

- TMTOWTMS -

# There's More Than One Way To Monitor System(s)



May 16 2008  
Toshiyuki Sugimoto  
Shuichi Tajiri  
Jong-jin Lee

# Who are We?

はてなに入社しました  ★199★



<http://d.hatena.ne.jp/antipop/20080501/1209636817>

Let me introduce myself to you

軽く

自己紹介をさせていただきます。

JEEN

Perldoc-kr



Yesterday, I got an incredible super sexy item.

昨日、JesseからT-Shirtをもらいました

He said,  
“If you make a patch for Prophet during this talk,  
I'll give you this T-shirt.”

Jesseさん曰く、  
“Prophetをペッチしてくれたら、  
このT-Shirtあげるよ”

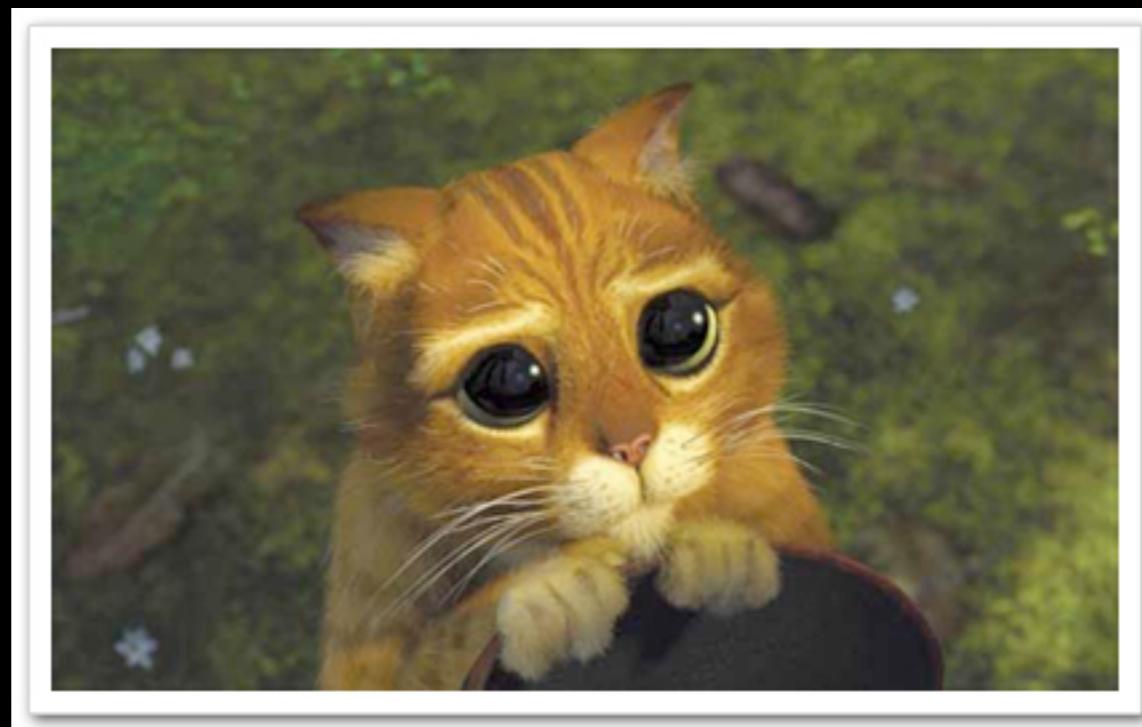
But I did nothing!

でも、私はなにもやってないのに...

Hmm...

Maybe What He thought would be...

もしかして、彼は  
こう思ったのかもしれません。



“How Pity!”

“かわいそうだな”

It's a Joke!

もちろん、冗談です

Anyway, Thanks so so much Jesse!

とにかく、Jesseさん！  
ありがとうございます！

Your Free Software “will” be running at our company

あなたのソフト使わせていただきます。

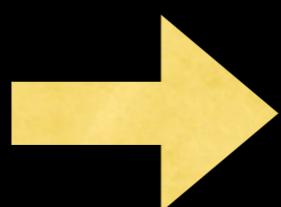




2007



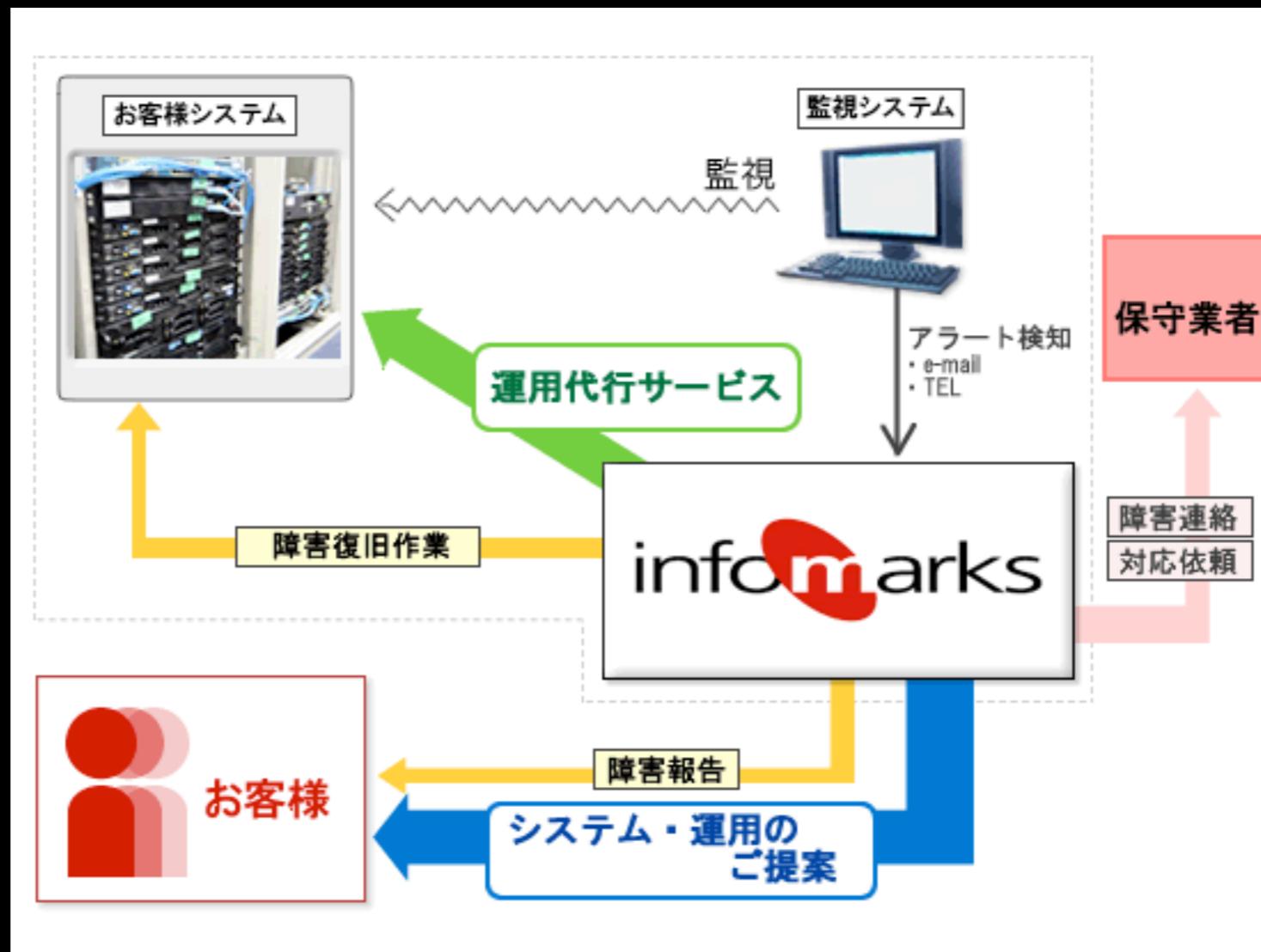
2008



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# Company Works



# System Monitoring, Maintenance



# Promotion Support



# EC Service Support

And

# CodeRepos

# CodeRepos

Hosted by [INFOMARKS Corporation](#)



<http://www.infomarks.co.jp/>

<http://blog.infomarks.co.jp/>

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  - What to Monitor?
  - CTI
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# System Monitoring

Why?

It's a main job of our company

There has been too many session  
about

# System Monitoring

in  
YAPC::(.) (¥d+)

Yeah, That Is Why I'm talking about

“Too Many” eq “Very Important”

True / False ?

