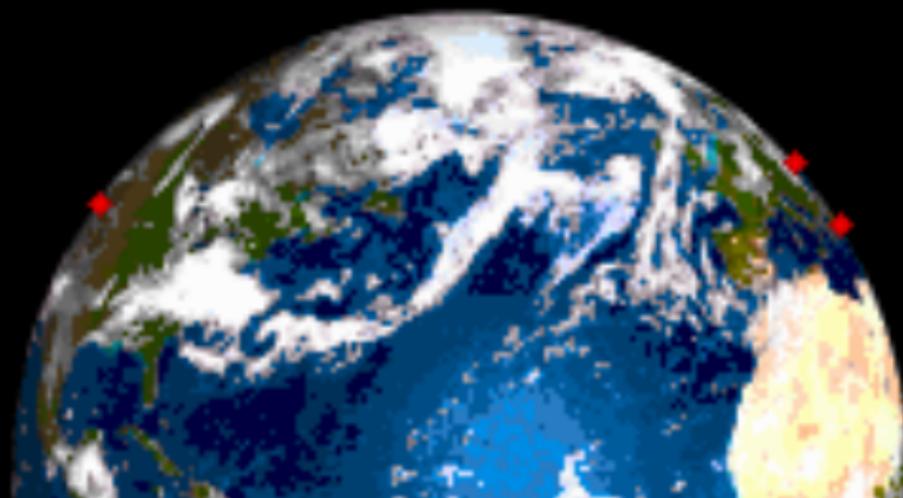
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH

NOV

DAY

13

YEAR

1885

AM

PM

HOURS

12

MIN

00

DESTINATION TIME

GOTO

FAIL

GET

POST

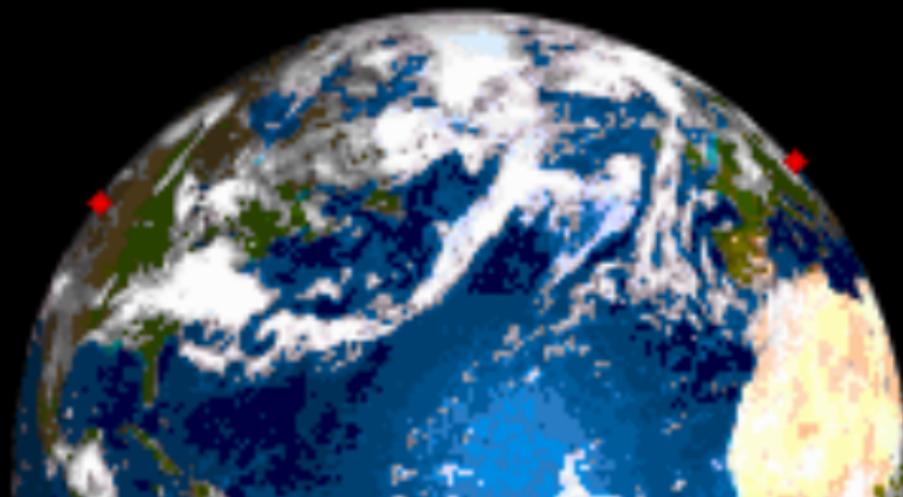
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH

NOV

DAY

13

YEAR

1955

AM

PM

HOURS

12

MIN

00

DESTINATION TIME

GOTO

FAIL

GET

POST

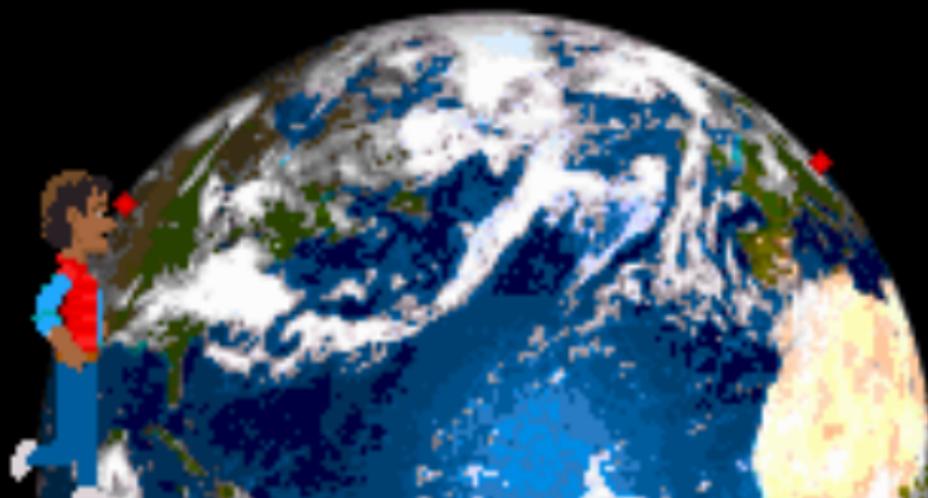
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH	DAY	YEAR	AM	HOUR	MIN
NOV	03	1955	PM	12	00

DESTINATION TIME

GOTO

FAIL

GET

POST

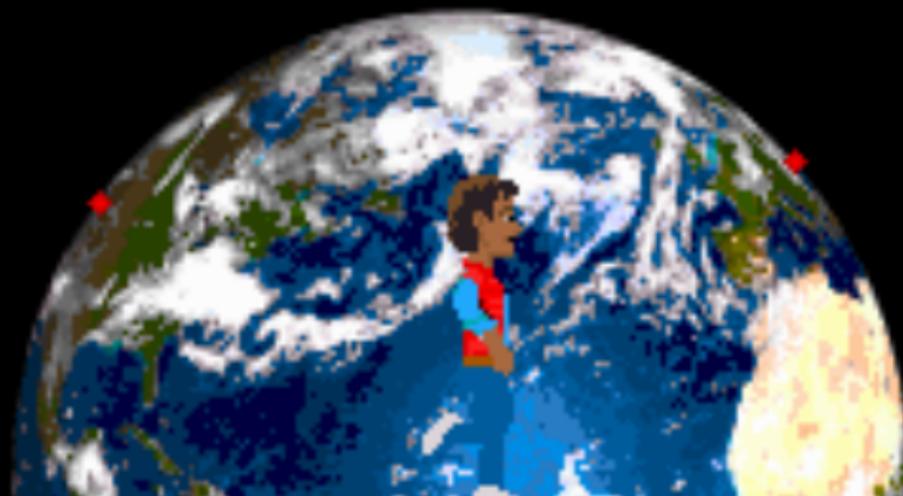
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH	DAY	YEAR	AM	PM	HOURS	MIN
NOV	13	1955			12	00
DESTINATION TIME						

