

# Silos are for farmers

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The Build Doctor



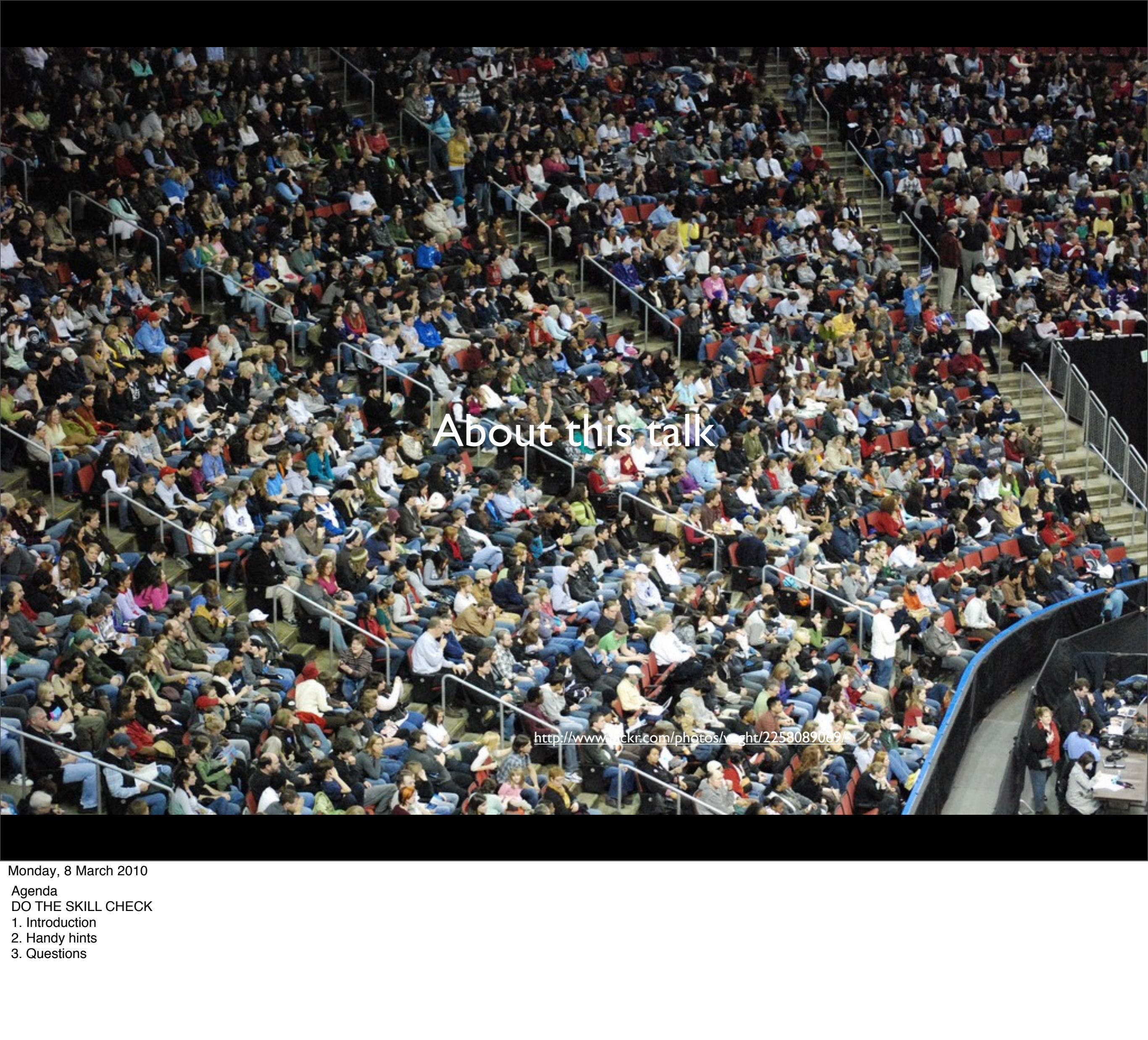
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# About Me

Monday, 8 March 2010

Entered IT Industry in 1991. First task: rolling up cables to exacting standards of fastidious boss  
Brief foray as screwdriver and TCP fix-er  
Solaris Admin  
build and release manager  
passionately believes that we went wrong as an industry  
ok coder  
blogger at [build-doctor.com](http://build-doctor.com)