It's Your Choice.



TALOMT

It Means...

There's A Lot Of Monitoring Tools

- **Nagios**
  - <http://www.nagios.org/>
- **Zabbix**
  - <http://www.zabbix.com/>
- **JFFNMS**
  - <http://www.jffnms.org/>
- **Big Brother**
  - <http://bb4.com/>
- **Big Sister**
  - <http://bigsister.graeff.com/>
- **Etc**



# What To Monitor

- Port-Availability
  - HTTP, HTTPS, SSH, TELNET
  - FTP, SMTP, IMAP
  - POP3
  - etc

- System Resources
  - DISK
  - CPU
  - Memory
  - Swap
  - Network
  - I/O
  - Load Average
  - Process
  - etc

- Application/Daemons
  - MySQL/Oracle
  - DNS
  - Mail
  - Apache
  - etc

- System/Application Log
  - Kernel log
  - DB error.log
  - Web server error.log / access.log
  - etc

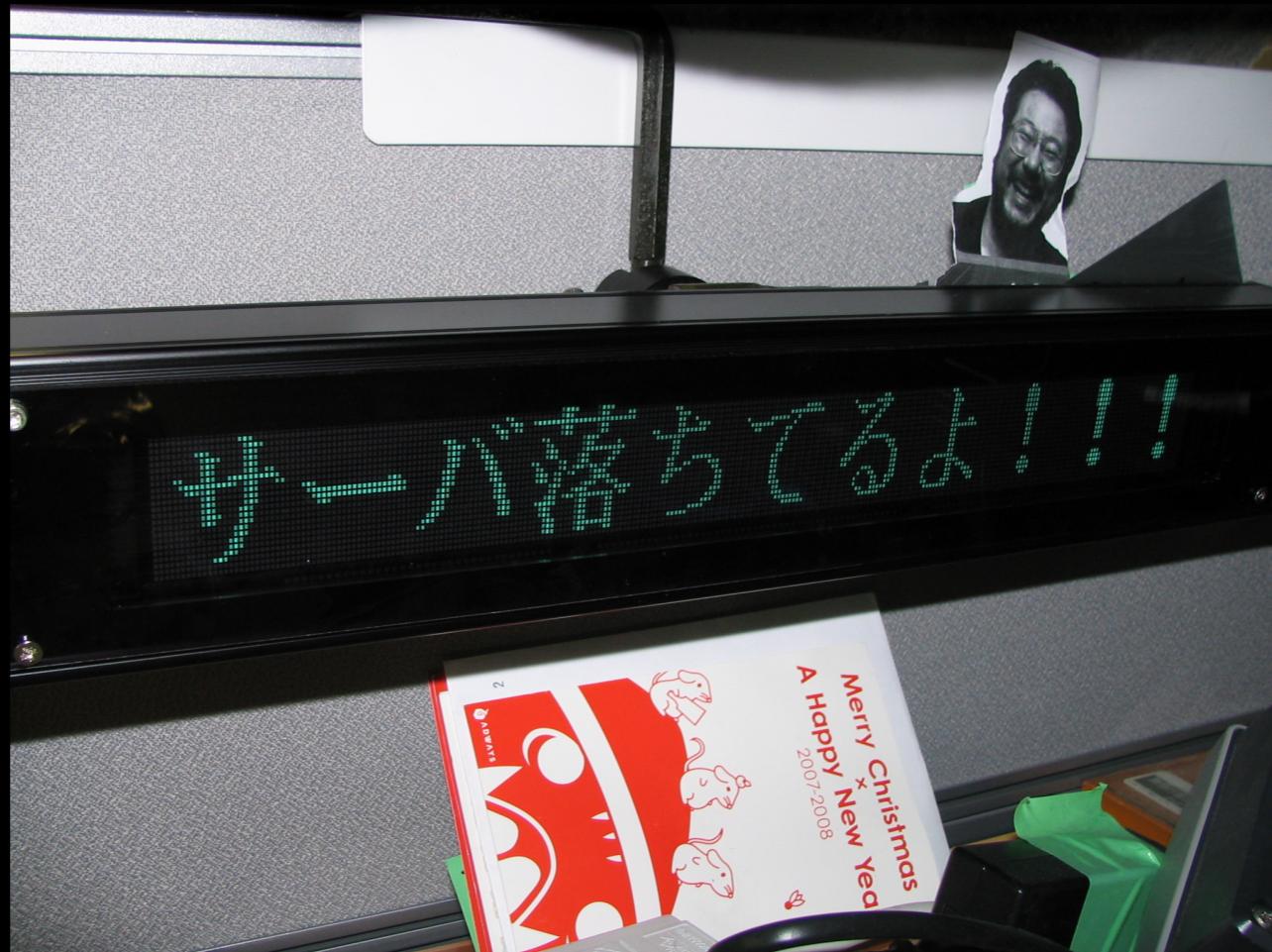
There's More Than  
One Way  
To Notify Warnings!

# Mail

# Instant Messenger

IRC

and...



VFD?

But No one knows  
SOMETHING WRONG

Like This...



Or



Warning Lamp?

What do you think about  
CTI?

では、CTIはどうでしょうか？



CTI

CTI ?

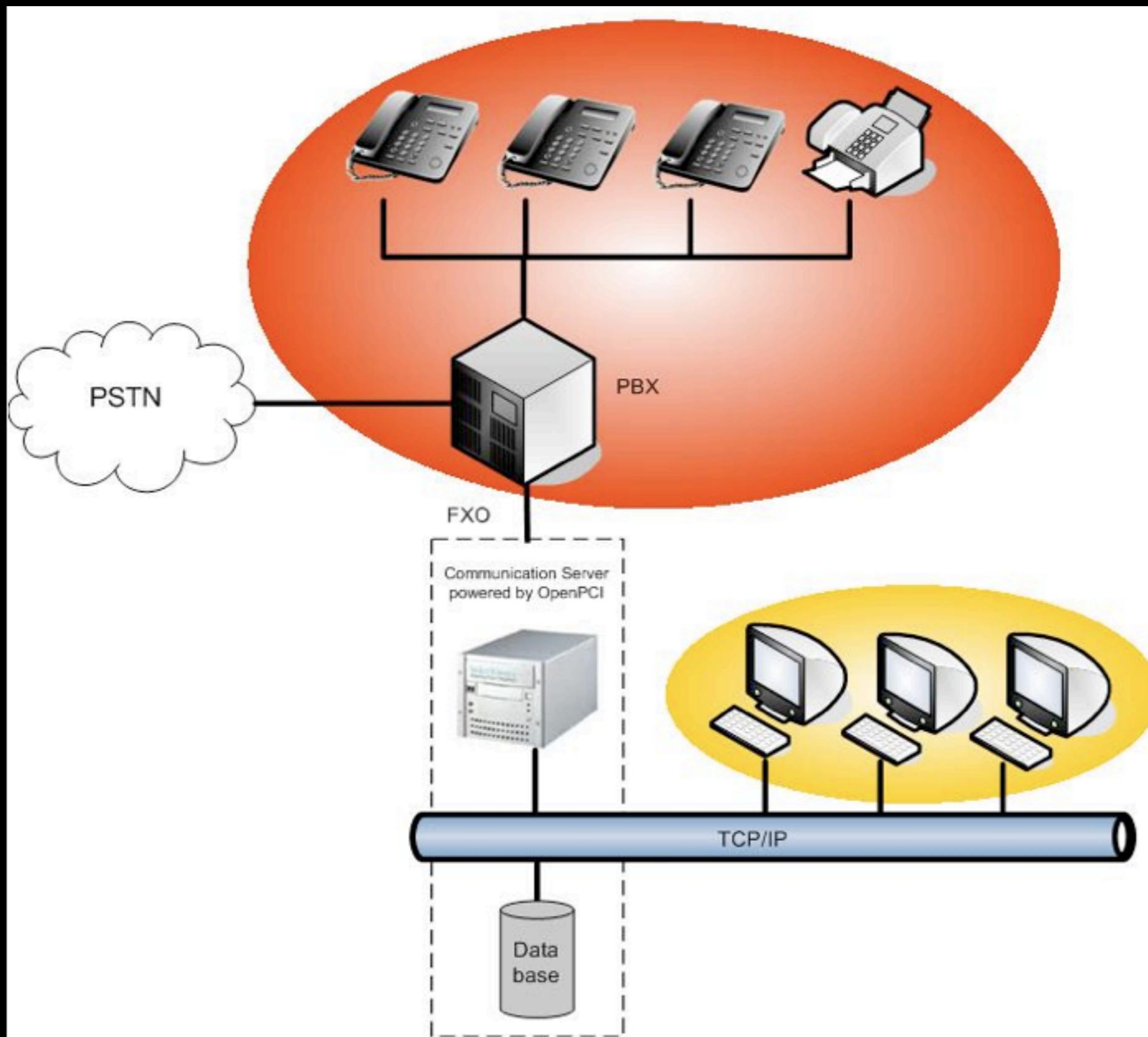
# Computer Telephony Integration

コンピューターと電話との統合

# CTIの機能

- 電話をかけたり、受けたり
- 一般電話で発信者の番号を表示したり
- 電話の内容を録音したり
- 向こうが押した番号を拾ったり

# Computer Telephony Integration



CTI is used on...