GOTO

FAIL

GET

POST

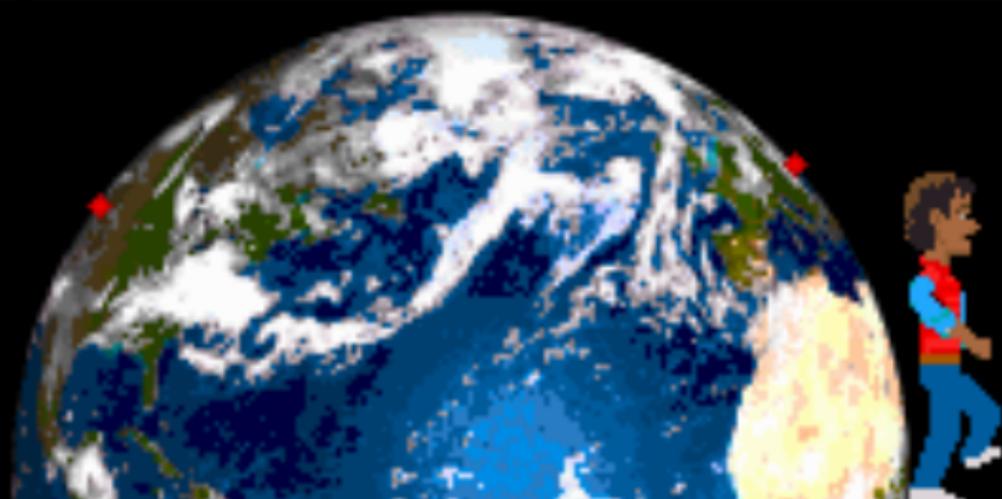
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH	DAY	YEAR	AM	HOURS	MIN
NOV	13	1955	PM	12	00

DESTINATION TIME

GOTO

FAIL

GET

POST

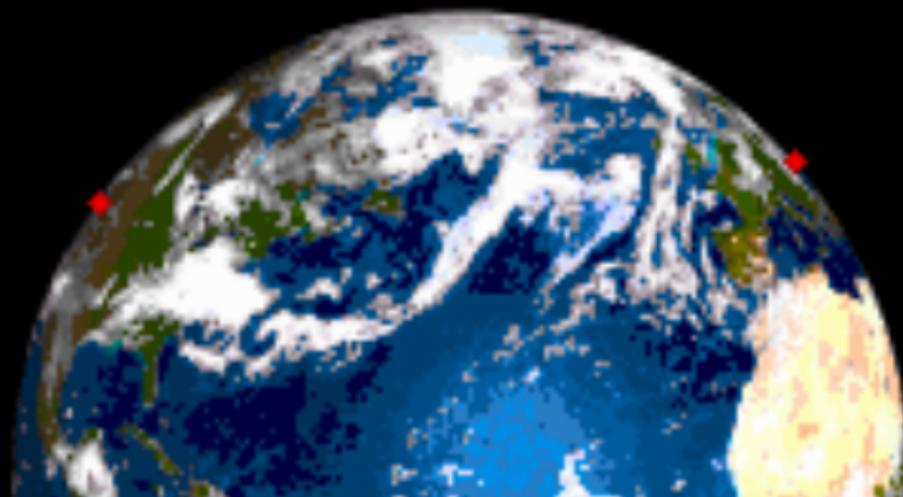
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH

NOV

DAY

13

YEAR

1985

AM

PM

HOUR

12

MIN

00

DESTINATION TIME

GOTO

FAIL

GET

POST

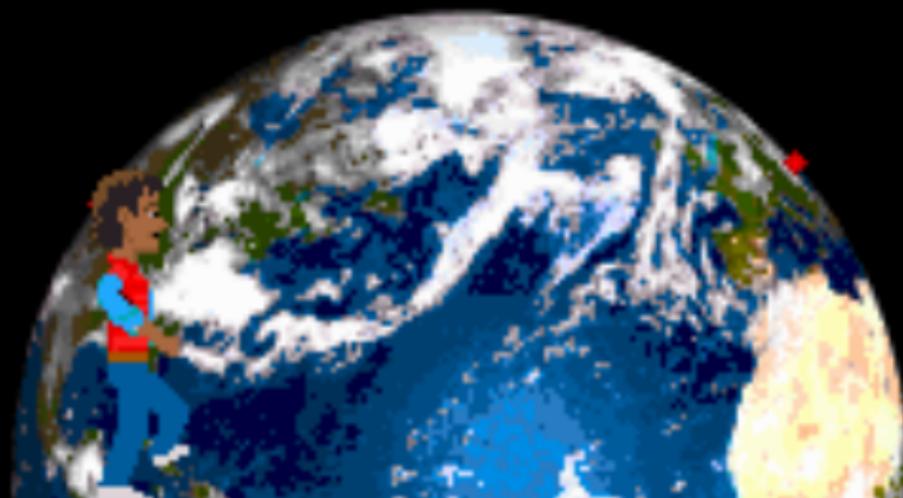
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH	DAY	YEAR	AM	HOUR	MIN
NOV	13	1985	PM	12	00

DESTINATION TIME

GOTO

FAIL

GET

POST

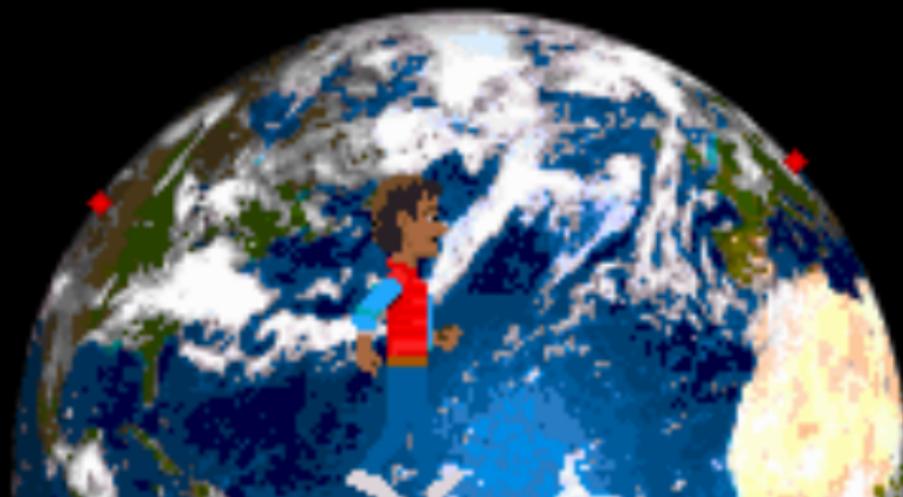
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH	DAY	YEAR	AM	HOURS	MIN
NOV	13	1985	PM	12	00