# About this talk

<http://www.flickr.com/photos/vight/22580890e9/>

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Agenda

DO THE SKILL CHECK

1. Introduction
2. Handy hints
3. Questions



## Introduction:Trench Warfare

It shouldn't have to be like this

<http://www.flickr.com/photos/angells60640/3411660099/>

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Example: sequence 2001-2004

Impact: we certainly delivered late

Bad devs, who the ops team didn't help, but chose to get pissed off at

Good ops team, but attitude poor in retrospect

Vicious cycle of passive aggression, political needling

Social group theory

Entire department collocated in room but argued over email and IM

Who gives out these incentives? Sociopaths? Sociopaths do well in organisations

“That brings me to Dennis Ritchie. Our collaboration has been a thing of beauty” --Ken Thompson

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Most teams seem to have an adversarial approach "we just need to get this past the operations" "damn developers keep dumping crap on us"

Does an adversarial approach work well in many situations, even in legal?

Collaboration is key to all working in organisations

Yet we pass work around as if we were assembling TV's

We're passing up effecting collaboration to score points

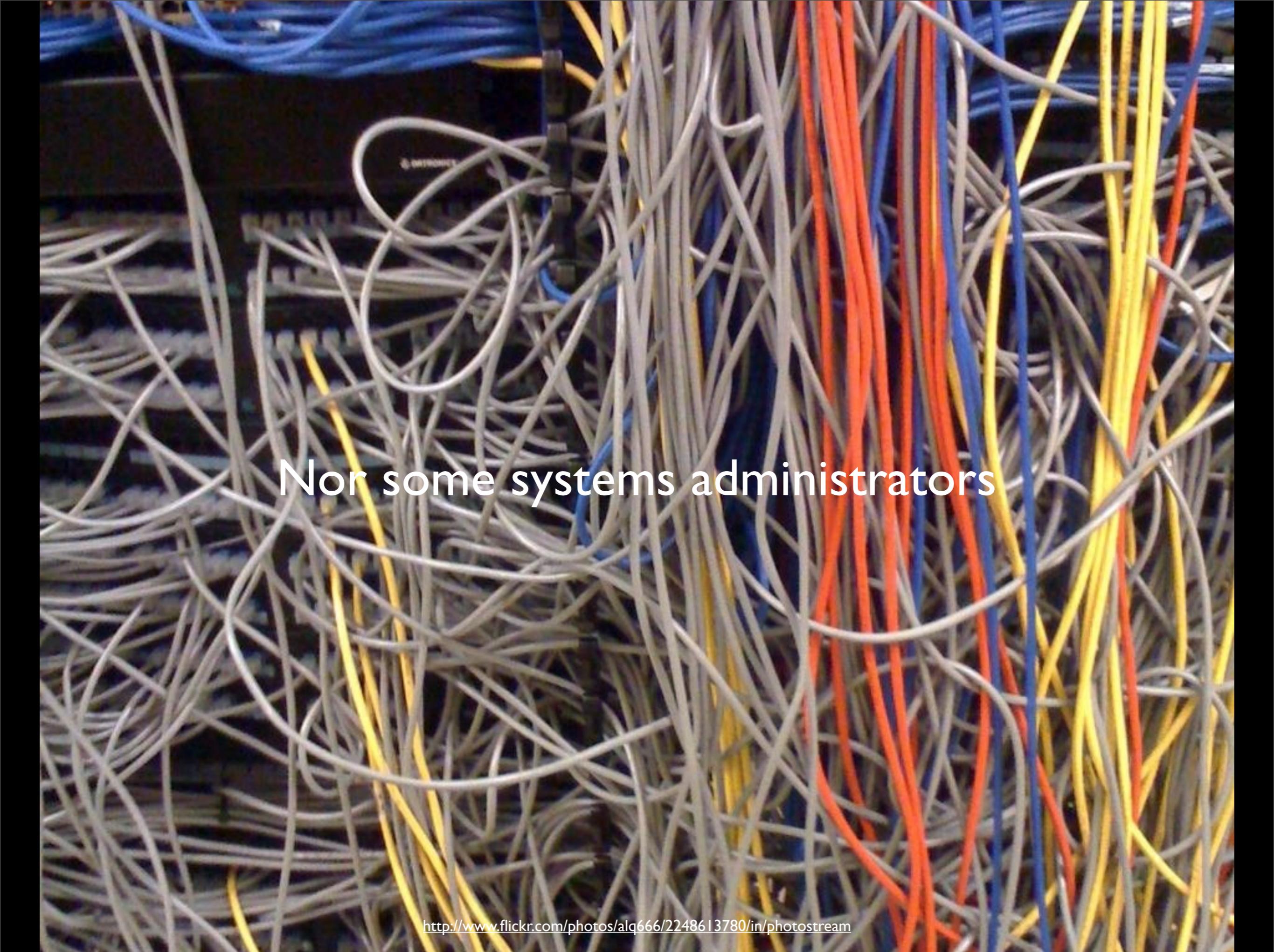


## Some developers aren't very good

<http://www.flickr.com/photos/schmilblick/2629823009/>

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There's no need for me to cite examples of underskilled developers when the DailyWTF does it so well.  
Worked with many, many developers who were out of their league but had incentives to stay in the game  
You won't get co-operation with someone who doesn't feel equal to the other party  
Most of us don't know how to hire good developers  
Warning signs: won't pair, prefer to work alone, talking loud, but delivering little



Nor some systems administrators

<http://www.flickr.com/photos/alq666/2248613780/in/photostream>

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Exact same problem with sysadmins

Sometimes harder to document, but go to pub with sysadmins: the stories are there

We don't know how to hire them either

Warning signs, everything is a security risk, excessive caution, failing to use sudo or SSH pubkey

