



A Gentle Introduction

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Systems, Frameworks and APIs, Oh My!

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- *Content Management System* built on the














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- *Content Management System* built on the
- *Framework*, which uses the
- *APIs* (Application Programming Interface)


What is where?


- ▶  **includes**
- ▶  **misc**
- ▶  **modules**
- ▶  **profiles**
- ▶  **scripts**
- ▶  **sites**
- ▶  **themes**
 -  **cron.php**
 -  **index.php**
 -  **install.php**
 -  **robots.txt**
 -  **update.php**
 -  **xmlrpc.php**


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
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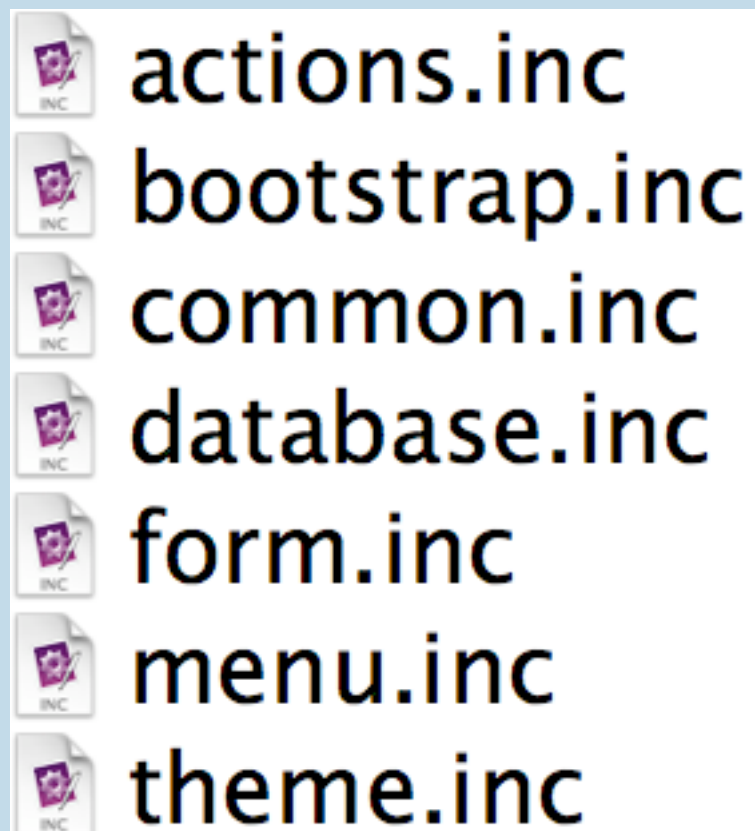
 **index.php**