# Tele-Banking

# Customer Support

## 顧客サポート

# Tele-Marketing

電話販売

# Voice Phishing

オレオレ詐欺  
(振り込め詐欺)

And so on...

その他いろんなところで  
よく使われています。

# Before CTI

CTI導入の前には

We used to get  
inbound calls

From Several Services Whenever  
system is in trouble

なんか障害が発生したら、電話をかけてくれる  
あるサービスを使ってたのです。

But, It Costs Every Months

でも、それ毎回お金かかることだし...

¥

But, It Costs Every Months

でも、それ毎回お金かかることだし...

Hmm...

We always wanted to make a system that is either

どうすれば

a Low Cost

安くて

Scalable

拡張性あつて

under our Control

会社で勝手にいじってもいい  
システムを作れるんでしょうか？

The Answer is ...

結局, 答えは

CTI

And

OSS

# CTI with Closed Source

クローズドソースとCTIを組み合わせたら

- OS \$200
- Application \$3000

だいたいこんなにかかるって書いてありました

- from [www.voicetronix.com.au](http://www.voicetronix.com.au)

But, Open Source is...

でも オープンソースでは



- OS ¥0
- Application ¥0



セ 口

- from [www.voicetronix.com.au](http://www.voicetronix.com.au)

Wow!

すげえー

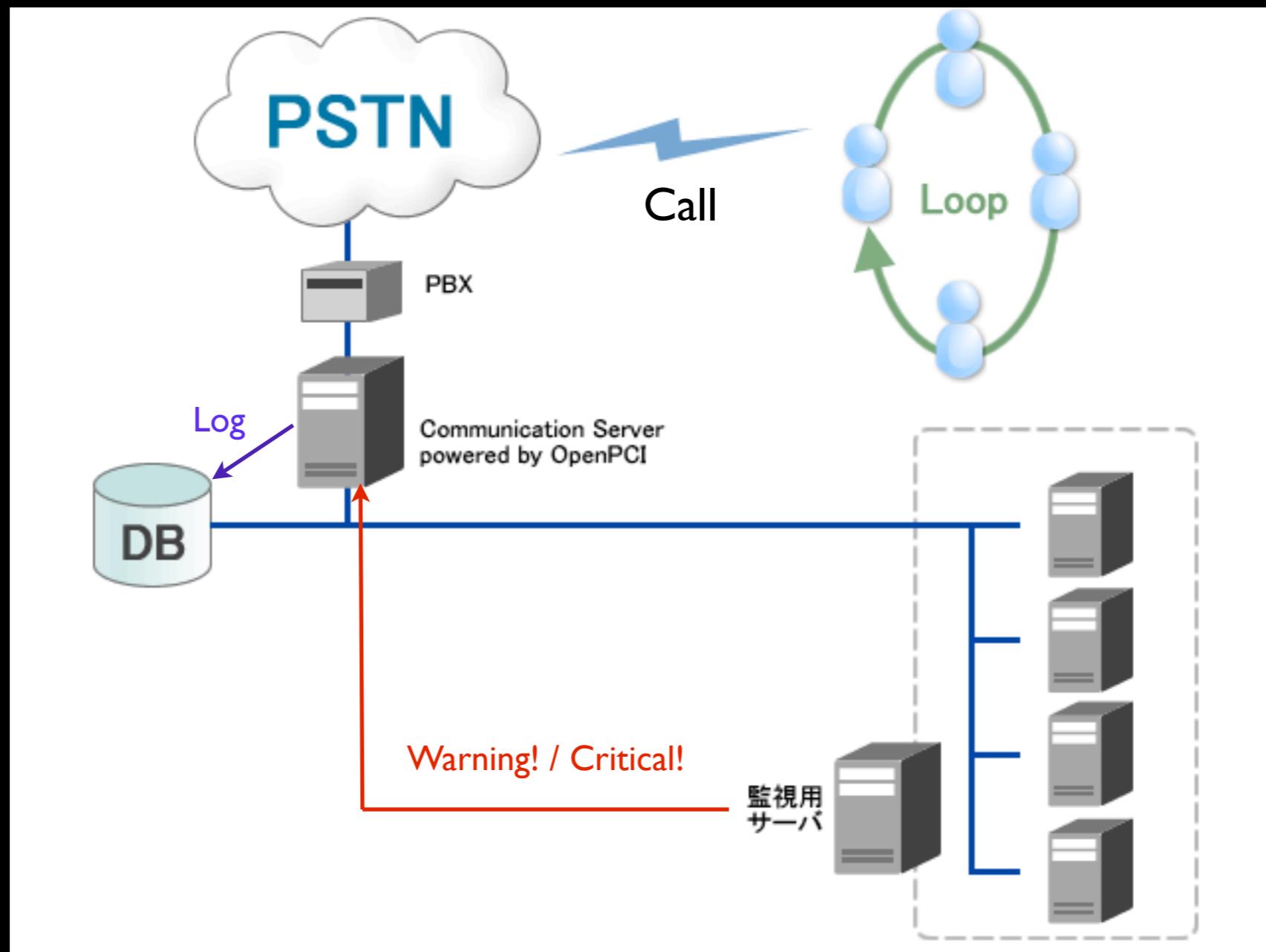
# Voicetronix OpenPCI Card

- CPAN Module  
(Telephony::CTPort)
- Low Cost (\$400~)
- RJ-11



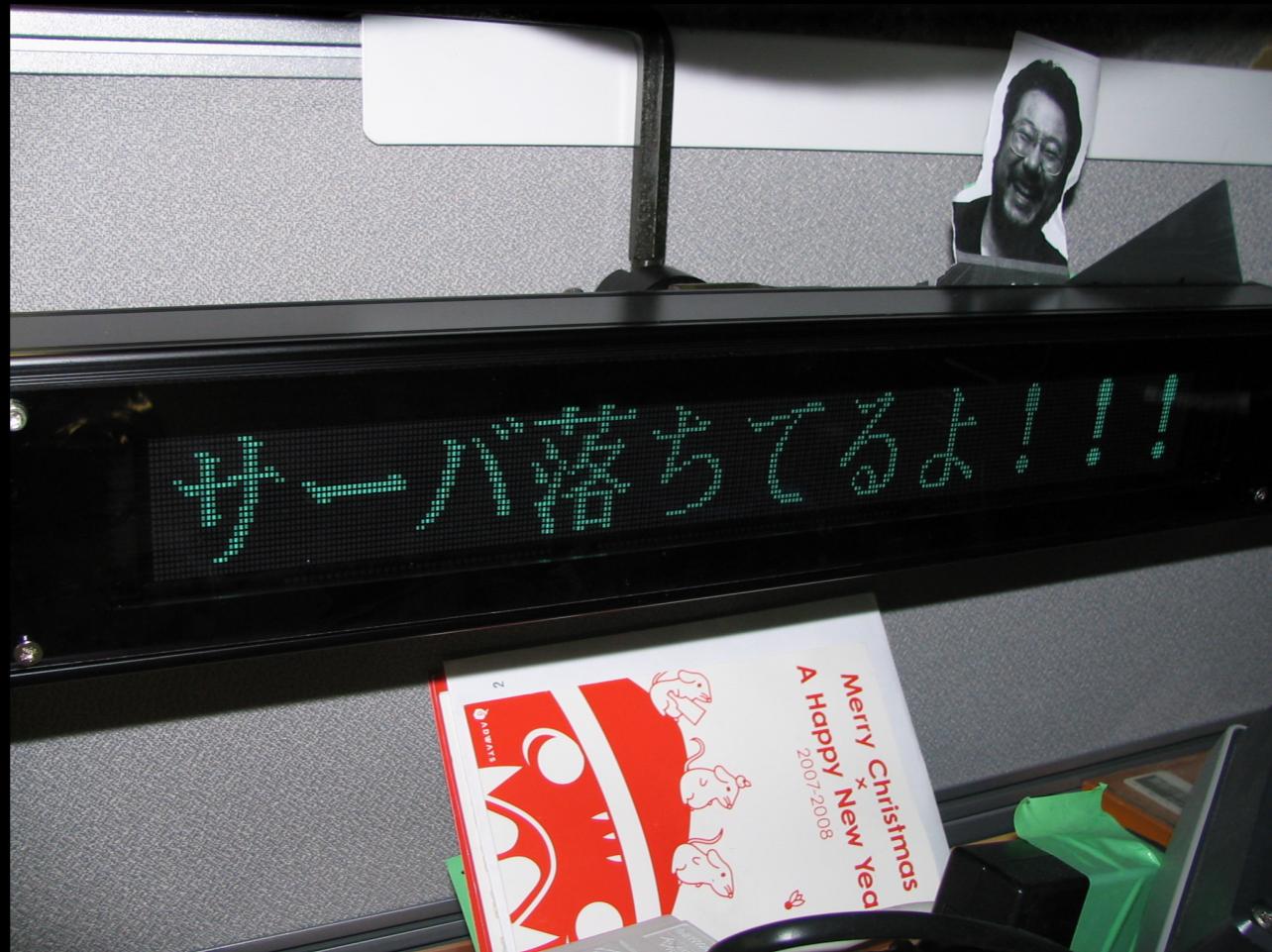
# CTI on System Monitoring?