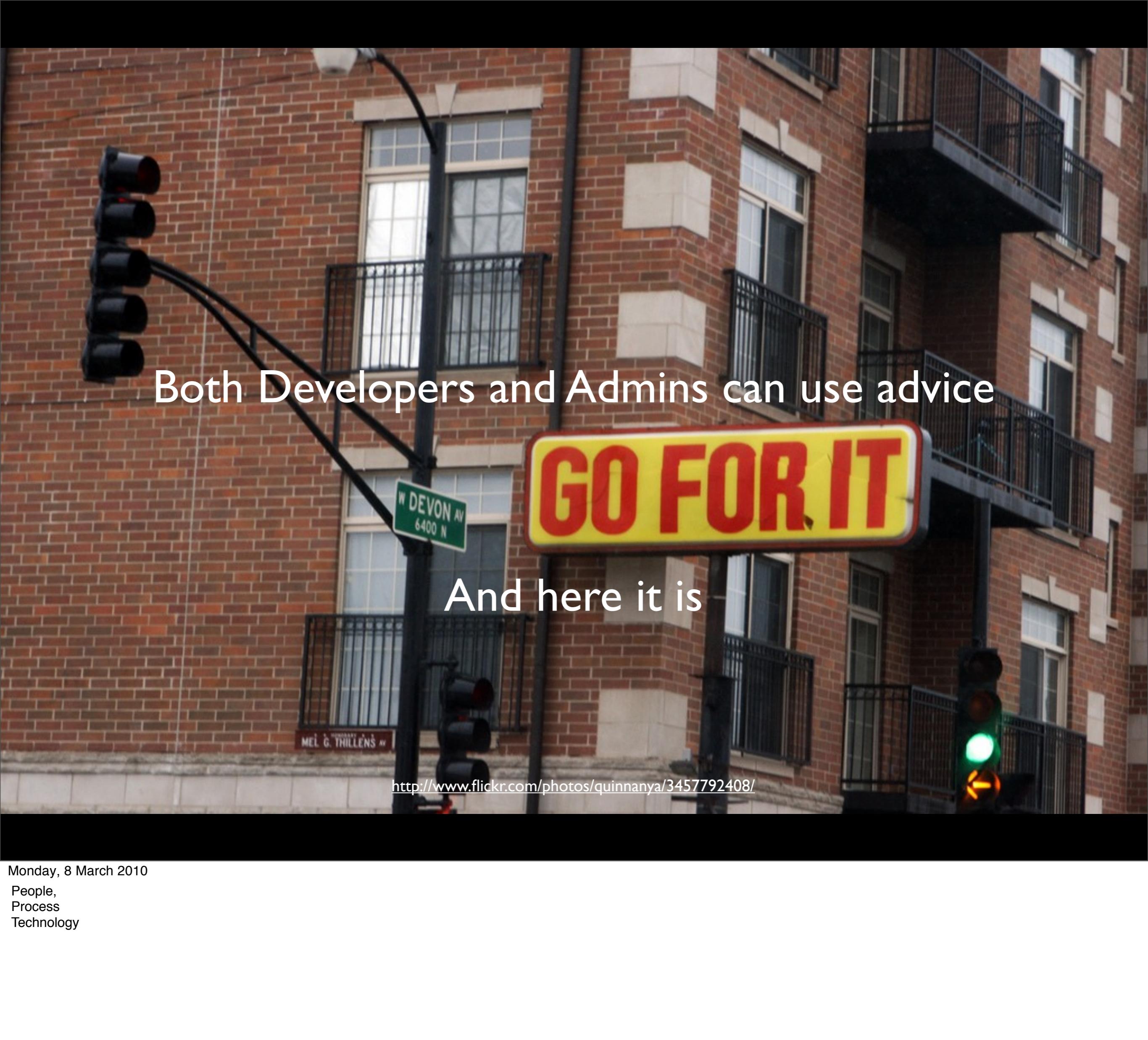


Those people want to hide  
You don't want them on your team

<http://www.flickr.com/photos/wbaiv/3236672907/>

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If people aren't just conditioned to make meetings, plan 'catch-ups', telephone calls, write email  
Then they are using the organisation to hide - policy is my favourite

A photograph of a multi-story brick apartment building with several windows and balconies. In the foreground, there's a street sign for "W DEVON AV 6400 N" and a smaller sign for "MEL G. THILLENS AV". A traffic light is visible on the left, and another one on the right showing a green light with a left turn arrow. A large, yellow rectangular sign with the words "GO FOR IT" in red capital letters is mounted on a pole in front of the building.

Both Developers and Admins can use advice

And here it is

<http://www.flickr.com/photos/quinnanya/3457792408/>

# People

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**Why people?**

Gerald Weinburg's Second law of consulting "No matter how it looks at first, it's always a people problem."



Don't use email. Just stop it.