 **install.php**

 **robots.txt**







 **update.php**

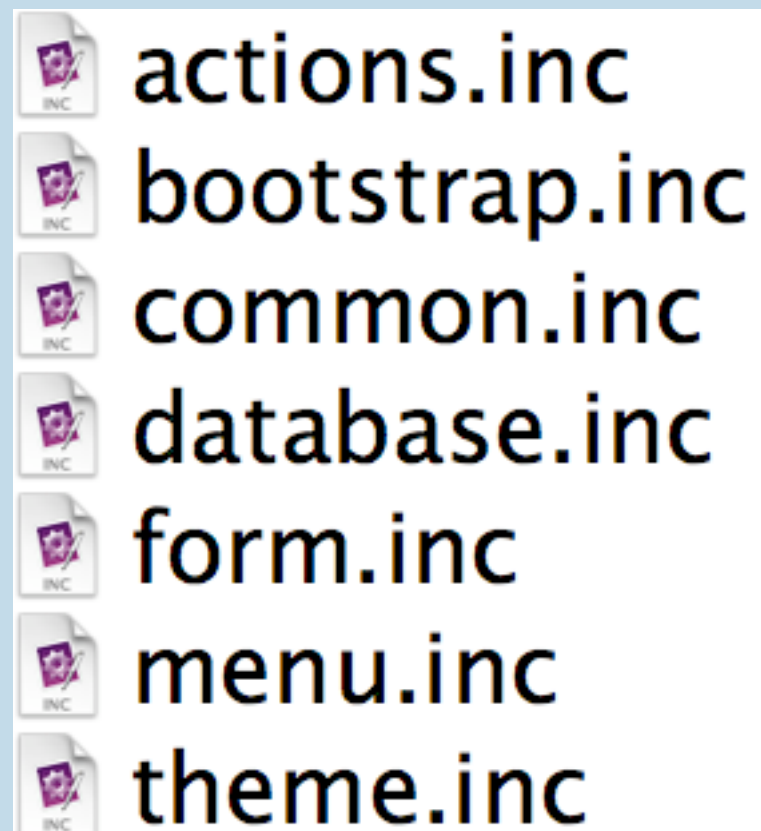

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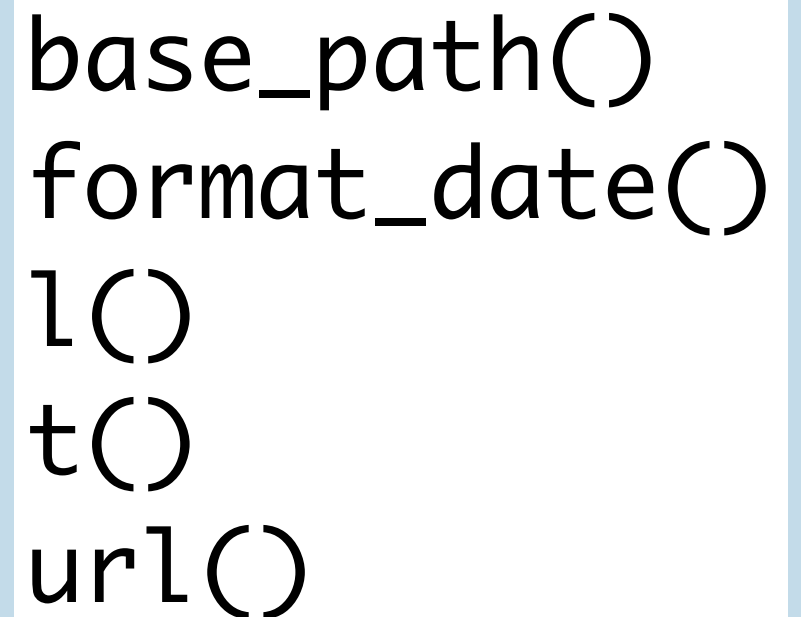

 **actions.inc**
 **bootstrap.inc**
 **common.inc**
 **database.inc**
 **form.inc**
 **menu.inc**
 **theme.inc**

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-  **theme.inc**



- base_path()**
- format_date()**
- l()**
- t()**
- url()**

Hooks

- Naming convention
 - hook_* where hook is replaced by your module name
- Lets modules add their own stuff to Drupal's workflow

