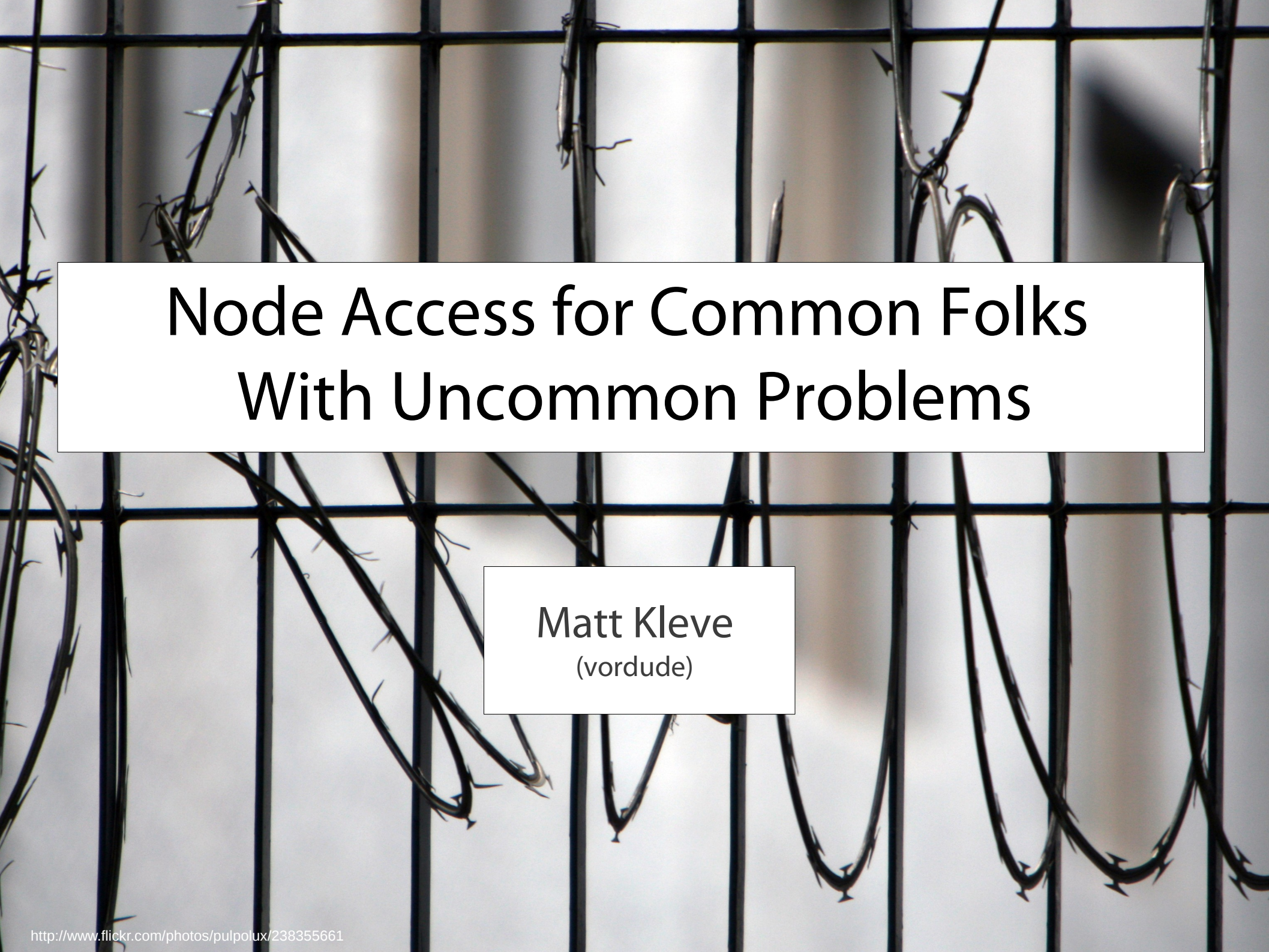

Node Access for Common Folks With Uncommon Problems

Matt Kleve
(vordude)

http://www.flickr.com/photos/pulpolux/238355661

Who is this guy?