<http://www.flickr.com/photos/brunogirin/2484786902/>

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## We know that email removes most of the communication.

One study at UCLA indicated that up to 93 percent of communication effectiveness is determined by nonverbal cues. Another study indicated that the impact of a performance was determined 7 percent by the words used, 38 percent by voice quality, and 55 percent by the nonverbal communication.

And we're really, really bad at writing them, too. Stop!

# Respect everyone

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They may not share your views, but that doesn't stop them being valuable  
Sysadmins and developers have different skills, but there's no excuse to disrespect anybody  
because of their career path



Have lunch with the people on the other side of the wall

<http://www.flickr.com/photos/balakov/1614997917/>

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It's a meeting with a purpose  
You might learn something



Talk to your systems people  
about ideas you have to solve problems.  
They may have easier ways.



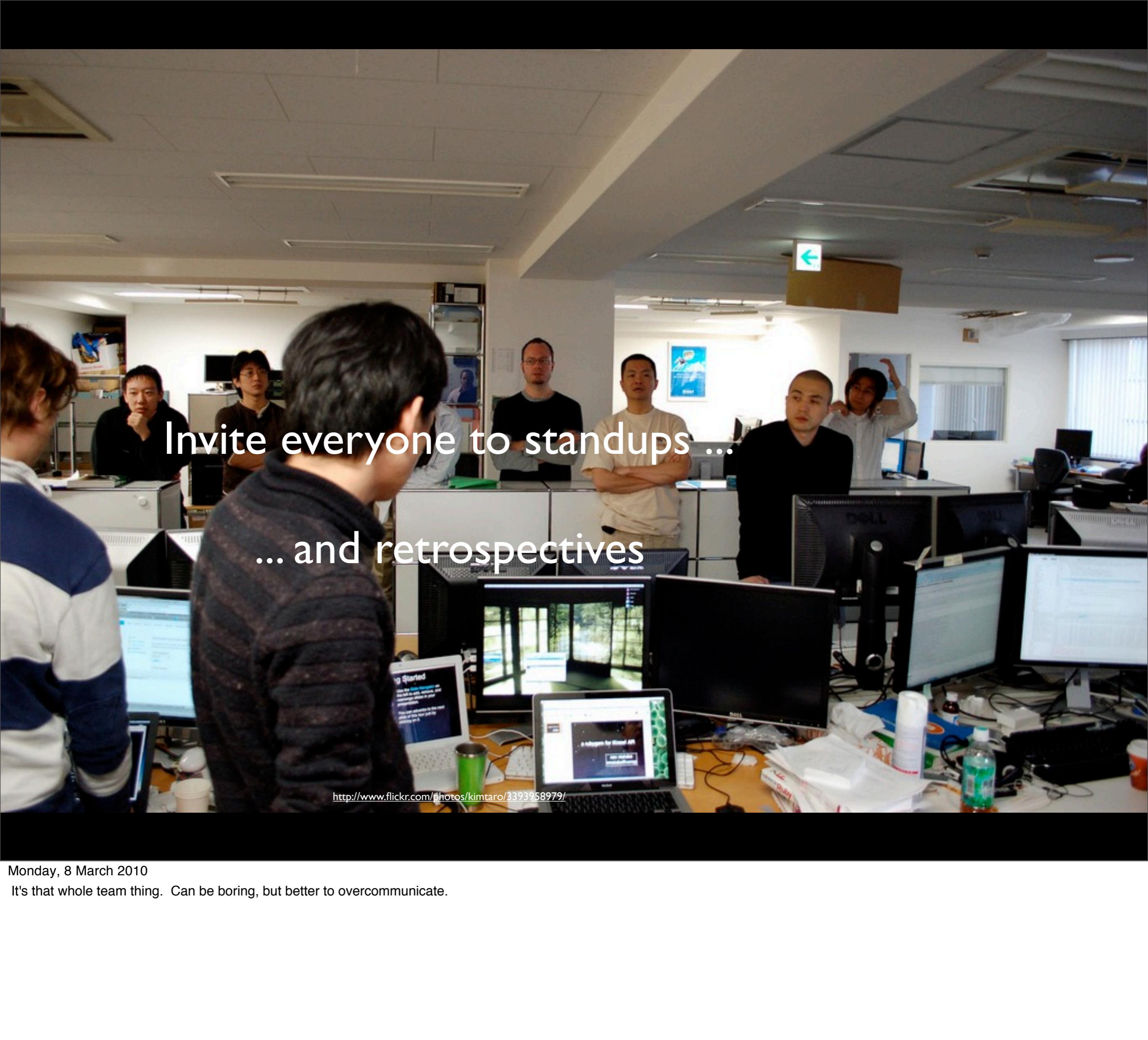
<http://www.flickr.com/photos/clarity/154640125/>