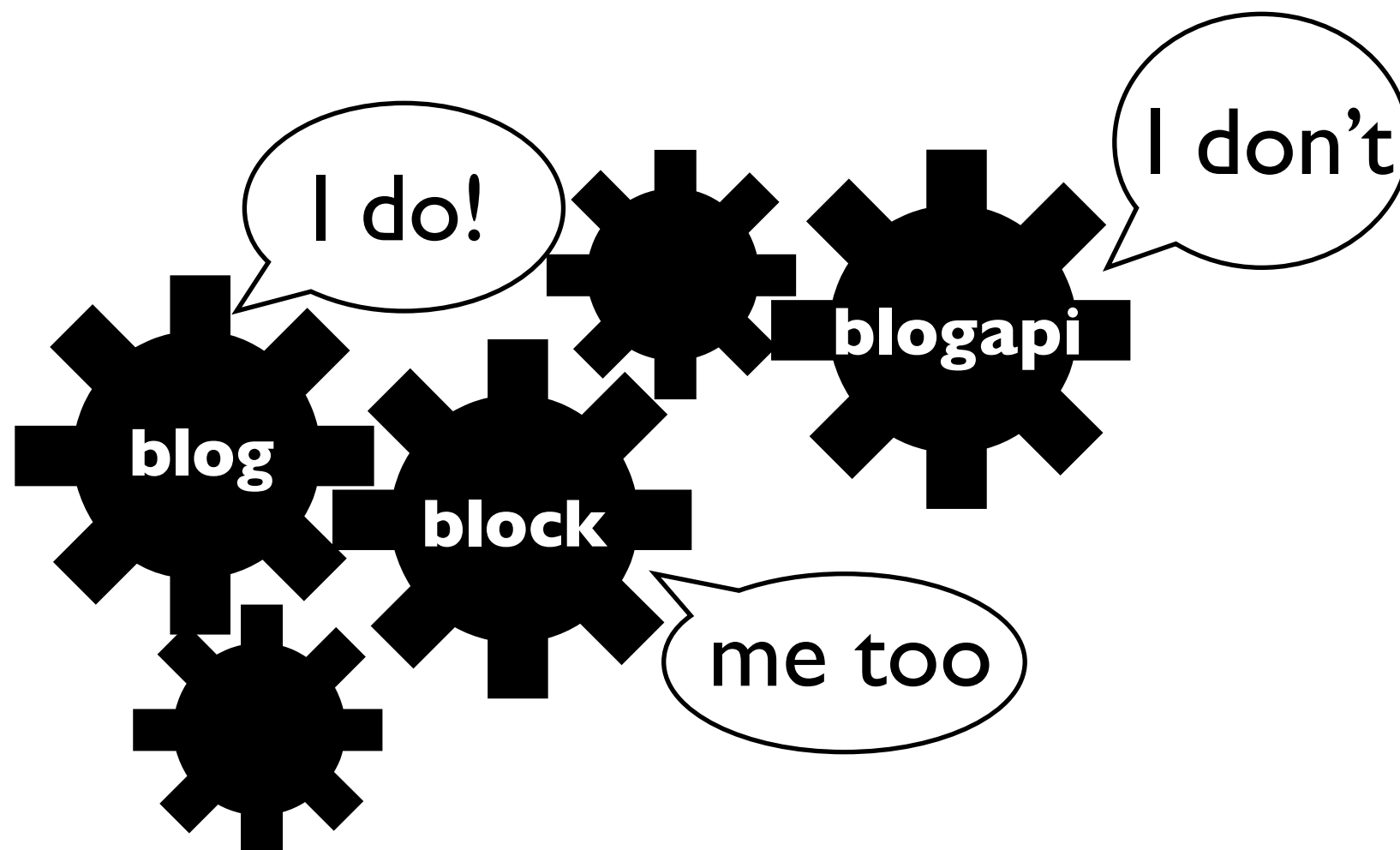


A hook example

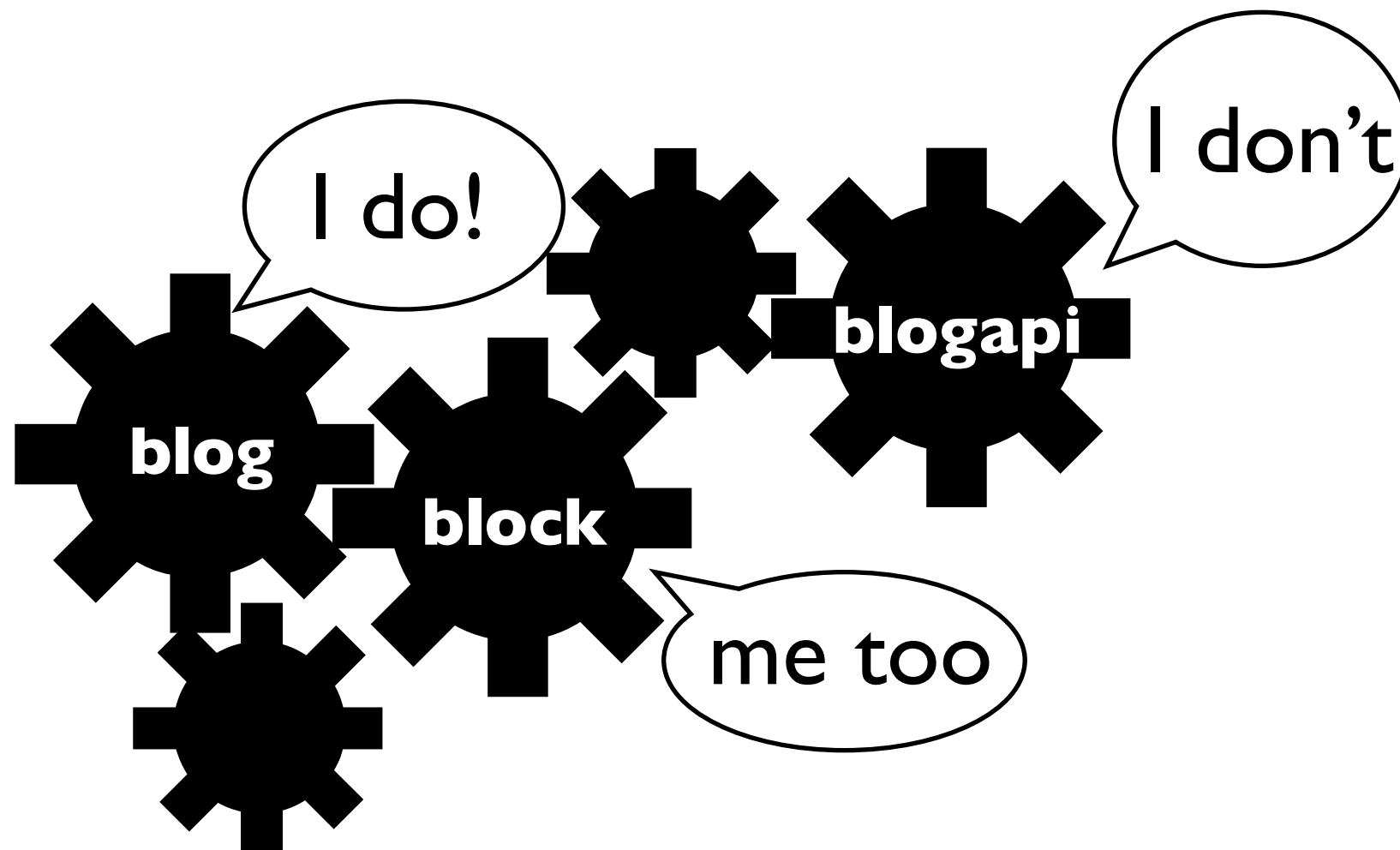


Hey modules! I'm gonna display the permissions page, you have anything you want me to add?