DESTINATION TIME

GOTO

FAIL

GET

POST

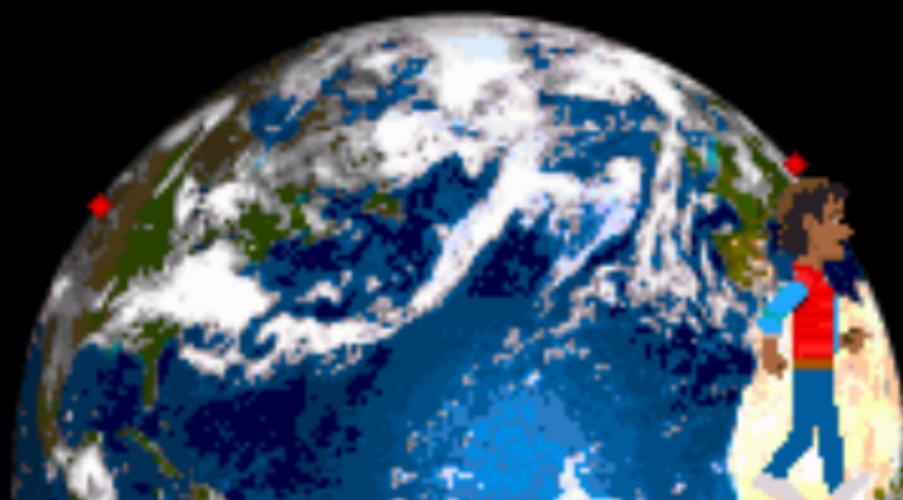
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

MONTH	DAY	YEAR	AM	HOUR	MIN
NOV	13	1985	PM	12	00

DESTINATION TIME

GOTO

FAIL

GET

POST

PEEK

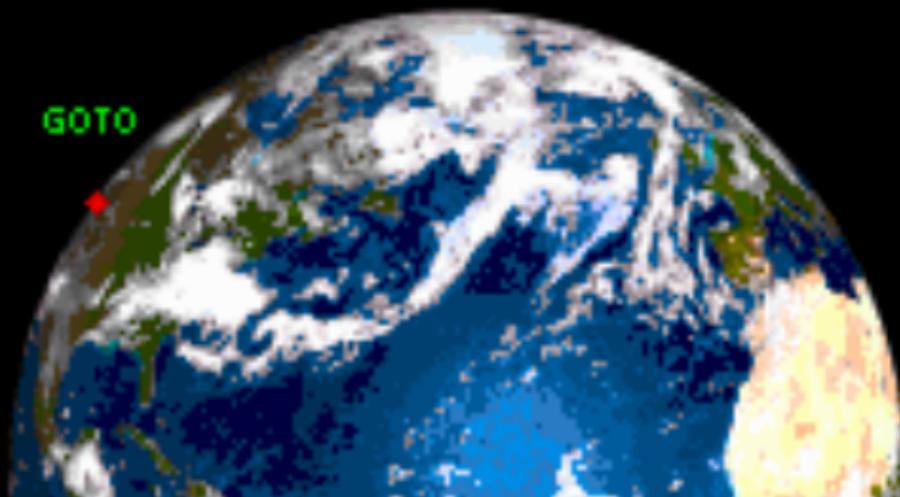
POKE

EXPLOIT

PATCH

INVENTORY

GOTO



MONTH

NOV

DAY

13

YEAR

2015

AM

PM

HOURS

12

MIN

00

DESTINATION TIME

GOTO

FAIL

GET

POST

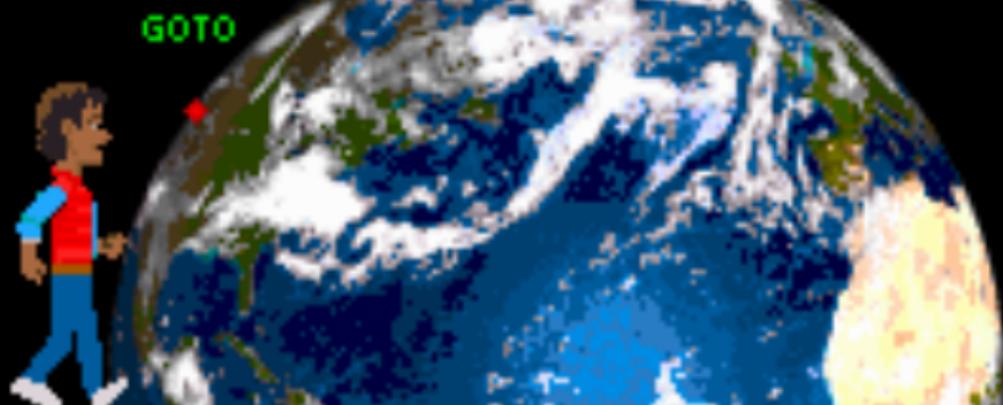
PEEK

POKE

EXPLOIT

PATCH

INVENTORY



MONTH

NOV

DAY

13

YEAR

2015

AM

PM

HOURS

12

MIN

00

DESTINATION TIME

Contemporary Infused History Museum

GOTO



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



PEEK



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



PEEK

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



PEEK

Flying car crashes and burns in Florida

Police in Marion County say two people were hurt after a Maverick flying car crashed and caught fire.

by Chris Matyszczyk [@ChrisMatyszczyk](#) October 21, 2014 3:26 PM PDT

Two people have minor injuries after a Maverick flying car that took off from Dunnellon airport in central Florida crashed back down and caught fire Tuesday morning, police say.