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Part of theme of engaging early with sysadmins

Sysadmins love problem solving

Usually don't like being presented with a problem and solution



Invite everyone to standups ...  
... and retrospectives

<http://www.flickr.com/photos/kimtar/3393958979/>

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It's that whole team thing. Can be boring, but better to overcommunicate.



**Co-locate the sysadmins with the devs**

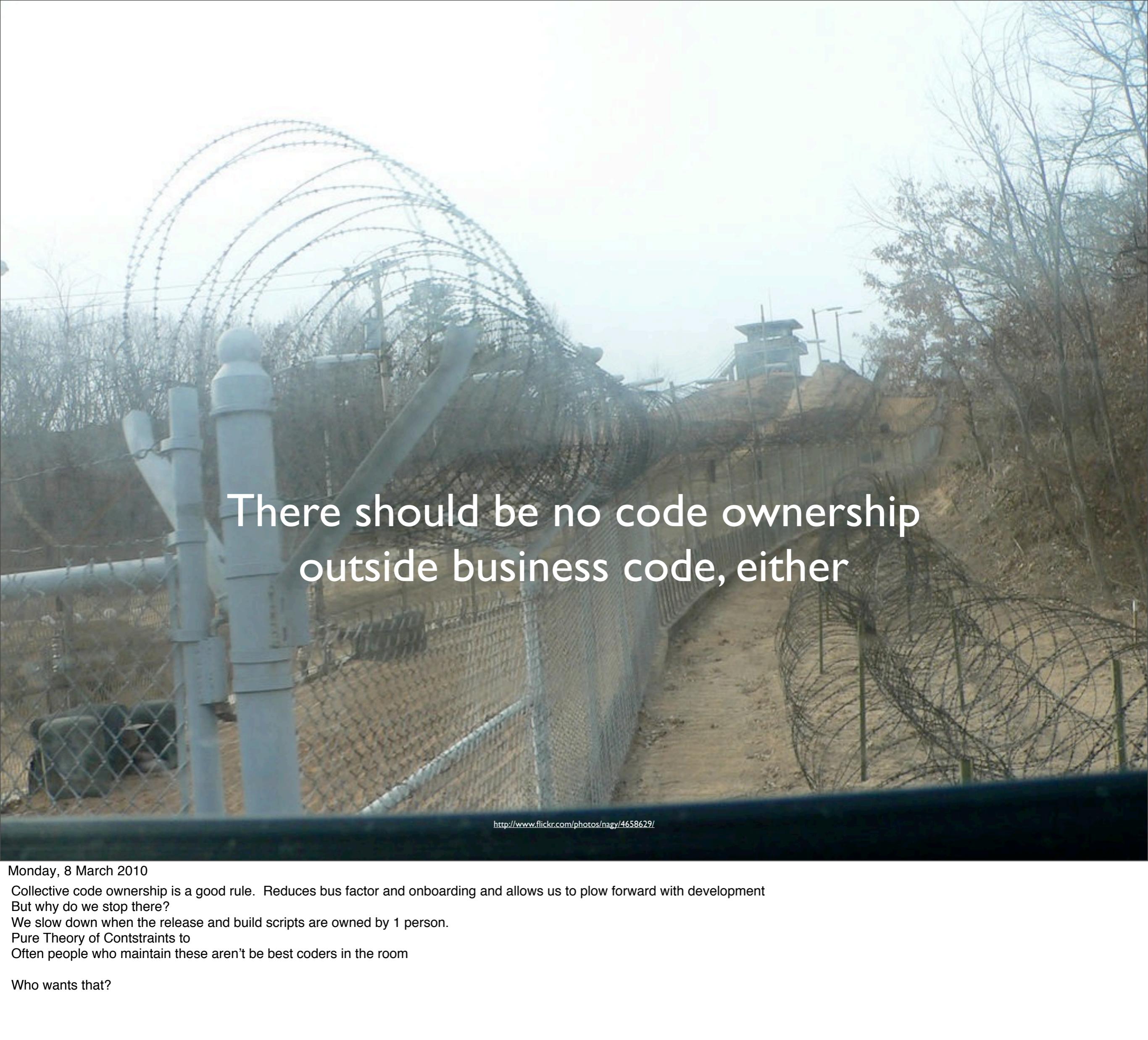
<http://www.flickr.com/photos/parap/4355237522/>