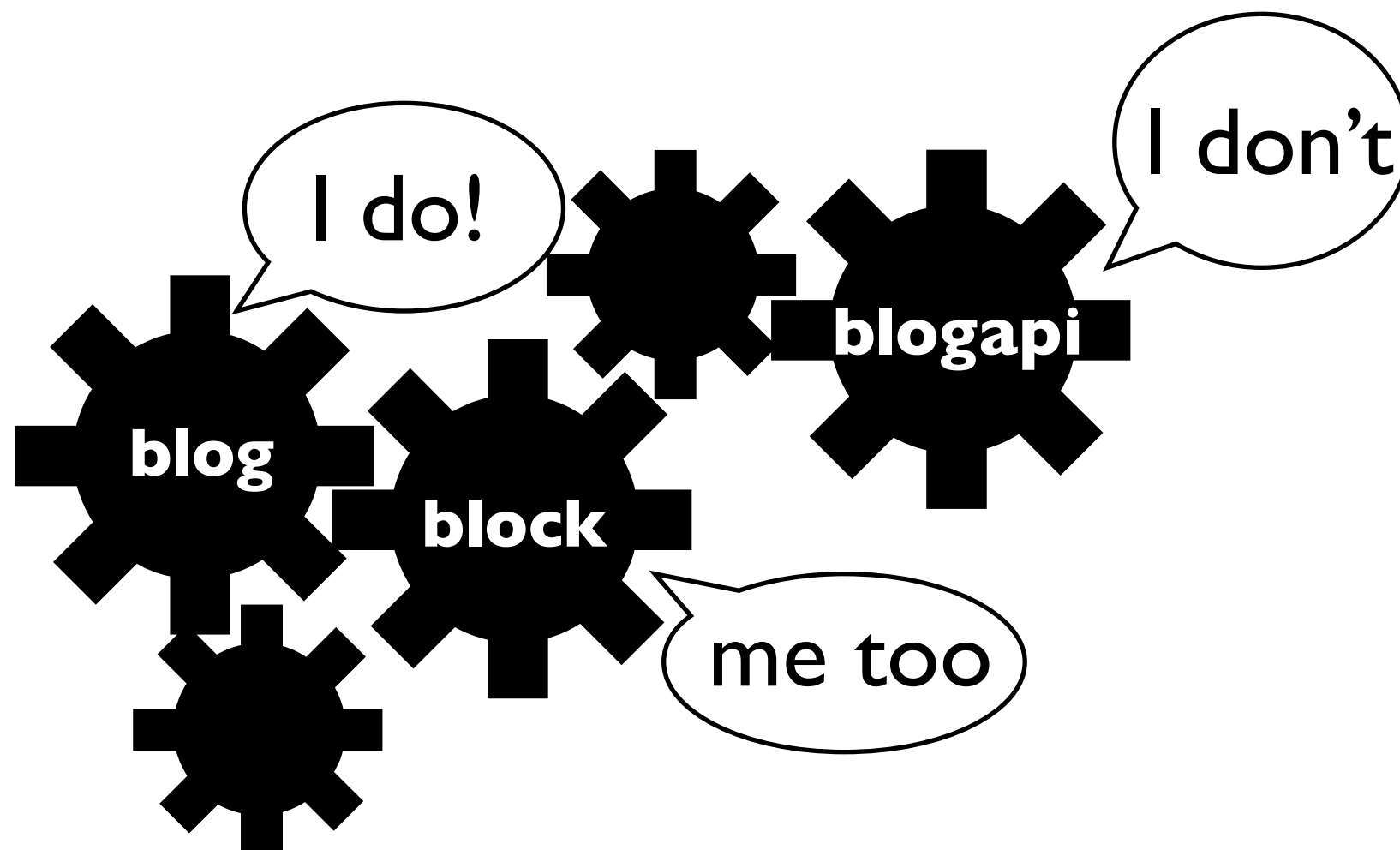
hook_perm



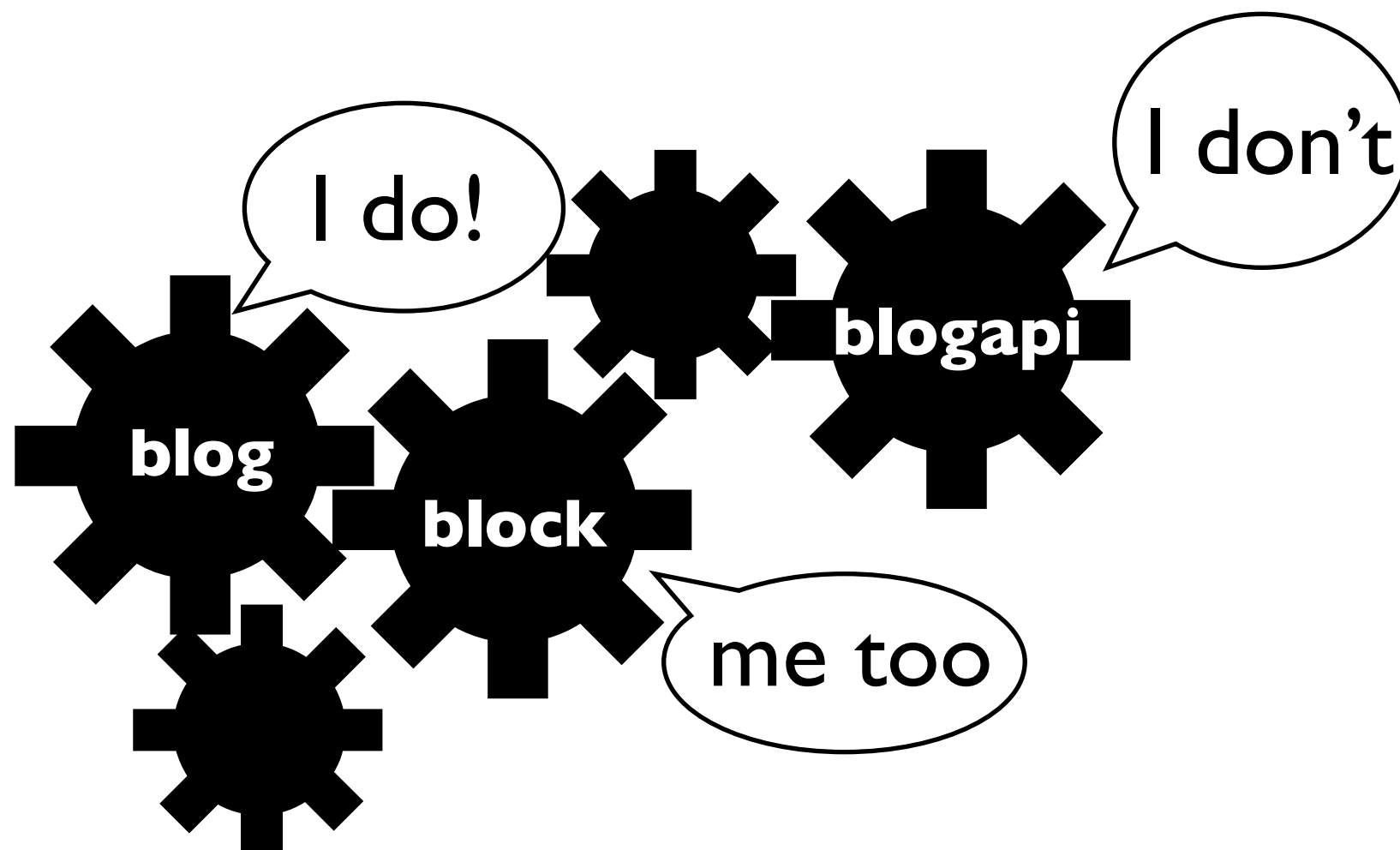
blog_perm



block_perm



hook_perm



Voila!

Permission	anonymous user	authenticated user
block module		
administer blocks	<input type="checkbox"/>	<input type="checkbox"/>
use PHP for block visibility	<input type="checkbox"/>	<input type="checkbox"/>
blog module		
create blog entries	<input type="checkbox"/>	<input type="checkbox"/>
delete any blog entry	<input type="checkbox"/>	<input type="checkbox"/>
delete own blog entries	<input type="checkbox"/>	<input type="checkbox"/>
edit any blog entry	<input type="checkbox"/>	<input type="checkbox"/>
edit own blog entries	<input type="checkbox"/>	<input type="checkbox"/>