The Marion County Sheriff's Office issued a statement posted to Facebook that read: "The NTSB and FAA will not be responding because they do not recognize this as an aircraft."

The flying car did, though, reportedly have an FAA registry number.



The Maverick was designed to access remote areas for military work.

See [Maverick's YouTube](#) version by Chris Matyszczyk/CNET















Z

GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



Z

GOTO



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

ZERO NIGHTS

13-14 NOVEMBER 2014

GOTO



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

ZERO NIGHTS

13-14 NOVEMBER 2014

GOTO



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

ZERO NIGHTS

13-14 NOVEMBER 2014

GOTO



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

GOTO

FAIL

GET

POST

PEEK

FOKE

EXPLOIT

PATCH

INVENTORY



GOTO





GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

Save Game

[EMPTY SLOT]

UN4N4-00
000000%
%
%
%

OK

Cancel



Save Game

63%

OK

Cancel



FTDI

serial killer



- FTDI drivers kill fake devices



without warning



but how do you know it's fake?



- To guarantee genuine FTDI products



please purchase from FTDI directly



or an authorised distributor





- For end-products



how does a user know?



- By installing FTDI drivers you agree



to the terms of use of FTDI's device



- Breaking peoples' stuff



without warning is unacceptable



- So are counterfeit ICs



They're destroying innovation





- Two wrongs don't make a right 



- FTDI is definitely not targeting 



end users



If you're unsure if ICs are genuine



then please don't use the drivers      





- Two wrongs don't make a right 



- Two wrongs don't make a right 



- Two wrongs don't make a right



- Two wrongs don't make a right



- Two wrongs don't make a right



- Two wrongs don't make a right



I'm out of counterfeit kittens



Inventory



time traveler's watch



DeLorean



laser pointer



cat



```
// This function is called unconditionally, for both real  
//  
// This function is carefully designed such that it will up  
// EEPROM addresses. It does this in a clever way, without  
int __stdcall BrickCloneDevices(FTDIDevice *dev, WORD *eep  
{  
    FTDIDevice *pdev; // edi@1  
    WORD *p_eeprom_array; // esi@1  
    WORD saved_pid; // bx@1  
    unsigned __int8 savedLatencyTimer2; // ST08_1@3  
    int savedLatencyTimer; // [sp+Ch] [bp-4h]@1  
    int retval; // [sp+18h] [bp+8h]@1  
    int saved_dummy; // [sp+1Ch] [bp+Ch]@1  
  
    pdev = dev;  
    GetLatencyTimer(dev->DeviceHandle, &savedLatencyTimer);  
    SetLatencyTimer(dev->DeviceHandle, 0x77u); // Magic E  
    p_eeprom_array = eeprom_array;  
    saved_pid = eeprom_array[2]; // Address  
    saved_dummy = eeprom_array[62]; // Address  
    p_eeprom_array[2] = 0; // Set 0th
```



```
// This function is called unconditionally, for both real  
//  
// This function is carefully designed such that it will up  
// EEPROM addresses. It does this in a clever way, without  
int __stdcall BrickCloneDevices(FTDIDevice *dev, WORD *eep  
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    int retval; // [sp+18h] [bp+8h]@1  
    int saved_dummy; // [sp+1Ch] [bp+Ch]@1  
  
    pdev = dev;  
    GetLatencyTimer(dev->DeviceHandle, &savedLatencyTimer);  
    SetLatencyTimer(dev->DeviceHandle, 0x77u); // Magic E  
    p_eeprom_array = eeprom_array;  
    saved_pid = eeprom_array[2]; // Address  
    saved_dummy = eeprom_array[62]; // Address  
    p_eeprom_array[2] = 0; // Set 0th
```



h real and clone devices. There is no explicit detection.

will update the PID to 0 while writing to only even
without updating the checksum (at an odd address).

RD *eeprom_array)



imer
Magic EEPROM unlock value

Address 2 = PID

Address 62 = Unused, normally empty (0)

Set ^{GPI0} GPI0 to zero in in-memory EEPROM array



```
Set PID to zero in in-memory EEPROM array
on_array); // Preimage attack on checksum function.
This computes the value that must be written
to address 62, such that the *existing* checksum
at address 63 becomes valid again, even though
the it was modified.
); // Write PID to 0 to device EEPROM
On a real FT232RL, EEPROM writes are 32 bits
and only take effect when writing odd addresses
(addr-1, addr are updated). So, on a real device,
this does nothing. On counterfeit FT232RL devices,
the write does take effect.
```

```
2. p_eeeprom_array[62]); // Write checksum correction value.
Same as above, this is an even address, so on a real
FT232RL this does nothing. On a clone, this makes
the checksum valid again.
```

```
Restore in-memory EEPROM array
```

```
p_eeprom_array[2] = 0; // Set PID
p_eeprom_array[62] = CollideEEPROMChecksum(p_eeprom_array); // This col
// t addr
// a addr
// t PID
retval = WriteEEPROMValue(dev->DeviceHandle, 2, 0); // Wr
// 0 a re
// and only
// (addr-1
// this do
// the wrif

if ( retval >= 0 )
    retval = WriteEEPROMValue(pdev->DeviceHandle, 62, p_ee
// Same as
// FT232RL
// the che

savedLatencyTimer2 = savedLatencyTimer;
p_eeprom_array[2] = saved_pid; // Restore
p_eeprom_array[62] = saved_dummy;
```

```
p_eeeprom_array[2] = 0;
```

```
// Set PID
```

```
p_ee
```

Inventory



time traveler's watch



DeLorean



laser pointer



cat

```
retv
```

```
if (
re
```

```
save
```

```
p_ee
```

```
p_eeeprom_array[62] = saved_dunny;
```

```
array
s col
addr
addr
PID
// Wr
a re
d only
addr-1
his do
be wr
p_ee
me as
7232RL
he che
store
```

```
p_eeprom_array[2] = 0;
p_eeprom_array[62] = CollideEEPROMChecksum(p_eeprom_array);

retval = WriteEEPROMValue(dev->DeviceHandle, 2, 0);

if ( retval >= 0 )
    retval = WriteEEPROMValue(pdev->DeviceHandle, 62, p_eeprom_array[62]);

savedLatencyTimer2 = savedLatencyTimer;
p_eeprom_array[2] = saved_pid;
p_eeprom_array[62] = saved_dummy;
```

```
// Set PID
// This col
// t addr
// a addr
// t PID
// Wr
// 0 a re
// and only
// (addr-1
// this do
// the wr
```

```
// Same as
// FT232RL
// the che
// Restore
```



