

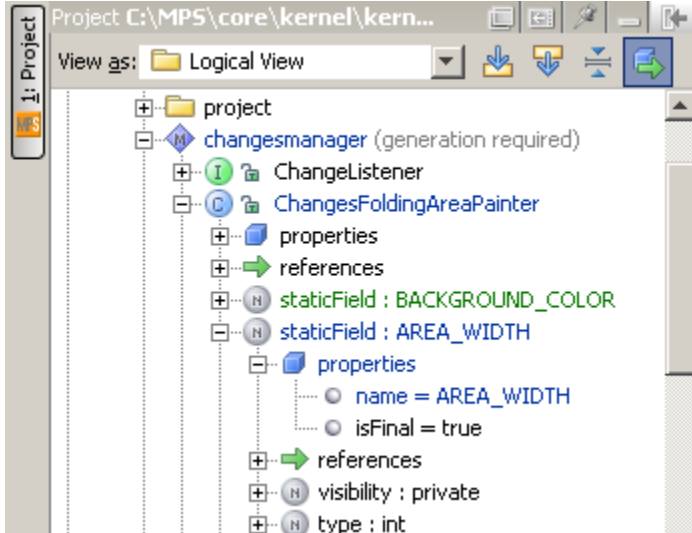
# Changes highlighting

## Changes highlighting

Changes highlighting is a handy way to show changes which were made since last update from version control system. Since MPS 1.5 changes for models are highlighted in the following places:

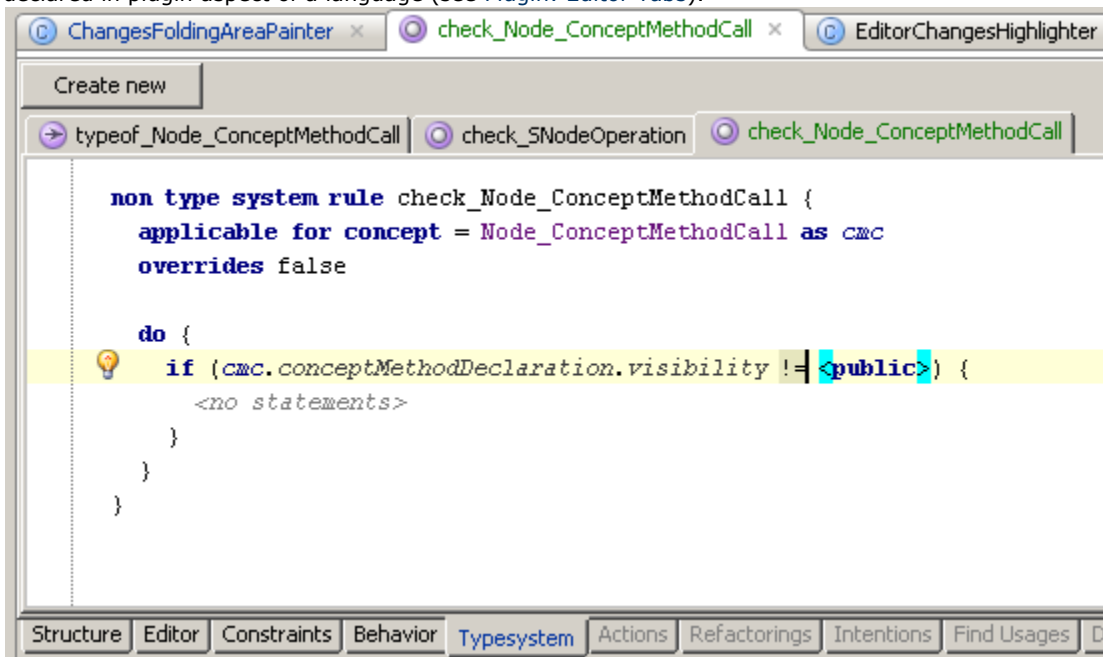
### Project tree view

Models, nodes, properties and references are highlighted. green means new items, blue means modified items, brown means unversioned items.



### Editor tabs

Highlighting appears for all of the editor tabs: for language aspect tabs of a concept and also for custom tabbed editors declared in plugin aspect of a language (see Plugin: Editor Tabs).



# Editor

Every kind of changes are highlighted in MPS editor: changing properties and references, adding, deleting and replacing nodes.

```
private void reinitMessageGroups() {
    myMessageGroups = new arraylist<MessageGroup>;
    EditorComponent editorComponent = getEditorComponent();

    list<EditorComponentChangesHighlighter.ChangeEditorMessage> messagesWithCells
        = myEditorComponentChangesHighlighter.getEditorMessages().where({~m =
            toList;
    messagesWithCells = messagesWithCells.sort({~aMsg,~bMsg =>
        Rectangle a = getMessageBounds(editorComponent, aMsg);
        Rectangle b = getMessageBounds(editorComponent, bMsg);
        // First compare by y, then by x, and, after all, by height
        if (a.y == b.y) {
            if (a.x == b.x) {
                return a.height - b.height;
            } else {
                return a.x - b.x;
            }
        } else {
            return a.y - b.y;
        }
    }, asc).toList;
```

If you hover mouse cursor over the highlighter's strip on the left margin of editor, the corresponding changes become highlighted in editor pane.

If you want to have your changes highlighted in editor pane all the time (not only on hovering mouse cursor over highlighter's strip), you can select "Highlight Nodes With Changes Relative to Base Version" option in IDE Settings Editor.

```
private void reinitMessageGroups() {
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        Rectangle a = getMessageBounds(editorComponent, aMsg);
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        // First compare by y, then by x, and, after all, by height
```

Added node in 'statement' role

If you click on highlighter's strip on the left margin, there appears a panel with three buttons: "Go to Previous Change", "Go to Next Change" and "Rollback".

```
private void reinitMessageGroups() {
    myMessageGroups = new arraylist<MessageGroup>;
    EditorComponent editorComponent = getEditorComponent();

    list<EditorComponentChangesHighlighter.ChangeEditorMessage> messagesWithCells
        = myEditorComponentChangesHighlighter.getEditorMessages().where({~m =
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    messagesWithCells = messagesWithCells.sort({~aMsg,~bMsg =>
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        Rectangle b = getMessageBounds(editorComponent, bMsg);
        // First compare by y, then by x, and, after all, by height
```

Rollback

If you click "Rollback", all the corresponding changes are reverted.

This feature allows you to feel free to make any changes to MPS model in editor without any fear, because at any moment you can revert it right from the editor.

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