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Nonverbal communication again

Face-to-face is only way to overcome communication barriers

# Process



There should be no code ownership  
outside business code, either

<http://www.flickr.com/photos/nagy/4658629/>

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Collective code ownership is a good rule. Reduces bus factor and onboarding and allows us to plow forward with development  
But why do we stop there?

We slow down when the release and build scripts are owned by 1 person.  
Pure Theory of Constraints to  
Often people who maintain these aren't the best coders in the room

Who wants that?



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This won't feel natural at first

Harder, because of lack of tools (pairing with vi can be hard)

Great, safe way to learn

A photograph of two women standing in a grassy field. Both are wearing white lab coats over dark tops and jeans. The woman on the left is wearing a pink baseball cap and sunglasses, and is holding a small electronic device. The woman on the right is holding a clipboard and a pen. They are both smiling. In the background, there is a dense line of trees and bushes.

Sign off stories when the code is deployed to production

<http://www.flickr.com/photos/dave-rogers/2815036285/>

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You're faking it unless you count them as done when they are in production  
This gives incentive to help the deploy effort

# Tech



Teach your sysadmins to use version control

SUBVERSION



<http://www.flickr.com/photos/daquellamanera/70740020/>

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An operations job is about tracking and controlling change. Why wouldn't you?

I suspect the answer is cultural - it's seen as a developer

Don't use fancy vendor tools, don't use CVS either

Help your developers write performant code  
Help developers with managing their dev environment

(like SSH public keys)

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Why watch someone flounder?

Some sysadmins don't use SSH properly. Those who do, do well. Help developers become more fluent on the systems that you manage. They'll only thank you.

# Run your deploy scripts via CI Use continuous deployment



<http://www.flickr.com/photos/clofresh/3384877145/>

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Knowing that your code is undeployable should focus the mind. I've done this, and it helped the testing no end, and it helped derisk the prod deploys  
Continuous deployment might not be 50 days to prod  
But why not 50 a day to a test server?  
CD needs adapting for some domains  
But you can take the principles



## Use Puppet or Chef



<http://www.flickr.com/photos/34526794@N00/4164784445/>

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You don't need to choose one or the other  
You need to get good at modelling your systems  
And then the choice of tool should come second  
Remember this is a VI vs Emacs/Ruby vs Python - you should be focusing on automating well - the other guys are the ones telling the CTO that installing stuff by hand is cool

# Synthesise monitoring and CI

Setup monitoring in dev environment

<http://www.flickr.com/photos/34997655@N02/3914526029/>

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Big visible state of your build: fine. What about your build infrastructure?  
Don't you want to know? What about production? Is that broken?  
It's easy to write plugins to monitoring systems.