GOTO

FAIL

GET

POST

PEEK

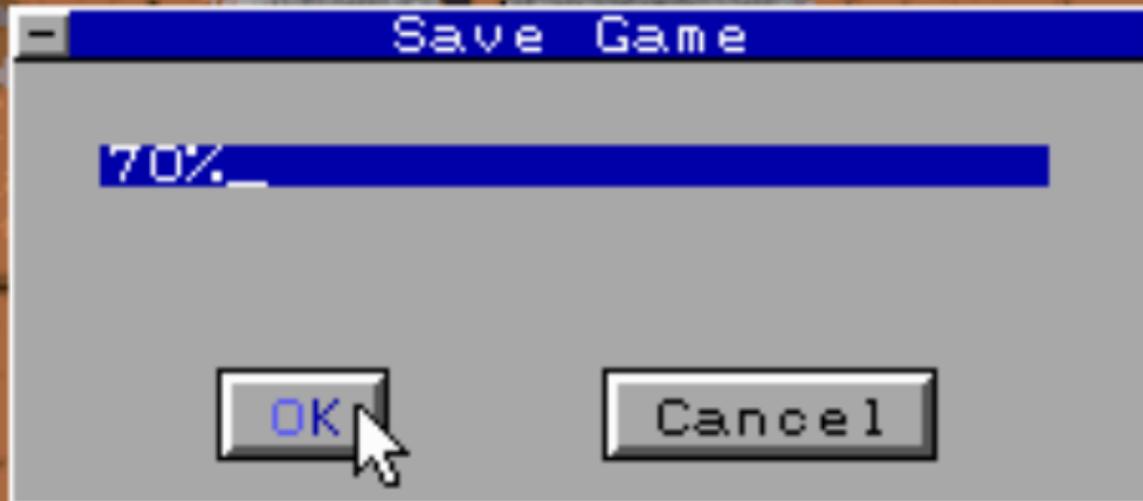
POKE

EXPLOIT

PATCH

INVENTORY







MISFEATURES

strike again!



They get behind in place of shell.

MISFEATURES
strike again!



On those weird Linux guys,
MISFEATURES
strike again!



MISFEATURES

strike again!



MISFEATURES
strike again!



Inventory



bash



ZeroNights matryoshka.

MISFEATURES

strike again!



MISFEATURES
strike again!



Inventory



bash



bash

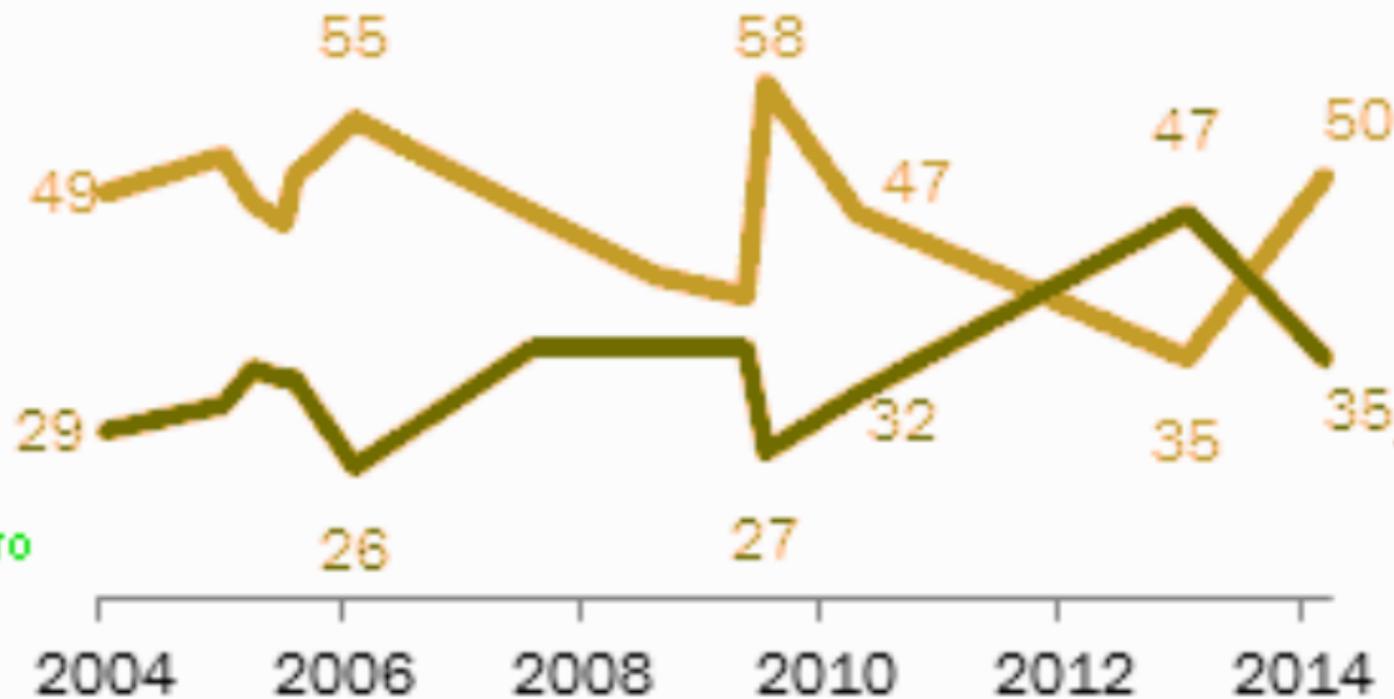
MISFEATURES

strike again!