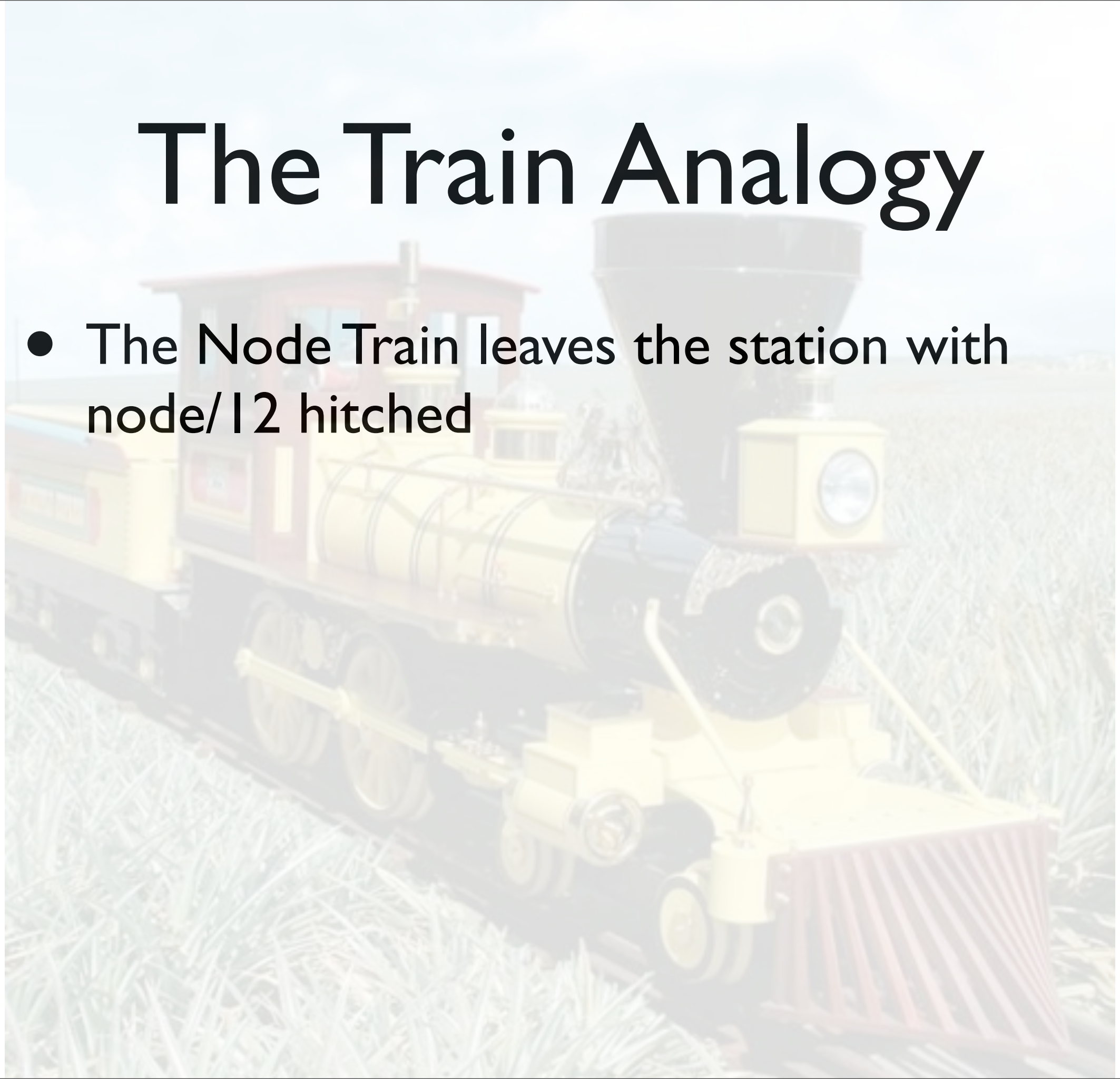


The Train Analogy



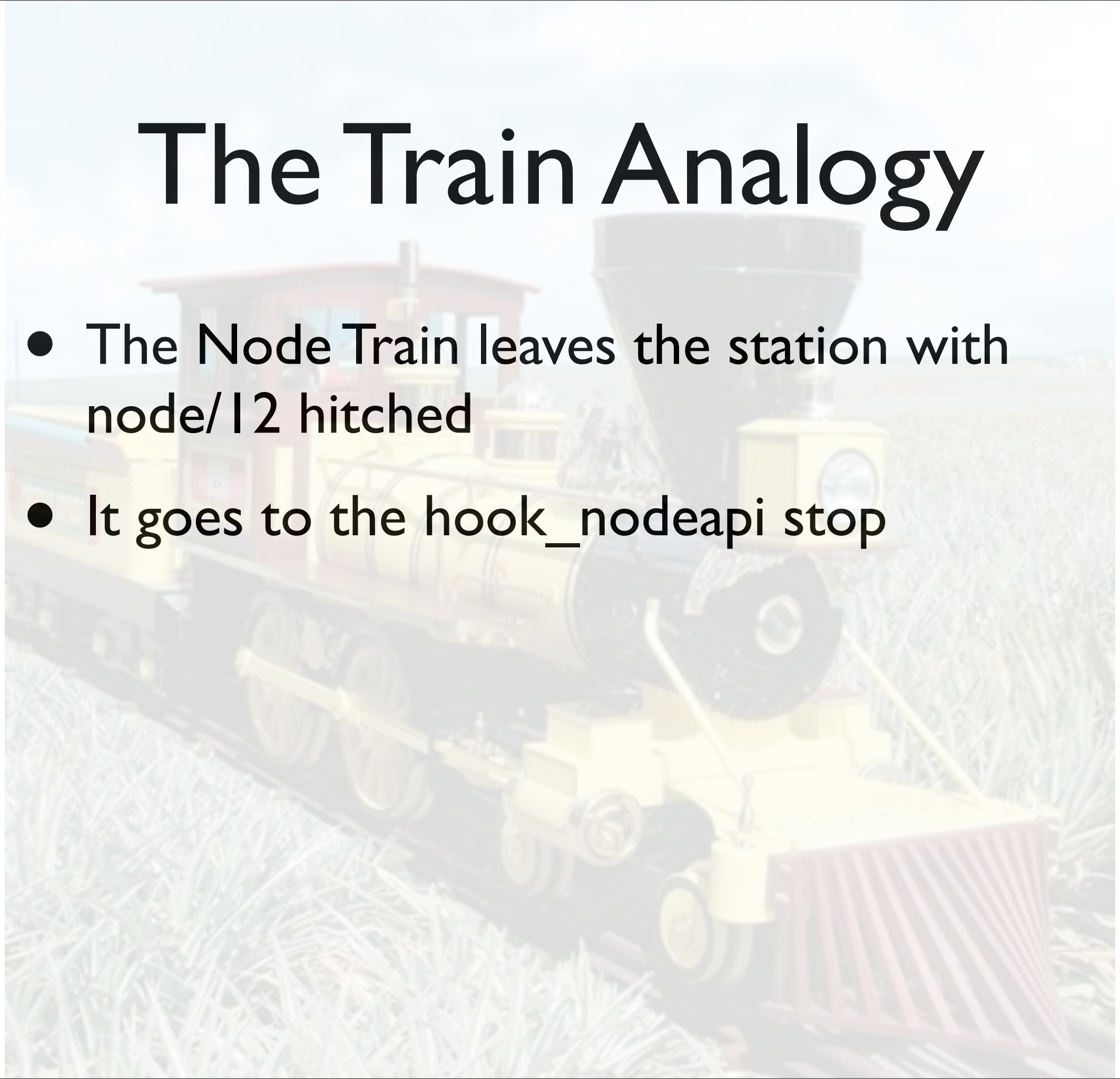
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 - Attaches the taxonomy and comment cars
- Gets to the Theme depot
- Goes on to the Browser Terminal