OS Packages are your friend

<http://www.flickr.com/photos/avlxyz/3014317179/>



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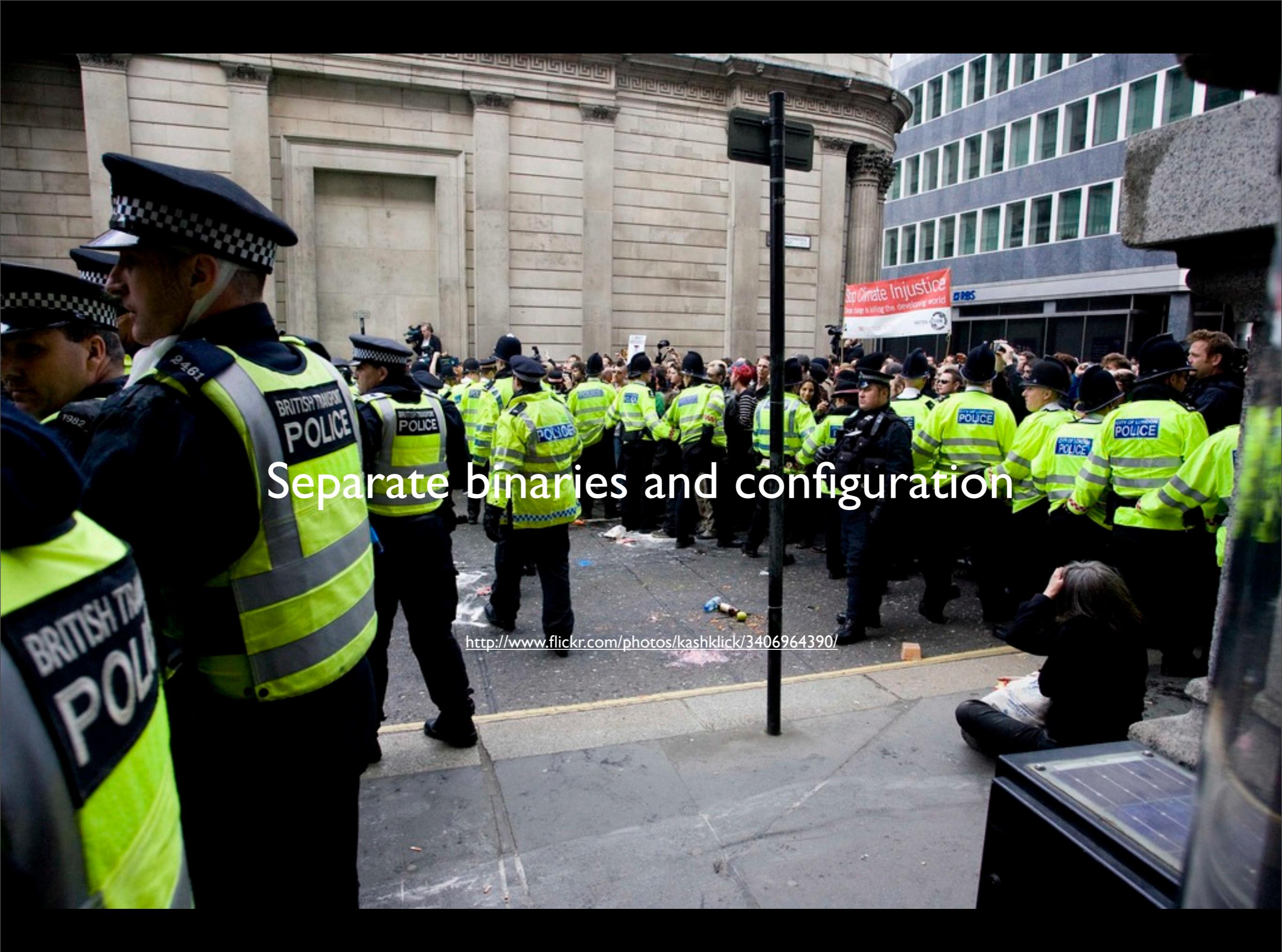
OS packages contain useful metadata

It means you can match up your application and its native dependencies

Doesn't help developers all that much but it helps sysadmins a boatload

Development help in delivering these can be a godsend to devs, and likely to make you a hero

"how often do you ask the sysadmin what they want? - or do you just show up and ask them to deploy something?



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What works for your desktop and your very first single-node test environment may not work for all environments  
This will hurt everyone unless you head it off at the pass  
Seems obvious but I've had people fight me on it



<http://www.flickr.com/photos/kdga/38116440>

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Making development systems too easy to deploy causes deployment problems down the line.  
Make development a little more like production and gradually roll it out.



Give developers access to production logs and data

<http://www.flickr.com/photos/misterdna/49841409/>

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Feedback loop. If you can't see what your code does in production, how can you improve?