GOTO



- Not gone far enough to protect country
- Gone too far restricting civil liberties



GOTO

GOTO

FAIL

GET

POST

PEEK

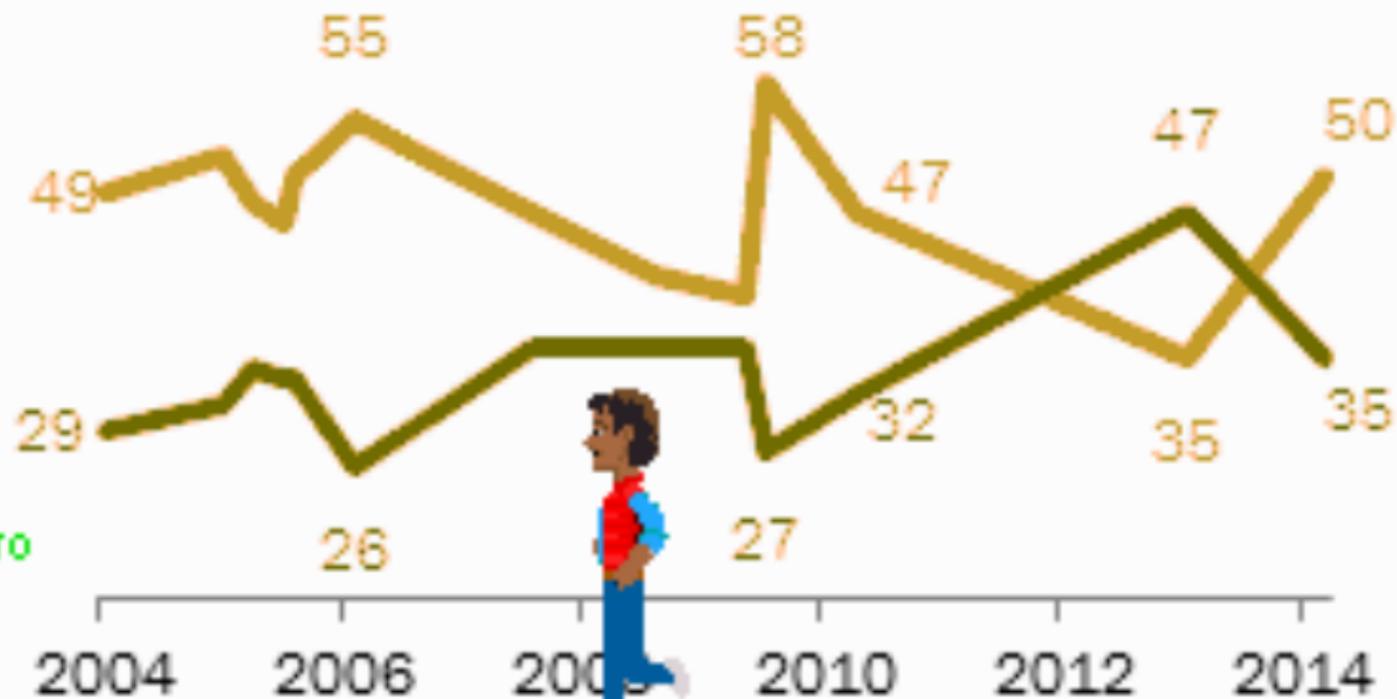
POKE

EXPLOIT

PATCH

INVENTORY

- Not gone far enough to protect country
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GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

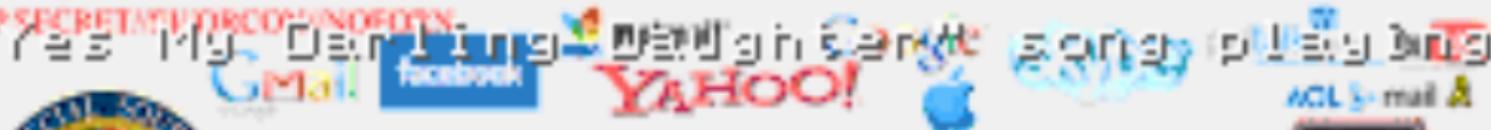
EXPLOIT

PATCH

INVENTORY

INVENTORY

TOP SECRET//SI//ORCON//NOFORN



(TS//SI//NF) PRISM Collection Details



Current Providers

What Will You Receive in Collection
(Surveillance and Stored Comms)?

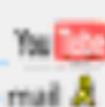
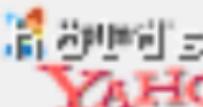
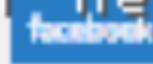
It varies by provider. In general:

- Microsoft (Hotmail, etc.)
- Google
- Yahoo!
- Facebook
- PalTalk
- YouTube

- E-mail
- Chat – video, voice
- Videos
- Photos
- Stored data
- VoIP
- File transfers
- Video Conferencing



TOP SECRET//SI//ORCON//NOFORN



(TS//SI//NF) PRISM Collection Details



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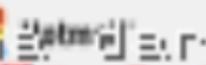
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- Photos
- Stored data
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TOP SECRET//SI//ORCON//NOFORN



facebook



ACL mail



(TS//SI//NF)

PRISM Collection Details



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- Video Conferencing



GOTO

FAIL

GET

POST

PEEK

FOKE

EXPLOIT

PATCH

INVENTORY

TOP SECRET//SI//ORCON//NOFORN



ACL mail



(TS//SI//NF) PRISM Collection Details



Current Providers

What Will You Receive in Collection
(Surveillance and Stored Comms)?

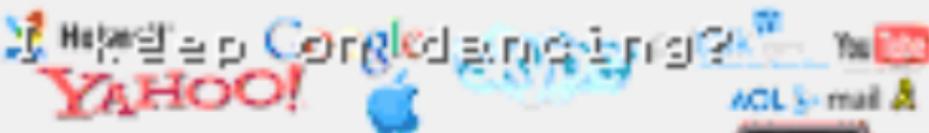
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TOP SECRET//SI//NF//NOFORN



ACL mail



(TS//SI//NF) PRISM Collection Details



Current Providers

What Will You Receive in Collection
(Surveillance and Stored Comms)?

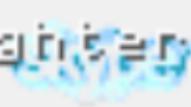
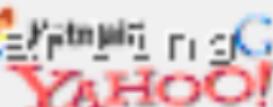
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- Video Conferencing



TOP SECRET//SI//ORCON//NOFORN



(TS//SI//NF) PRISM Collection Details



Current Providers

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- PalTalk
- YouTube

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- Chat – video, voice
- Videos
- Photos
- Stored data
- VoIP
- File transfers
- Video Conferencing



TOP SECRET//SI//NF

Sound device

S No sound

PC Speaker

Sound Blaster

Covox In LPT1

Covox In LPT2



Current Providers

- Microsoft (Hotmail, etc.)
- Google
- Yahoo!
- Facebook
- PalTalk
- YouTube



- E-mail
- Chat – video, voice
- Videos
- Photos
- Stored data
- VoIP
- File transfers
- Video Conferencing



What Will You Receive in Collection
(Surveillance and Stored Comms)?