こんなCTIをどうしてシステム監視に  
使うか?



ex >  
while(Monitoring)

監視中に



# HTTP is down!

Ringing~

# Off Hook

電話受けて

Hello?

声かけると

“Somethings Wrong!”

“なんかおかしいよ”

“Somethings Wrong!!”

“なんかおかしいんだよ”

# Something's Wrong!!!

“なんかおかしいんだってば”

the CTI Notifier(?) just called us

こんな感じでCTI通知しております。

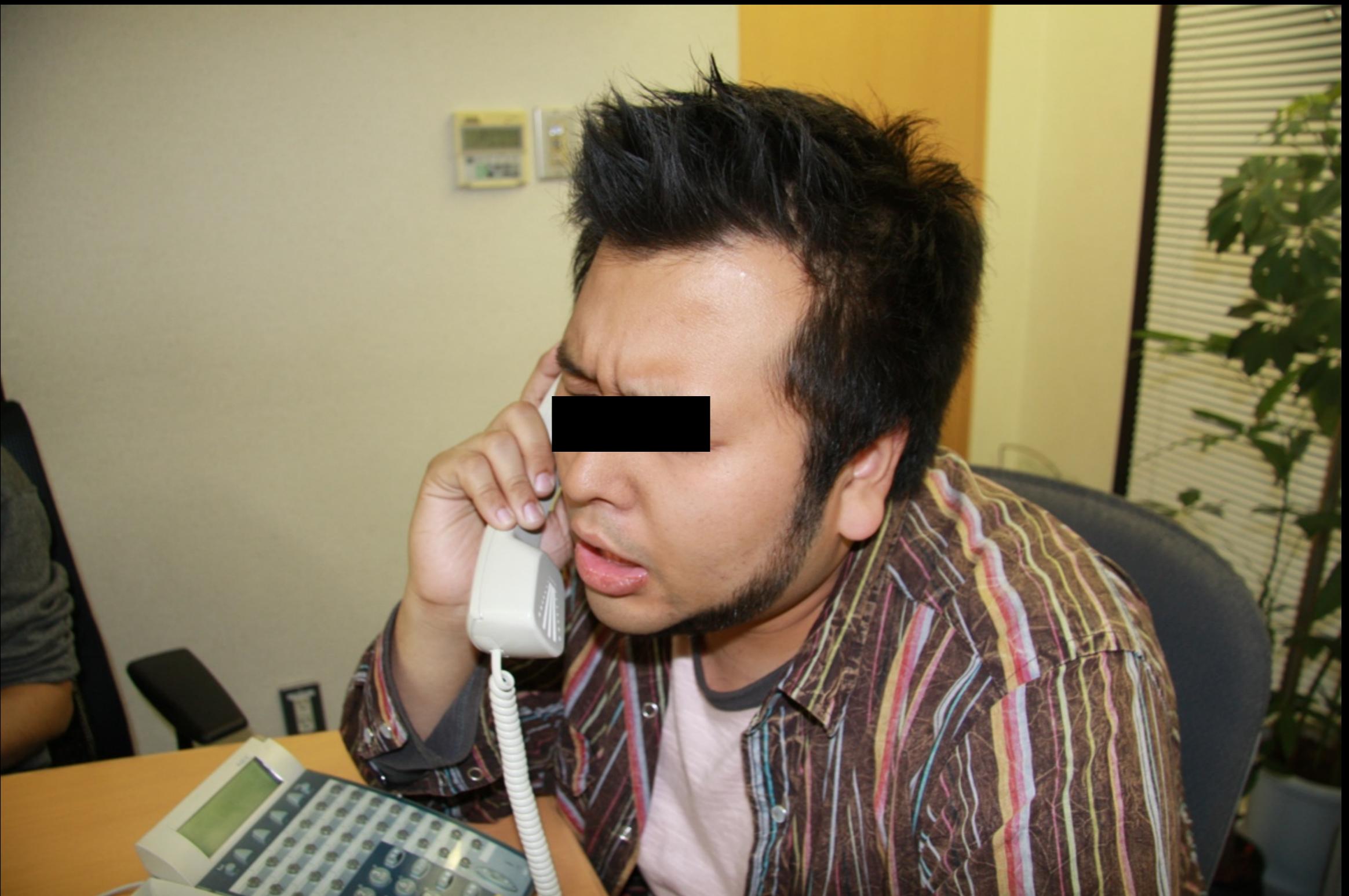
Whenever SA hears  
“Somethings Wrong”

このタイミングで、システム運用担当者のほうが  
”なんかおかしいよ”と言われたら

- He would be (彼は多分)
  - stressed (ストレスが出来たり)
  - impatient (いきなり緊張したり)
  - angry (ちょっと起ったり)
  - et cetera...(よくない現状いろいろ)