Some major players

- Menu
- Form
- Database
- Theme

Menu



- menu.inc, not menu.module
- maps URLs to functions
- functions can display output and initiate actions

FAPI

User registration settings

Public registrations:

- ☐ Only site administrators can create new user accounts.
- ☒ Visitors can create accounts and no administrator approval is required.
- ☐ Visitors can create accounts but administrator approval is required.

☒ Require e-mail verification when a visitor creates an account

If this box is checked, new users will be required to validate their e-mail address prior to logging into the site, and will be assigned a system-generated password. With it unchecked, users will be logged in immediately upon registering, and may select their own passwords during registration.

User registration guidelines:

This text is displayed at the top of the user registration form and is useful for helping or instructing your users.

- form.inc
- handles the form, validation and submission

Database



- database.inc (and database*.inc)
- schema creation
- abstracted to work with multiple databases

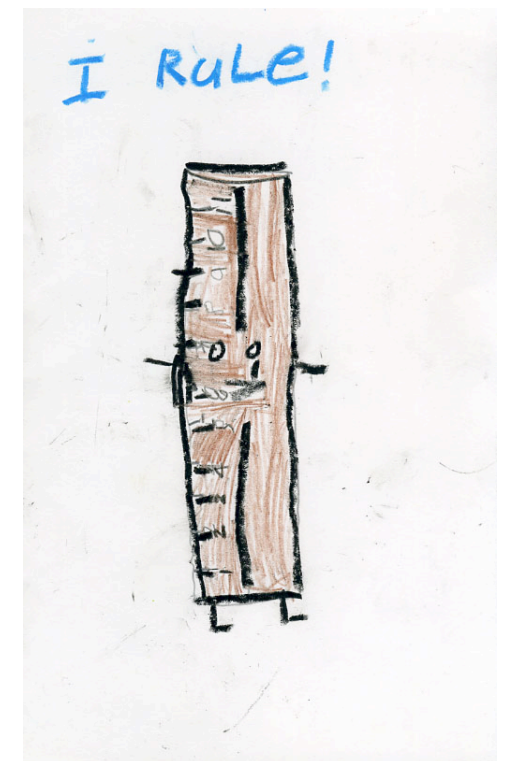
Theme layer



- theme.inc
- system module has default block, box, page tpl
- other tpls are in the respective module folder

Themes rule

- Modules put all output in theme functions or tpl files
- All theme functions pass through the core theme() function
- Order of priority:
 - theme_function_name()
 - phptemplate_function_name()
 - mytheme_function_name()



Resources

- Developer/Theme handbooks
- Drupal source code/api.drupal.org
- Dev/Theme mailing lists (drupal.com/mailling-lists)
- IRC: #drupal (#drupal-dev) #drupal-themes
- Issue queues
- Paper books
 - PDD, Learning Drupal 6 Module Development, Drupal 5 Themes