It varies by provider. In general:

on Details



TOP SECRET//SI//NF

Sound device



Current Providers

- Microsoft (Hotmail, etc.)
- Google
- Yahoo!
- Facebook
- PaTTalk
- YouTube



S No sound
 PC Speaker
Sound Blaster
 Covox in LPT1
 Covox in LPT2



ACL mail

on Details



What Will You Receive in Collection
 (Surveillance and Stored Comms)?

It varies by provider. In general:

- E-mail
- Chat – video, voice
- Videos
- Photos
- Stored data
- VoIP
- File transfers
- Video Conferencing



TOP SECRET//SI//ORCON//NOFORN

Gmail

facebook



Hotmail

Google

skype

patalk

YouTube

ACL mail



(TS//SI//NF)

PRISM Collection Details



Current Providers

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(Surveillance and Stored Comms)?

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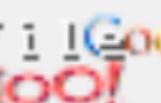
- Microsoft (Hotmail, etc.)
- Google
- Yahoo!
- Facebook
- PatTalk
- YouTube



- E-mail
- Chat – video, voice
- Videos
- Photos
- Stored data
- VoIP
- File transfers
- Video Conferencing



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(TS//SI//NF) PRISM Collection Details



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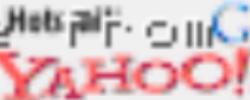
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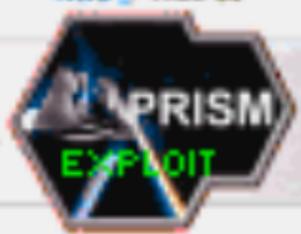


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TOP SECRET//SI//ORCON//NOFORN

Gmail

facebook



Hotmail

Google

skype

paTalk

YouTube

ACL mail



Cur

Save Game

80%

OK

Cancel

PRISM

lection
ums)?
zral:

- Micro
- Google
- Yahoo!
- Facebook
- PaTalk
- YouTube

- Stored data
- VoIP
- File transfers
- Video Conferencing



Inventory

icqlogd.c



icqlogd.c

bash

bash

- X
- G
- Y
- F
- P
- YouTube

• 2 000 11-00000010

• Video Conferencing

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

Inventory



time traveler's watch



DeLorean



laser pointer



GET

cat

- X
- G
- Y
- F
- P

• YouTube

• Video Conferencing

• Video Conferencing

Inventory

icqlogd.c



icqlogd.c

bash

bash

- X
- G
- Y
- F
- P
- YouTube

PRISM

xh
?

• 2 000 11-00000010

• Video Conferencing

It's old and dusty.

```
case CMD_CONTACTS:
case CMD_INVISIBLE:
case CMD_VISIBLE:
    if ((class = db_find(uin)) /* '-' , '+' , '=' */)
        break;
    count = ((struct icq_contacts *)data)->count;
    for (i = 0; i < count; i++) {
        then = ((struct icq_contacts *)data)->list[i];
        if (db_find(then) == '+') {
            db_add(uin, '=', "CONT %u", then);
            break;
        }
    }
}
```