- 5 years of Drupal
- (bad) Module Maintainer
- Drupal Security Team
- Senior Developer, Lullabot

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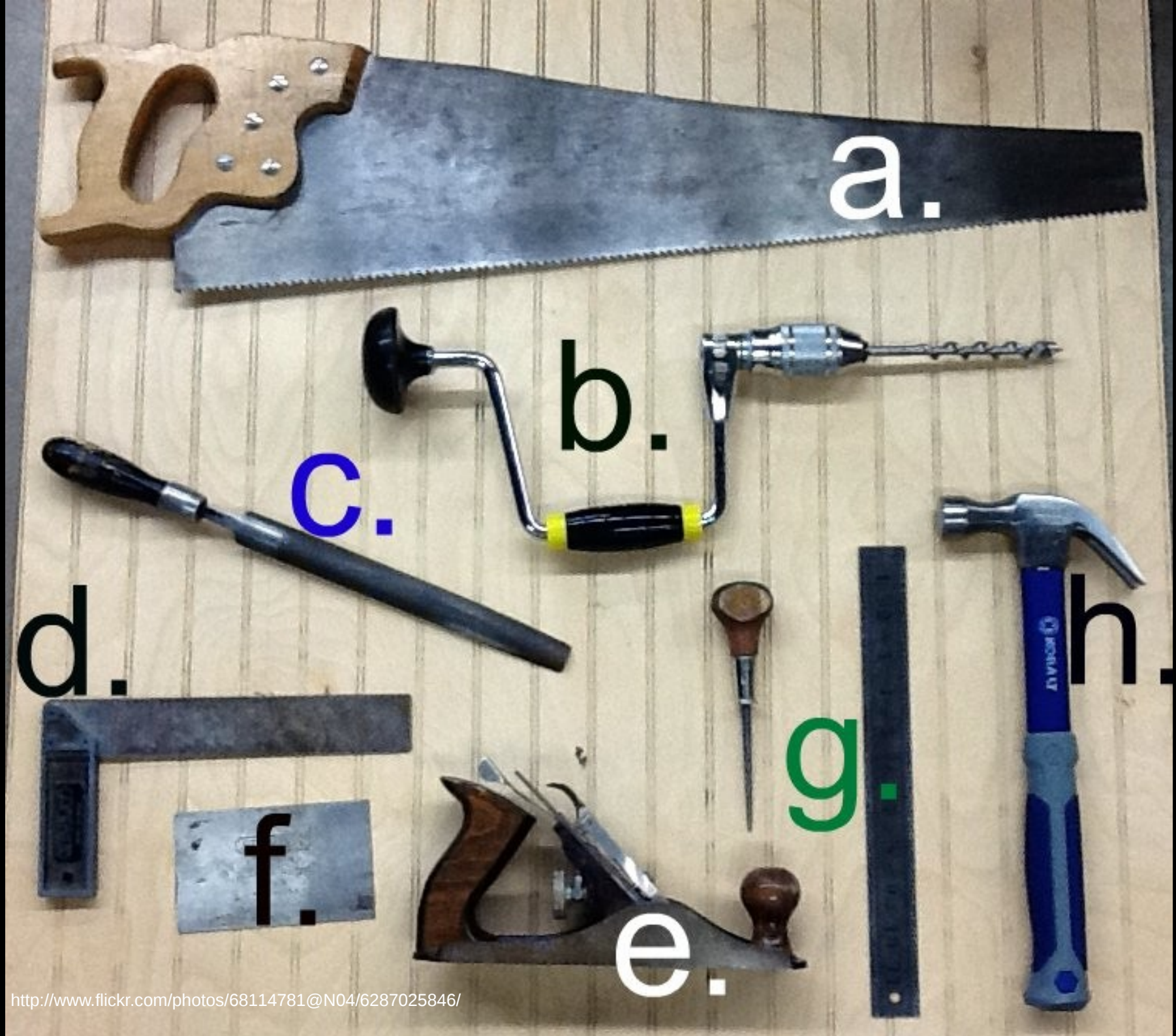

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You basic Node Access Needs

- **Who?** (The user on the site)
- **What are they doing?** (View? Edit? Delete? Create?)
- **To What?** (The Node They're doing it to)

WARNING

These first 2 tools work together, if you've never looked at this stuff before, it won't make sense until you hear about both of them.