B Y T E B O O K S

# BUILD YOUR OWN Z80 COMPUTER

Design Guidelines  
and Application Notes

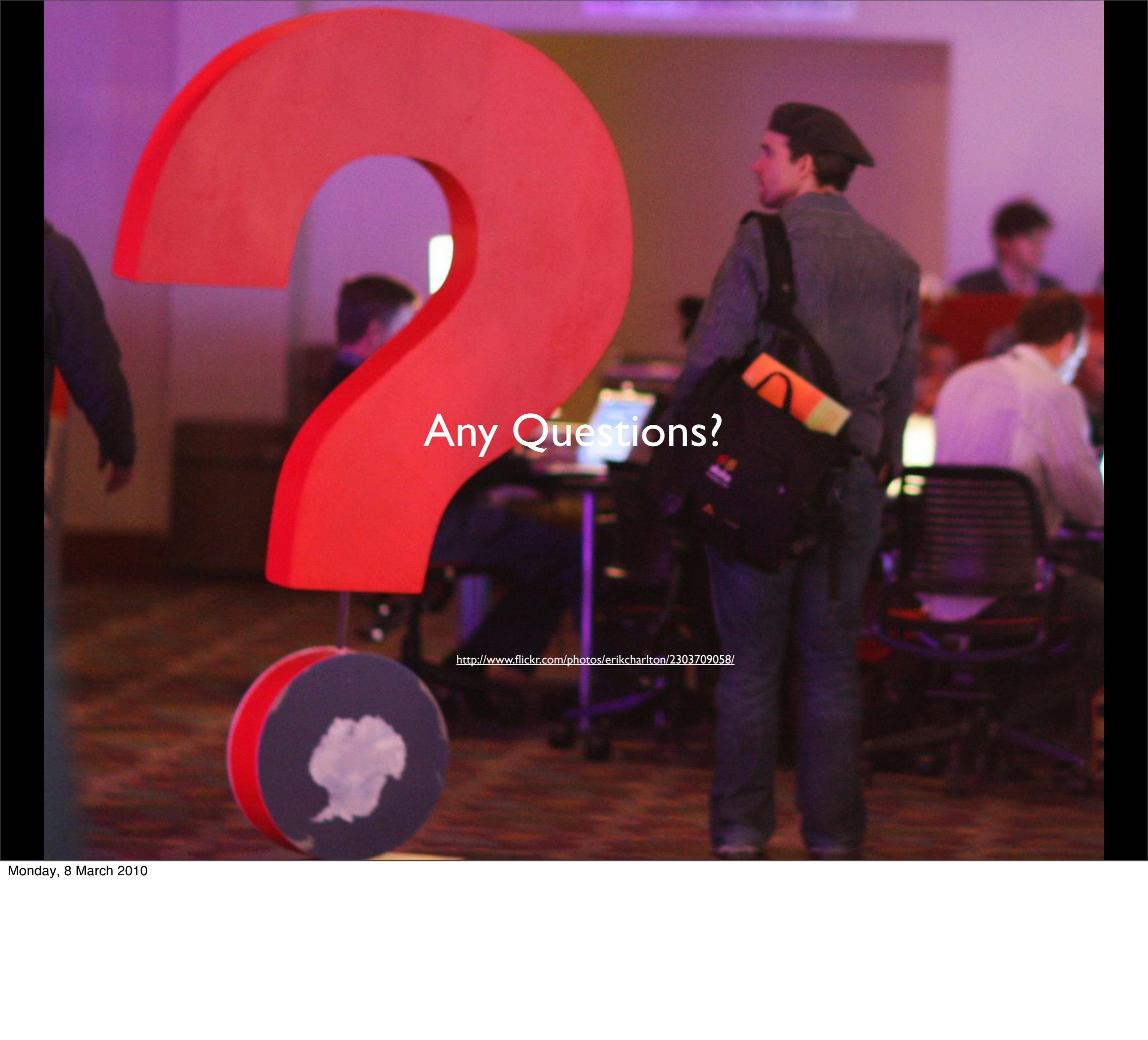
Re-create the developer environment often

by Steve Ciarcia

<http://www.flickr.com/photos/mrbill/159064314/>

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Little tweaks here and there go unnoticed. REbuilding frequently forces us to have a process. rebuilding any system is possible these days with puppet.



# Any Questions?

<http://www.flickr.com/photos/erikcharlton/2303709058/>

Thank you!  
more at  
[build-doctor.com](http://build-doctor.com)