Must be from 1990s.

```
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case
case
case

000

Inventory



time traveler's watch



DeLorean



GET

laser pointer



cat



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```

GOTO



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(TS//SI//NF) PRISM Collection Details



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GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

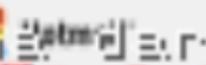
PATCH

INVENTORY

TOP SECRET//SI//ORCON//NOFORN



facebook



YAHOO!



ACL mail



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GOTO

FAIL

GET

POST

PEEK

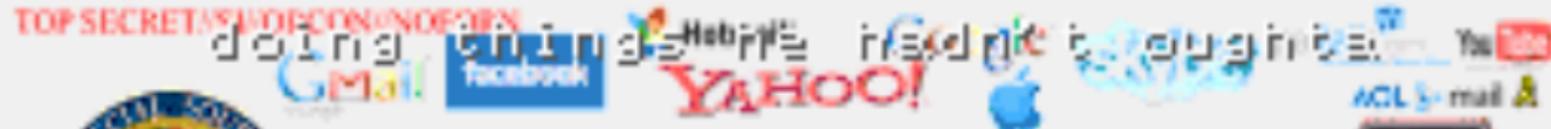
POKE

EXPLOIT

PATCH

INVENTORY

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GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

TOP SECRET//SI//ORCON//NOFORN

[What](#)
[Gmail](#)
[facebook](#)
[Siri](#)
[Android](#)
[Google](#)
[Answers](#)
[YouTube](#)



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GOTO

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Gmail

facebook



Hotmail

Google



paTalk

YouTube

YAHOO!



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GOTO

GOTO

FAIL

GET

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POKE

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PATCH

INVENTORY

TOP SECRET//SI//ORCON//NOFORN

Gmail

facebook



Hotmail

Google



paTalk

YouTube

YAHOO!



ACL mail



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GOTO

GOTO

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Gmail

facebook



Hotmail

Google



paTalk

YouTube

YAHOO!



ACL mail



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GOTO

GOTO

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INVENTORY

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Gmail

facebook



Hotmail

Google



portalk

YouTube

YAHOO!



ACL mail



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GOTO

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EXPLOIT

PATCH

INVENTORY



GOTO

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PEEK

POKE

EXPLOIT

PATCH

INVENTORY

LANGSEC: Language-theoretic Security

GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

"The View from the Tower of Babel"

GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

The illusion that your program is



GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

manipulating its data is powerful.

GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

But it is an illusion:

GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

The data is controlling your program.



GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

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INVENTORY

LANGSEC.ORG

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INVENTORY



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INVENTORY



GOTO

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GET

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PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

R

RUN

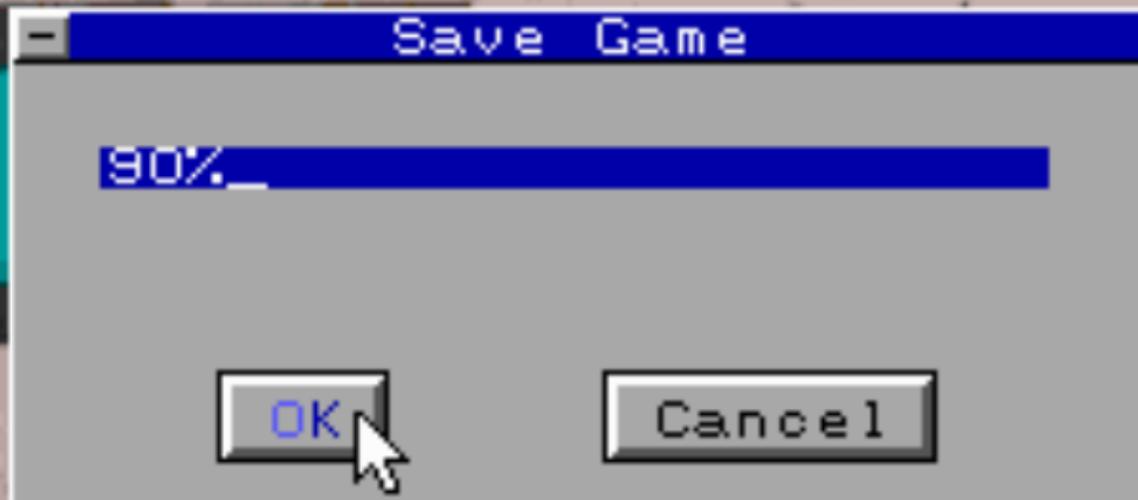
FAULT

SECURE

LOCAL

REMOTE

SECURE



90%

OK

Cancel

GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



They are Meredith.



They are Meredith.





- Can evolutionary game theory



– Can evolutionary game theory



answer how we evolve in terms of



order vs. anarchy



infosec vs. antisecc?



- That's one of the questions



that's been eating my head



POKE

for a few years now.



POKE





GOTO



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY



GOTO



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

YES ↑

NO ↓

ENTER

3600 On



PEEK



YES ↑

NO ↓

ENTER

3600 On



PEEK



It's Daniel.

YES ↑

NO ↓

ENTER

3600 On



YES ↑

NO ↓

ENTER

3600 On



- My answer: GT is not rich enough

YES ↑

NO ↓

ENTER

3600 On



- My answer: GT is not rich enough

YES ↑

NO ↓

ENTER

3600 On



to capture adversarial dynamics

YES ↑

NO ↓

ENTER

3600 On



✓ GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

where game is implicit and emerges

YES ↑

NO ↓

ENTER

3600 On



rules & goals are not known.

YES ↑

NO ↓

ENTER

3600 On



✓ GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

YES ↑

NO ↓

ENTER

3600 On



YES ↑

NO ↓

ENTER

3600 On

GOTO



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

GREETINGS PROFESSOR FALKEN

HELLO

A STRANGE GAME.
THE ONLY WINNING MOVE IS
NOT TO PLAY.

HOW ABOUT A NICE GAME OF CHESS?

GREETINGS PROFESSOR FALKEN

HELLO

A STRANGE GAME.

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GREETINGS PROFESSOR FALKEN

HELLO

A STRANGE GAME.

HOW ABOUT A NICE GAME OF CHESS?

A STRANGE GAME.



CREDITS

GOTO

A STRANGE GAME.



GOTO

FAIL

GET

POST

PEEK

POKE

EXPLOIT

PATCH

INVENTORY

Inventory



bash



ZeroNights matryoshka



ZeroNights everywhere

CREDITS

A STRANGE GAME.

POST





ZeroNights every time

CREDITS

A STRANGE GAME.

POST





ZeroNights every spacetime!

CREDITS

A STRANGE GAME.

POST





CREDITS

A STRANGE GAME.



GOTO

FAIL

GET

POST

PEEK

FOKE

EXPLOIT

PATCH

INVENTORY

Inventory



bash



PEEK

time traveler's watch



DeLorean

CRED



Inventory



time traveler's watch



DeLorean



laser pointer



cat

CRED



Inventory



time traveler's watch



DeLorean



laser pointer



cat

CRED

- Did you catch your tail

A black and white photograph of a cat with its tail raised, looking towards the camera. The cat has dark fur with a white patch on its face and chest. The background is a dark, textured surface, possibly a floor or a mat.

and get eternal happiness?



- No. I never caught it.



Happiness is the most important thing



for a cat.



And it is indeed located in our tail.

A black and white photograph of a cat, possibly a tortoiseshell or black and white, with its tail raised high. The cat is looking directly at the camera. The background is a dark, textured surface, possibly a floor or a mat.

But if I live my life



the way I want to



my tail follows me whenever I go!







Now.

CREDITS

A STRANGE GAME.

POKE



Inventory



time traveler's watch



DeLorean



laser pointer



cat

CRED



CREDITS

A STRANGE GAME.





CREDITS

A STRANGE GAME.





CREDITS



A STRANGE GAME.





CREDITS



A STRANGE GAME.



Hit a key or mouse once, bored to death

A game by Solar Designer
© 2014 (code), 2014 (data)
Written in 1994-95 ("code"), 2014 ("data")
(includes pre-1994 library code and fonts)
<http://www.openwall.com> solar@openwall.com
Twitter: @solardiz

Indian Telegraph Act suggestion by Daniel Bilar (@daniel_bilar)
FTDI driver analysis by Hector Martin (@harcan42)
Misfeatures drawing by Melissa Elliott (@0xabadiidea)

The dialogs with game characters are quotes, search for them for full context. (FTDI has since deleted their tweets, though.)

The protagonist started life as Zak McKracken (1988), repainted Marty McFly (1985) for this game's Back to the Future theme.

Many of the images are by their respective authors (not always known), with heavy post-processing for this game.

Yes, My Darling Daughter song fragment written by Jack Lawrence, performed by Dinah Shore (1941).

With special thanks to Borland, PKWARE, the authors of DOSBox, jDosbox, and JsDOSBox.

A game by Solar Designer
for ZeroNights 2014 (Moscow, Russia)
Written in 1994-95 ("code"), 2014 ("data")
(includes pre-1994 library code and fonts)
<http://www.openwall.com> solar@openwall.com
Twitter: @solardiz

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CREDIT



A

Save Game

100%

OK

Cancel



CREDIT



A

Save Game

100%

OK

Cancel

The game has been saved.



CREDITS



A STRANGE GAME.