Go with me for a moment.

http://www.flickr.com/photos/jjay69/5041747953/

hook_node_access_records()

```php
function image_hider_node_access_records($node) {
  $grants = array();
  if ($node->type == 'image') {
    $grants[] = array(
      'realm' => 'image_hider_author',
      'gid' => $node->uid,
      'grant_view' => 1,
      'grant_update' => 1,
      'grant_delete' => 1,
      'priority' => 0,
    );

    $grants[] = array(
      'realm' => 'image_hider_paid',
      'gid' => 42,
      'grant_view' => 1,
      'grant_update' => 1,
      'grant_delete' => 0,
      'priority' => 0,
    );

    return $grants;
  }
}
```

hook_node_access_records()

```
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> select * from node_access;
+-----+-----+--------------------+------------+--------------+--------------+
| nid | gid | realm              | grant_view | grant_update | grant_delete |
+-----+-----+--------------------+------------+--------------+--------------+
|   1 |   1 | image_hider_author |          1 |            1 |            1 |
|   1 |  42 | image_hider_paid   |          1 |            1 |            0 |
| 134 |   0 | all                |          1 |            0 |            0 |
| 135 |   1 | image_hider_author |          1 |            1 |            1 |
| 135 |  42 | image_hider_paid   |          1 |            1 |            0 |
| 136 |   0 | all                |          1 |            0 |            0 |
| 137 |   1 | image_hider_author |          1 |            1 |            1 |
| 137 |  42 | image_hider_paid   |          1 |            1 |            0 |
+-----+-----+--------------------+------------+--------------+--------------+
8 rows in set (0.00 sec)

mysql>
```

hook_node_access_records_alter

7 node.api.php `hook_node_access_records_alter(&$grants, $node)`

8 node.api.php `hook_node_access_records_alter(&$grants, Drupal node Node $node)`

Alter permissions for a node before it is written to the database.

Node access modules establish rules for user access to content. Node access records are stored in the {node_access} table and define which permissions are required to access a node. This hook is invoked after node access modules returned their requirements via hook_node_access_records(); doing so allows modules to modify the $grants array by reference before it is stored, so custom or advanced business logic can be applied.

Upon viewing, editing or deleting a node, hook_node_grants() builds a permissions array that is compared against the stored access records. The user must have one or more matching permissions in order to complete the requested operation.

A module may deny all access to a node by setting $grants to an empty array.

Parameters

$grants: The $grants array returned by hook_node_access_records().

$node: The node for which the grants were acquired.

The preferred use of this hook is in a module that bridges multiple node access modules with a configurable behavior, as shown in the example with the 'is_preview' field.

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Function, file, or topic: *

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http://www.flickr.com/photos/redjar/136165399

hook_node_grants()

```php
function image_hider_node_grants($account, $op) {
  $grants = array();

  $grants['image_hider_author'] = array($account->uid);

  if (($op == 'view' || $op == 'update')&& user_access('view hidden images', $account)) {
    $grants['image_hider_paid'] = array(42);
  }

  return $grants;
}
```

hook_node_grants_alter

7 node.api.php `hook_node_grants_alter(&$grants, $account, $op)`

8 node.api.php `hook_node_grants_alter(&$grants, $account, $op)`

Alter user access rules when trying to view, edit or delete a node.

Node access modules establish rules for user access to content. hook_node_grants() defines permissions for a user to view, edit or delete nodes by building a $grants array that indicates the permissions assigned to the user by each node access module. This hook is called to allow modules to modify the $grants array by reference, so the interaction of multiple node access modules can be altered or advanced business logic can be applied.

The resulting grants are then checked against the records stored in the {node_access} table to determine if the operation may be completed.

A module may deny all access to a user by setting $grants to an empty array.

Parameters

$grants: The $grants array returned by hook_node_grants().

$account: The user account requesting access to content.

$op: The operation being performed, 'view', 'update' or 'delete'.

Developers may use this hook to either add additional grants to a user or to remove existing grants. These rules are typically based on either the permissions assigned to a user role, or specific attributes of a user account.

Search 7

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Node Access From a Query!

```
function node_page_default() {
  $select = db_select('node', 'n')
    ->fields('n', array('nid', 'sticky', 'created'))
    ->condition('promote', 1)
    ->condition('status', 1)
    ->orderBy('sticky', 'DESC')
    ->orderBy('created', 'DESC')
    ->extend('PagerDefault')
    ->limit(variable_get('default_nodes_main', 10))
    ->addTag('node_access');

  $nids = $select->execute()->fetchCol();
```

hook_node_access()

```php
function image_hider_node_access($node, $op, $account) {
  $type = is_string($node) ? $node : $node->type;

  if ($op == 'view' && date(w, REQUEST_TIME) == 5 && $type == 'image') {
    return NODE_ACCESS_DENY;
  }

  return NODE_ACCESS_IGNORE;
}
```


http://www.flickr.com/photos/hendry/2936838761/