# Like This

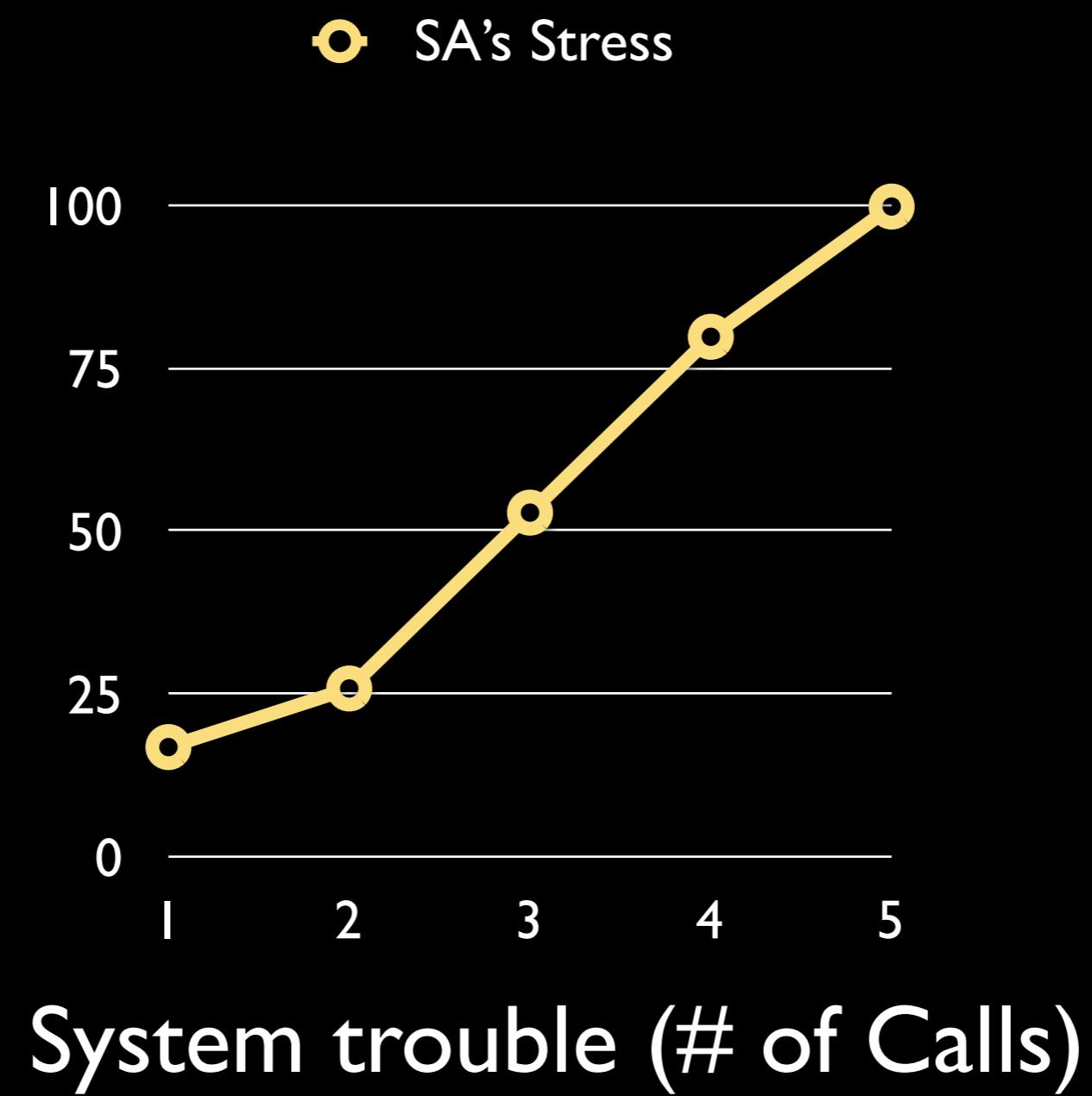
こういう風にですね



“WTF?” “なんだと！”

In the Graph...

グラフで見ると



we wish SA for some happiness

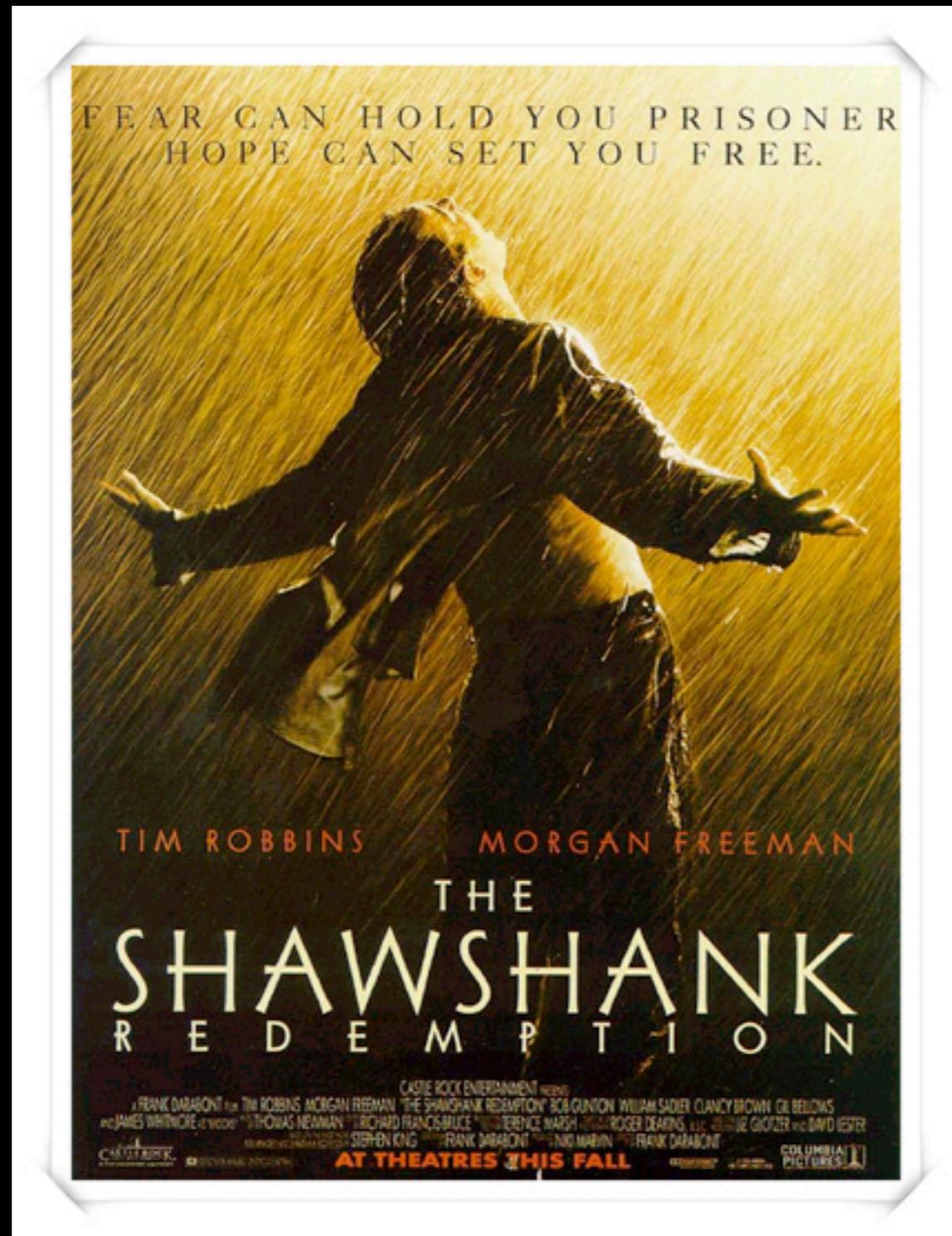
システム導入して  
運用担当者はよろこんでくれないかな

Is there any good solution?

なんかいいアイディアないかな？



!



Yatta~

After We have Completed  
this Mission,

一応これやったからは、

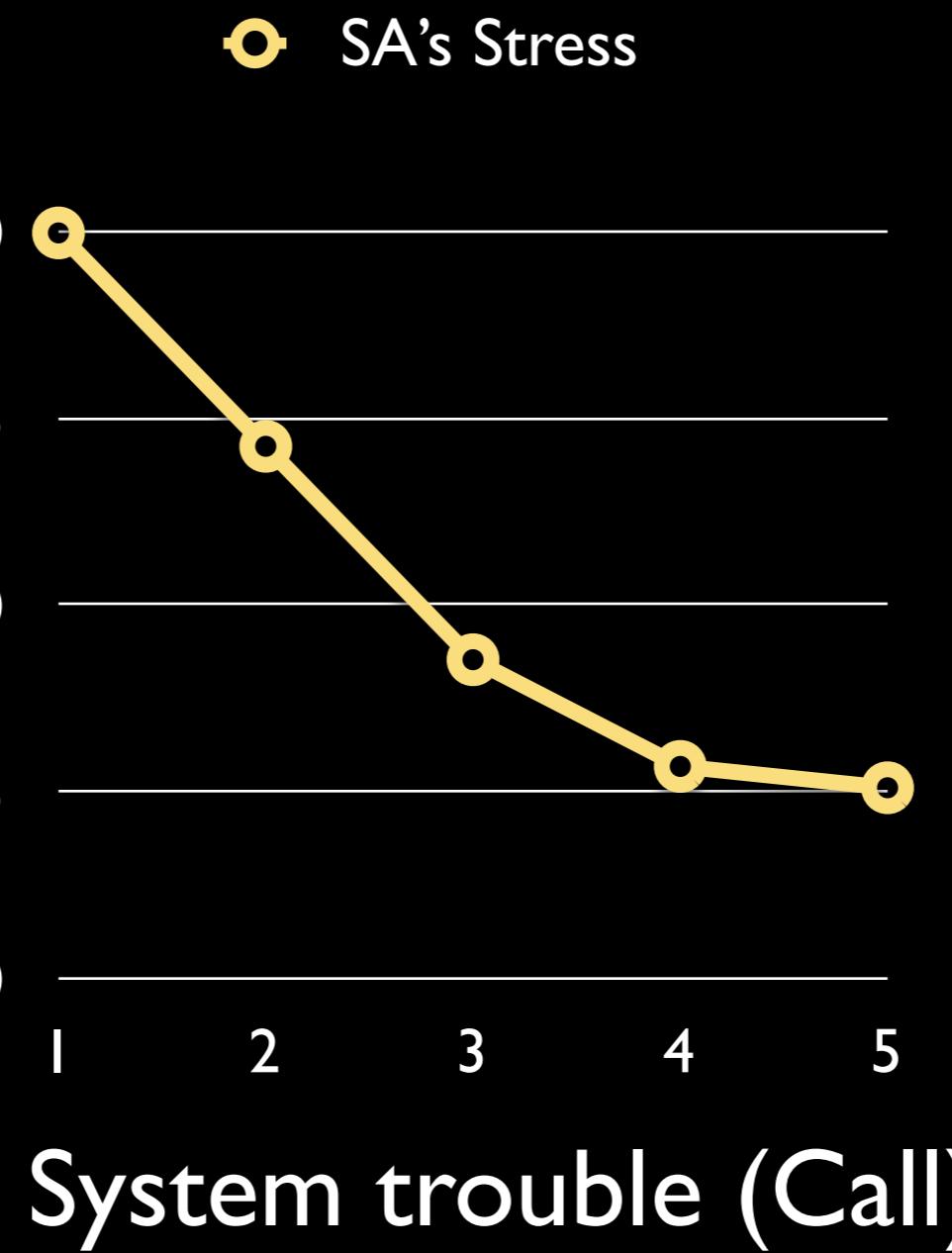
SA will be  
(.+)  
whenever  
Service goes Down

