Redmine - Feature #3007

Convert Enumerations to single table inheritance (STI)

2009-03-18 23:02 - Eric Davis

Status:	Closed	**Start date:**	2009-03-18
Priority:	Normal	**Due date:**	
Assignee:	Eric Davis	**% Done:**	100%
Category:		**Estimated time:**	0.00 hour
Target version:	0.9.0		
Resolution:	Fixed		

Description

I think Redmine's outgrown it's current Enumeration class and it's time to move Enumerations to a STI class. This should remove a lot of the code around Enumeration options and make the internal API cleaner:

- Enumerations.activities => Activity.all
- Enumerations.priorities => Priority.all

Associated revisions

Revision 2777 - 2009-05-31 01:30 - Eric Davis

Changed Enumerations to use a Single Table Inheritance

- Added migrations to change Enumerations to an STI relationship
- Added TimeEntryActivity model (STI)
- Added DocumentCategory model (STI)
- Added IssuePriority model (STI)
- Added Enumeration#get_subclasses to get a list of the subclasses of Enumeration
- Changed Enumeration to use the STI type field instead of the opt field
- Changed Enumeration#opt to return the old opt values but with a deprecation warning.
- Removed Enumeration::OPTIONS
- Removed the dynamic named_scopes in favor of specific named_scopes. Kept for compatibility reasons.
- Added Enumeration#default so each subclass can easily find it's default record.
- Fixed Enumeration#default to use the STI scoping with a fake default scope for finding Enumeration's default.
- Added a 'all' named scope for getting all records in order by position.
- Added Deprecation warnings to the old named_scopes in Enumerations.
- Moved various methods off of Enumeration and onto the concrete classes
- Changed the EnumerationsController to use types
- Updated the Enumeration list template
- Added has_many relationships to the Enumeration STI classes.
- Fixes for tests.

  #3007

History

#1 - 2009-03-23 23:40 - Eric Davis

- Status changed from New to 7

- Assignee set to Eric Davis

#2 - 2009-03-24 01:05 - Eric Davis

Starting to work on this in a GitHub branch: http://github.com/edavis10/redmine_branches/tree/sti-enumerations

#3 - 2009-03-25 22:50 - Eric Davis

- File enumeration-sti.patch added

- Target version set to 0.9.0

- % Done changed from 0 to 100

I think I'm done converting Enumeration to an STI class. I've updated the database, tests, and application code. I tried to keep the current API but add deprecation warnings to give third party developers enough time to update their code. I also left the opt column in, it could probably be removed also if we provide some deprecation wrapper like:

```
# Activity class
def opt
  ActiveSupport::Deprecation.warn('...')
  return 'ACTI'
end
```

Could I get another set of eyes to review my patches before I commit this to trunk? Please +1 if you reviewed the code and it looks good to commit. The code is on GitHub or as the attached patch.

Developed off of r2615

#4 - 2009-03-25 22:52 - Eric Davis

Also a nice side benefit of this is that a plugin can add a subclass of Enumeration and automagically get all the methods and be added to the Enumeration Administration panel. This might open up the doors for some more integrated plugins.

#5 - 2009-03-26 18:16 - Jean-Philippe Lang

I didn't test it but the patch looks good. A few things:

1. I would really prefer to split the migration: one that adds the column, ones that populates it. So that if an error is raised when updating for some reason, you'll still be able to rerun db:migrate without getting an error because the column to add already exists.
2. Since we now have dedicated models, we should better use the standard .human_name rails class method rather than Enumeration.option_name. Of course, translation files must be adjusted so that classes names are properly translated.
3. We have DocumentCategory, IssuePriority. Maybe we should have TimeEntryActivity ?
4. Maybe you could declare some has_many relations in subclasses to clean up the code, eg:

```
class IssuePriority < Enumeration
  has_many :issues, :foreign_key => 'priority_id'

  def objects_count
    issues.count
  end

  def transfer_relations(to)
    issues.update_all("priority_id = #{to.id}")
  end
end
```

#6 - 2009-03-26 18:32 - Eric Davis

Jean-Philippe Lang wrote:

> 1. I would really prefer to split the migration: one that adds the column, ones that populates it. So that if an error is raised when updating for some reason, you'll still be able to rerun db:migrate without getting an error because the column to add already exists.

Good idea.

> 1. Since we now have dedicated models, we should better use the standard .human_name rails class method rather than Enumeration.option_name. Of course, translation files must be adjusted so that classes names are properly translated.

I agree, with the split option_name really isn't needed except for two views.

> 1. We have DocumentCategory, IssuePriority. Maybe we should have TimeEntryActivity ?

Do you think Activities would ever be used for things other than a TimeEntry?

> 1. Maybe you could declare some has_many relations in subclasses to clean up the code, eg:

That's a good suggestion. I was trying to keep this patch so it's just rearranging the internals but I could see the relationships being useful.

FYI: I've pushed up some updates to GitHub for the EnumerationController. I had a few bugs where the type wasn't being set (can't be mass-assigned). I'll create a new patch for here soon.

#7 - 2009-04-02 00:45 - Eric Davis

- File enumeration-sti-3.patch added

I've updated the patch and the code on GitHub.

- Changed the Enumeration unit tests to use the generic Enumeration class
- Added unit tests for the three STI classes
- Renamed Activity to TimeEntryActivity
- Split the migration
- Added the has_many relationship to each STI class
- Added Enumeration#opt to return the old value but with a deprecation warning.

Can I get another review? I'd like to commit this soon if possible.

#8 - 2009-04-02 02:16 - Eric Davis

- File enumeration-sti-4.patch added

Fixed a small bug, when reordering an Enumeration the type would be lost.

#9 - 2009-05-31 01:20 - Eric Davis

- Status changed from 7 to Closed

- Resolution set to Fixed

Changed the Enumerations in r2777. I'll post in the forums so plugin developers are aware of the change.

Files

enumeration-sti.patch	35.8 KB	2009-03-25	Eric Davis
enumeration-sti-3.patch	42.8 KB	2009-04-01	Eric Davis
enumeration-sti-4.patch	42.8 KB	2009-04-02	Eric Davis