運用担当者は  
サービスが落ちても

- Happy(喜んでくれるし)
- Less Stress(ストレスもなさそうだし)
- etc(いい影響いろいろ)

# In Visual Mode

ビジュアル的に見ると



# More × 2 Visual Mode

ではもっともっとビジュアル的に見ると

# Like This

こういうふうになります



Why?

なんで?

What's happened to him?

彼になにがあったんでしょうか？

The Silver Bullet is what  
we gave to him is...

私たちが彼にあげた、解決策は...



これ

# Code

use Telephony::CTPort

# Methods

# Methods

- `on_hook()`, `off_hook()`

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- `wait_for_ring()`, `wait_for_dialtone()`

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- `record($file_name, $timeout,$term_key)`

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- `on_hook()`, `off_hook()`
- `wait_for_ring()`, `wait_for_dialtone()`
- `record($file_name, $timeout,$term_key)`
- `collect($max_digits, $max_sec)`

# Methods

- `on_hook()`, `off_hook()`
- `wait_for_ring()`, `wait_for_dialtone()`
- `record($file_name, $timeout,$term_key)`
- `collect($max_digits, $max_sec)`
- `dial($number)`

# Make a Call

# Make a Call

on\_hook()

# Make a Call

on\_hook() →

# Make a Call

`on_hook()` → `off_hook()`

# Make a Call

on\_hook() → off\_hook()

# Make a Call

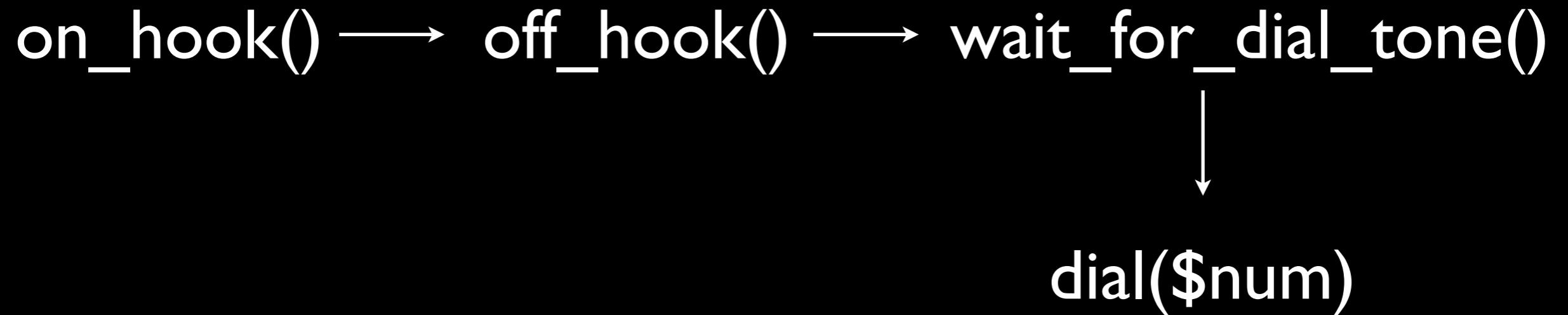
`on_hook() → off_hook() → wait_for_dial_tone()`

# Make a Call

`on_hook() → off_hook() → wait_for_dial_tone()`



# Make a Call



# Make a Call

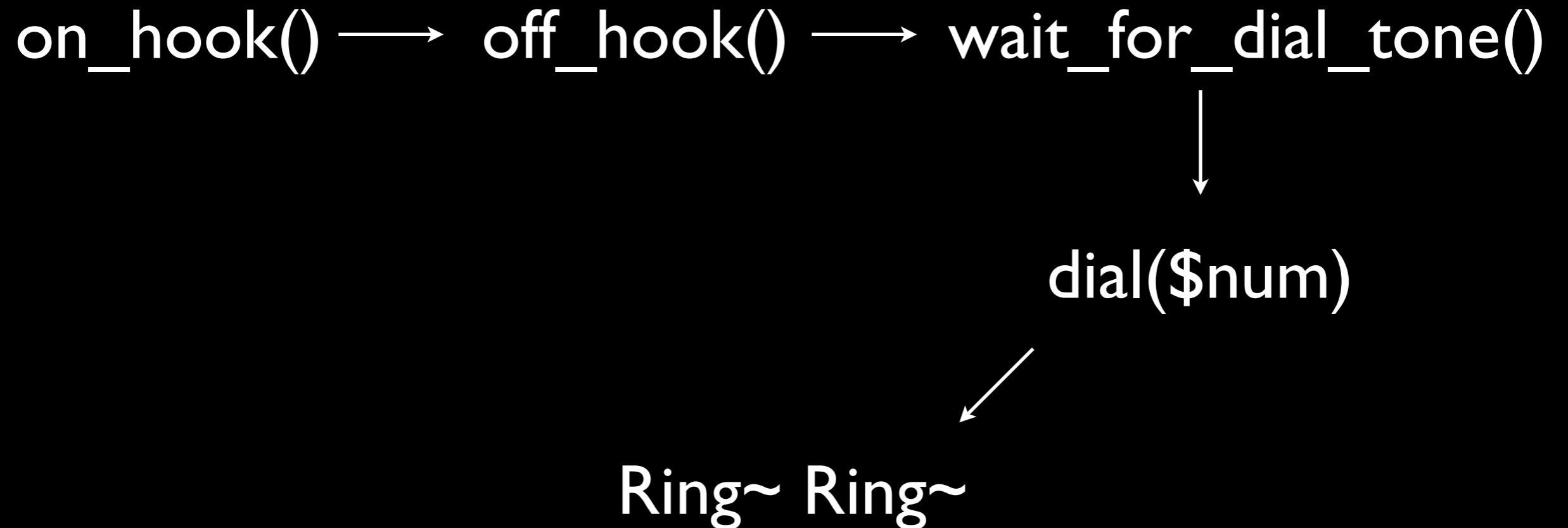
`on_hook() → off_hook() → wait_for_dial_tone()`



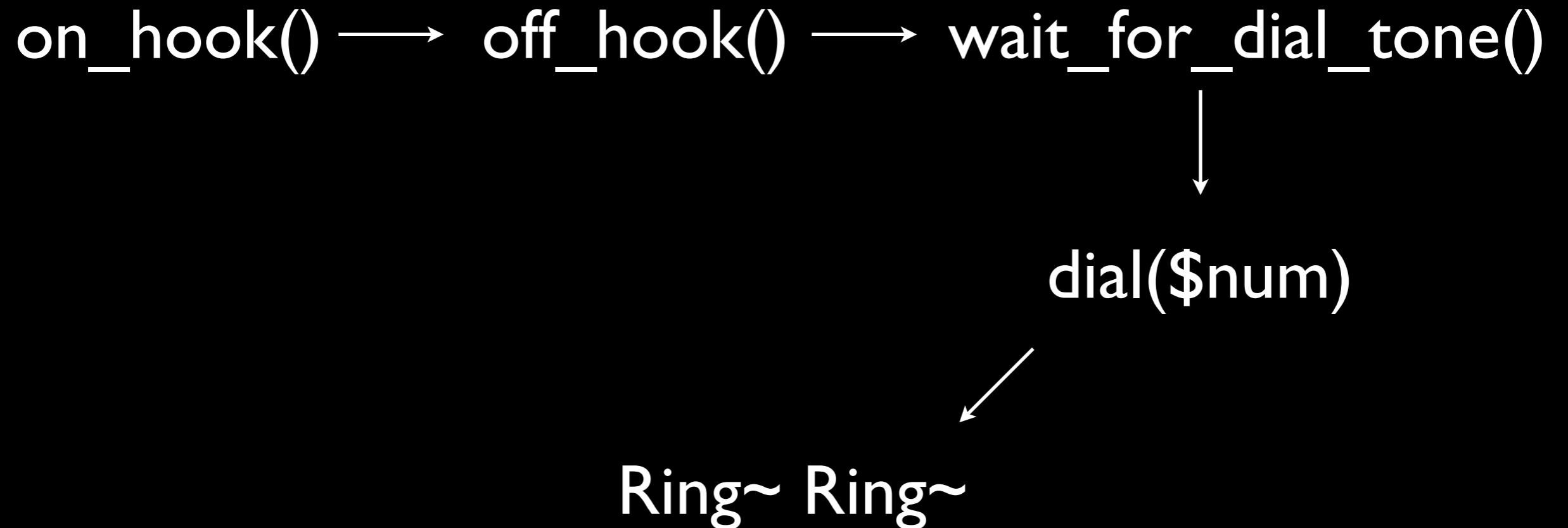
`dial($num)`



# Make a Call



# Make a Call



# Make a Call

on\_hook() → off\_hook() → wait\_for\_dial\_tone()

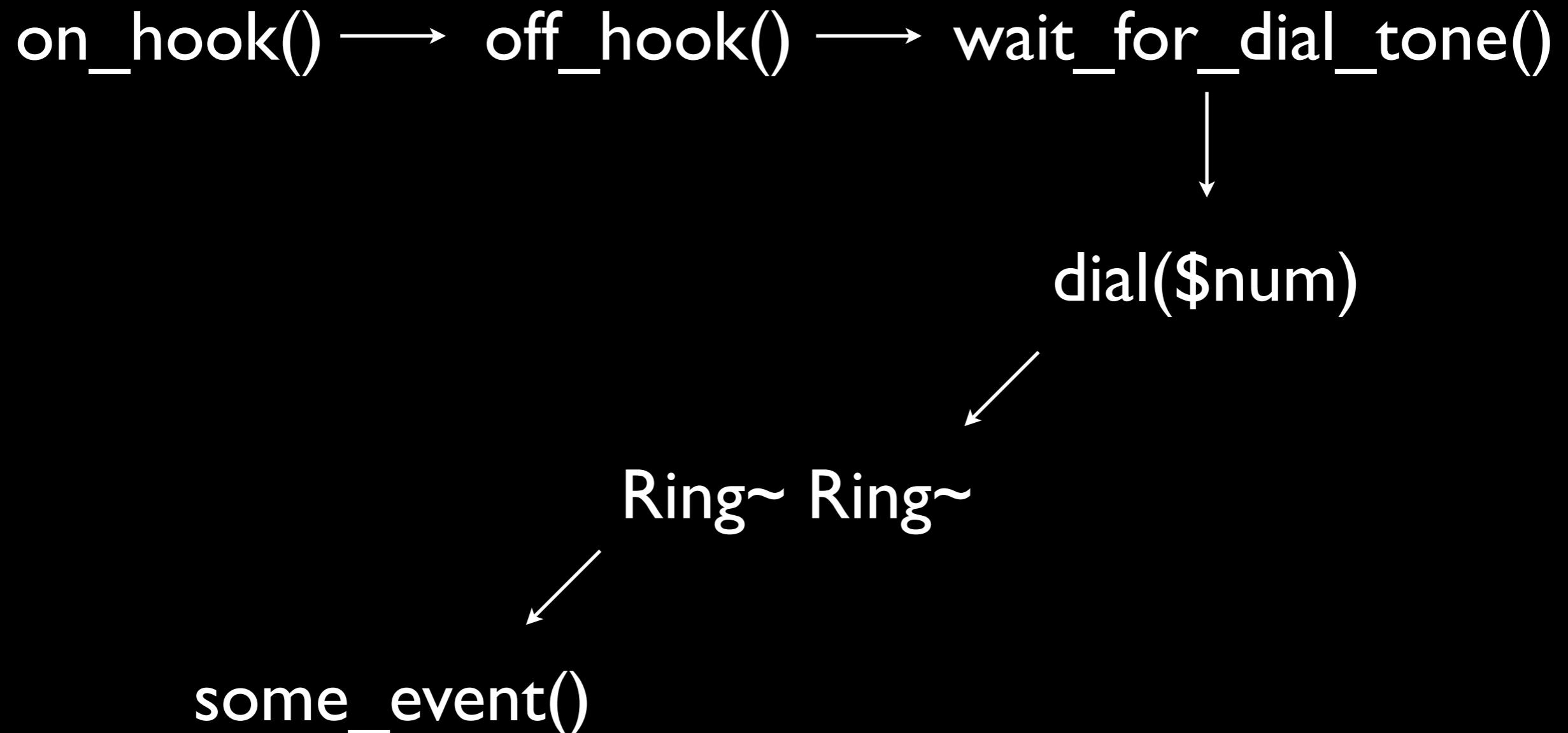


dial(\$num)

Ring~ Ring~



# Make a Call



# Receive a Call

# Receive a Call

on\_hook()

# Receive a Call

on\_hook() →

# Receive a Call

`on_hook() —> wait_for_ring()`

# Receive a Call

on\_hook() → wait\_for\_ring() →

# Receive a Call

on\_hook() → wait\_for\_ring() → Ring~ Ring~

# Receive a Call

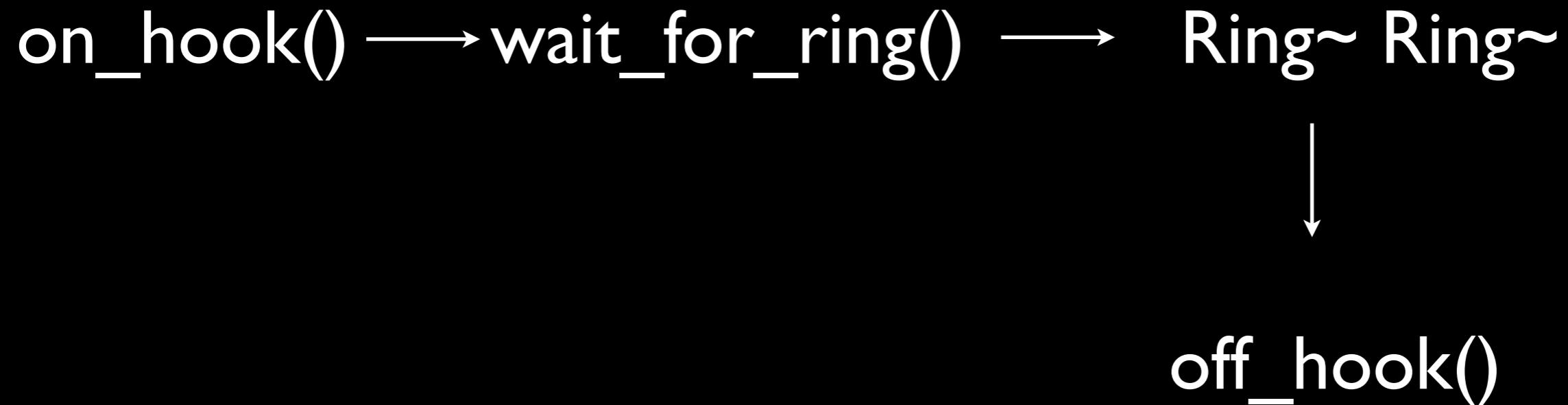
on\_hook() → wait\_for\_ring() → Ring~ Ring~

# Receive a Call

on\_hook() → wait\_for\_ring() → Ring~ Ring~



# Receive a Call



# Receive a Call

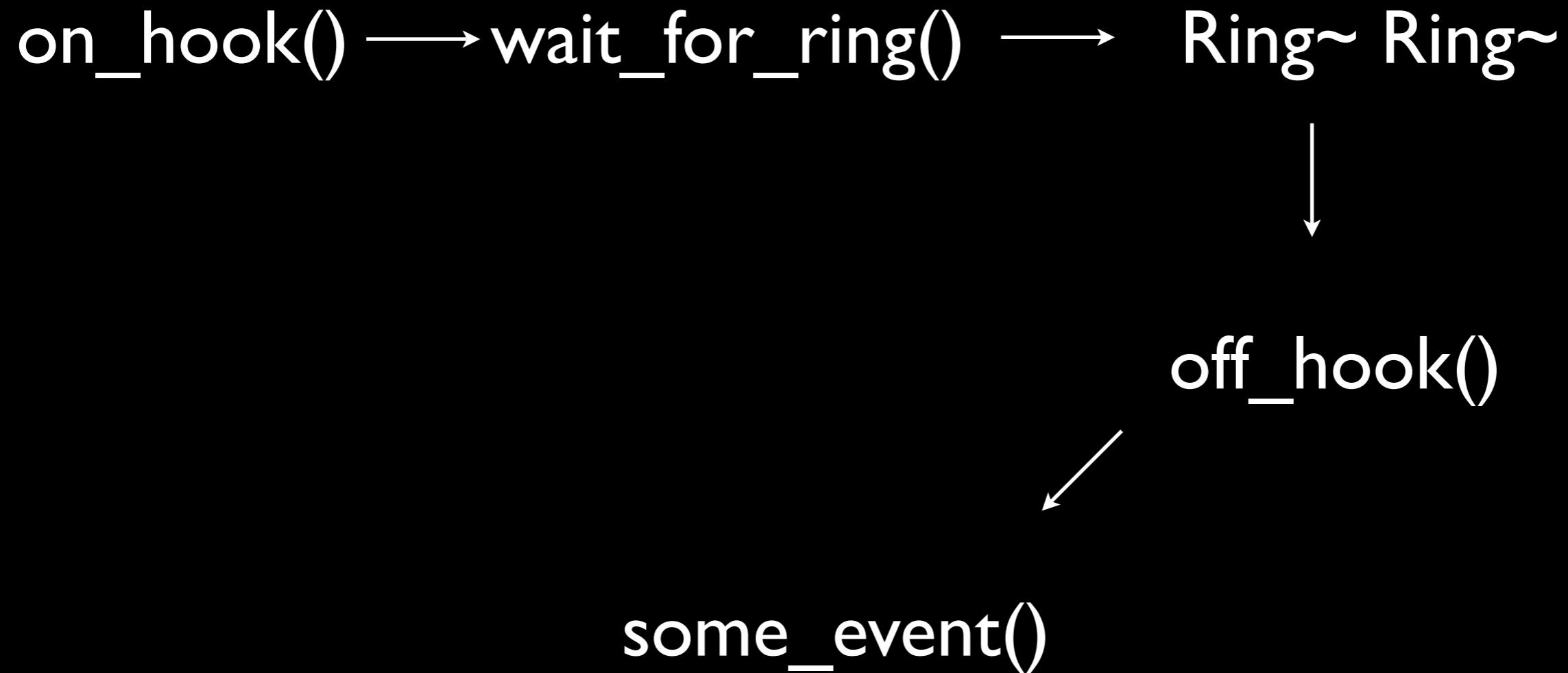
on\_hook() → wait\_for\_ring() → Ring~ Ring~



off\_hook()



# Receive a Call



```
# CTI daemon 起動
$ ctserver -d

#障害発生通報

use strict;
use warnings;
use CTIServer;
my @list = (#phone numbers#);
my $ct = CTIServer->new(port => 1234);
foreach my $person (@list) {
    if ($ct->call($person, 20)) { # Call! $person = PHS number
        do_something() if $ct->play("39_warn.wav");
    }
}
sub do_something { blahblah; }
```

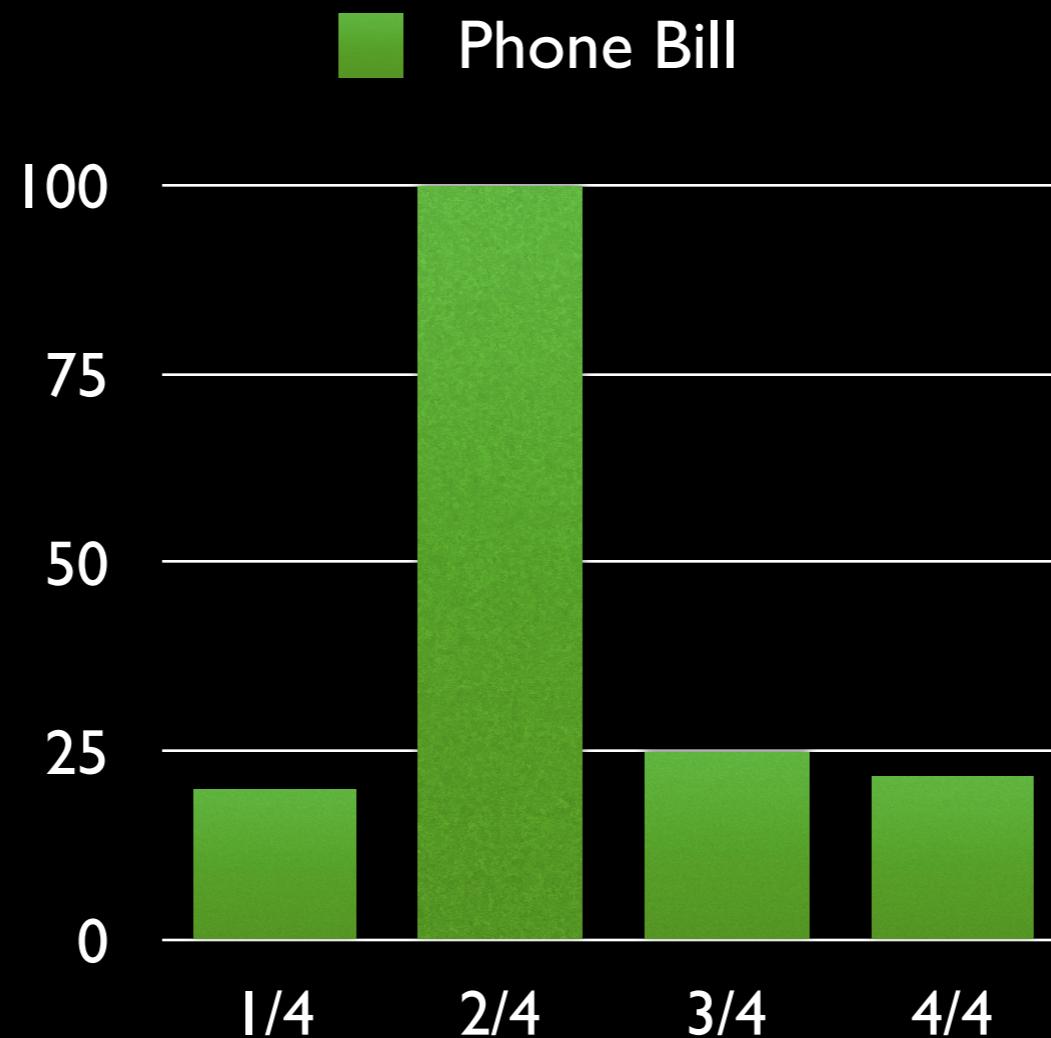
It will be a very Amazing System with  
previously mentioned features.

さっき申し上げました機能でなんとかすると  
すばらしいシステムができると思います。

# But, It has a Critical Weakness!

それはCTIに致命的な弱点があったからです

It is...



While we were testing CTI,  
our company received a huge telephone bill.

このCTIのテストをやってる時、  
会社の電話代が.....

orz

I hope...

一個お願いがありますが、

# Please Don't Use CTI for Voice Phishing! :-)

ぜひ、  
“オレオレ詐欺”とかには  
お使いなさいませんよう  
お願いします。

Nagios

or

App::MadEye

use Class::Component;

# Pluggable Monitoring System



# Why Trac?

```
package App::MadEye::Plugin::Notify::HTTP;

use LWP::UserAgent;

sub request : Hook('notify') {
    $ua = LWP::UserAgent->new;
    $url = $posts->{target} . "?" . $parameter;
    $res = $ua->get($url);
}
```

```
package App::MadEye::Plugin::Notify::Trac;

use DBI;

sub request : Hook('notify') {
    my $dbh = DBI->connect("dbi:SQLite:trac.db","","","");
    my $sth = $dbh->prepare("INSERT INTO ticket ...");
    $sth->execute(...);
}
```



# Demo

# Summary

- CTI will be the best choice to happy M.S.  
(but, you have to be with HOOO MOOO)
  - WARNING :Telephone bill
  - One Way on TMTOWTMS is Telephony ?

# Thank You!

Any Questions?