



# Future and 3rd party developments

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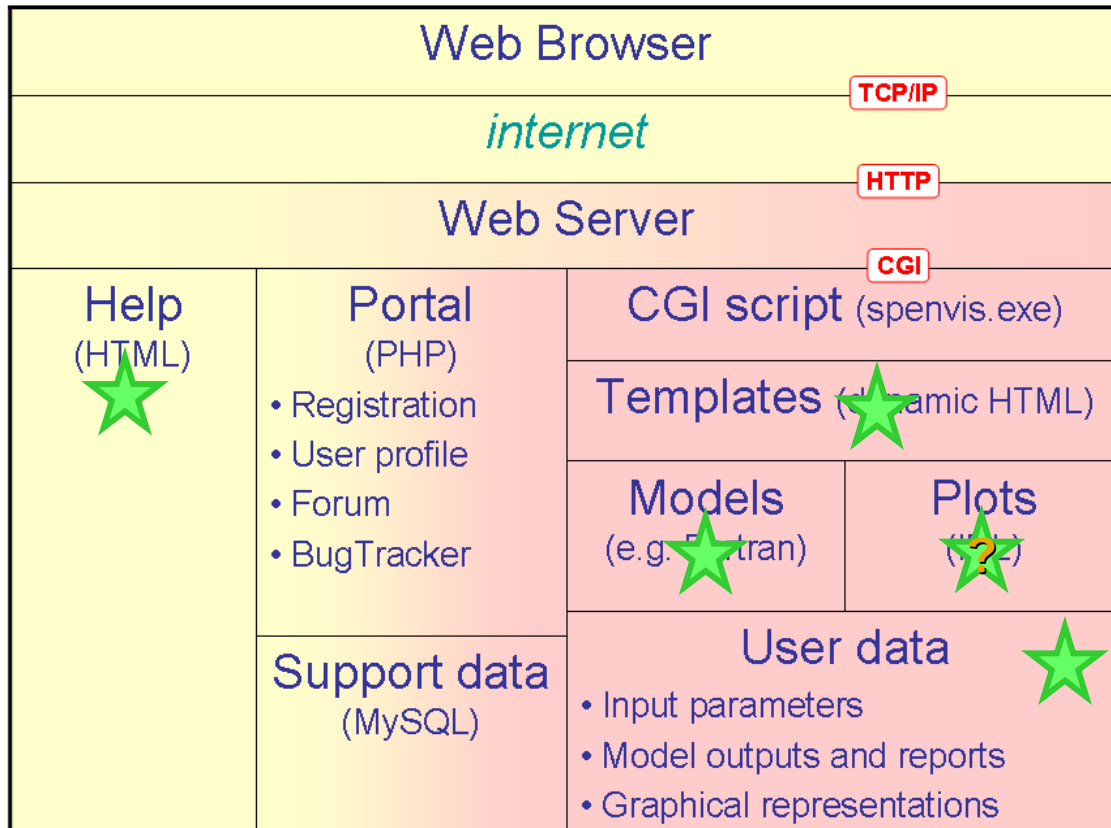
## Objective

- Today
  - Providing a method that allows 3rd party to plug a new model into SPENVIS
  - an environment to develop, integrate and test the model
  - Difficulties
    - Not part of the original requirements
    - SPENVIS structure is not fully modular
    - SPENVIS GUI is defined using its own language
- Tomorrow
  - SPENVIS Next Generation
    - Open modular system
    - Web service technologies

# SPENVIS functionality



- When plugging a model in SPENVIS



- Templates → GUI interface + logic

- Model API
  - input/output
  - report

- File mapping

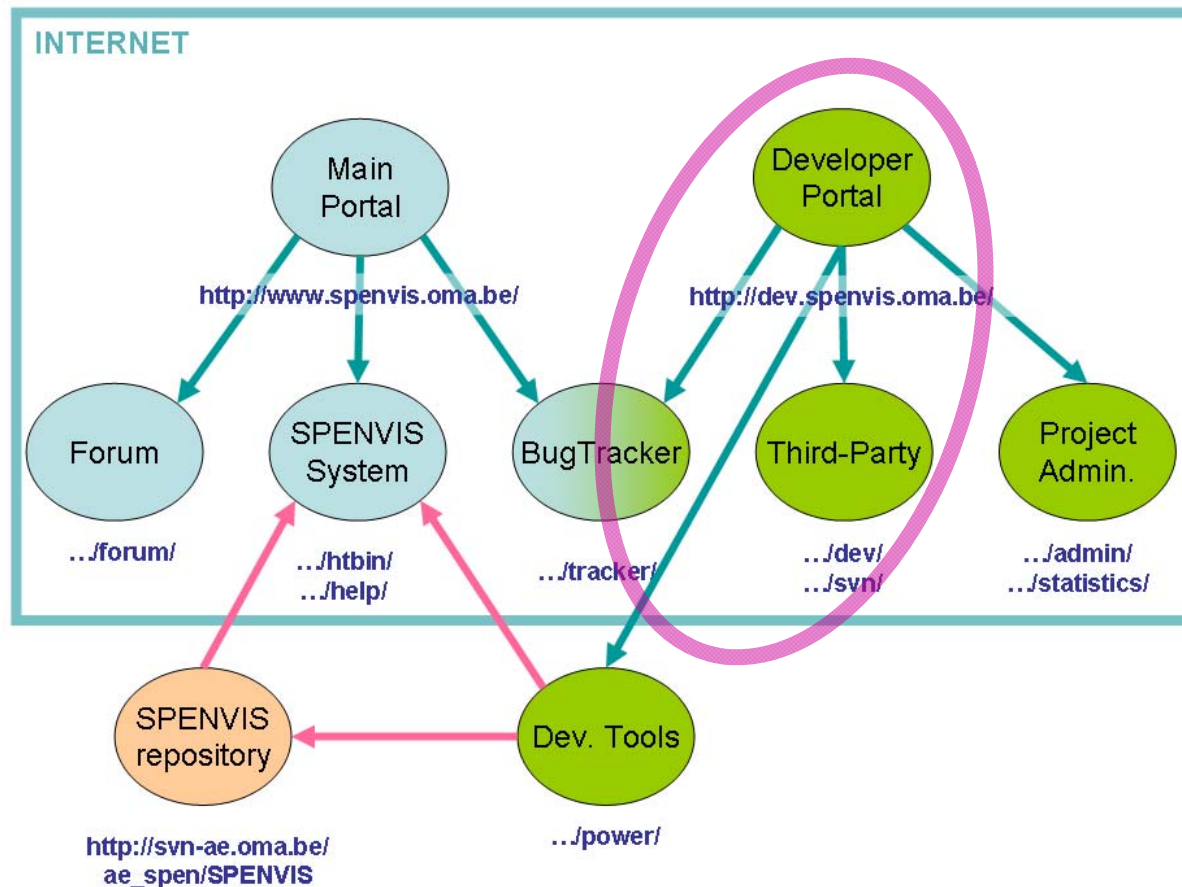
- Model dependencies
- Plot (optional)

- Help pages

- well isolated part
- parts shared between models



# SPENVIS System Components



# Third-Party developer portal



Mozilla Firefox

File Edit View History Bookmarks Tools Help Hello World!

http://dev.spervis.oma.be/dev/

http://dev.spervis.oma.be/dev/

spervis-dev

esa  
Space Environment Information System

**Quick access**

- [SPENVIS \(www\)](#)
- [SPENVIS @ dev](#)
- [Help \(www\)](#)
- [Forum](#)
- [Bug Tracker](#)
- [TEC-EES](#)

**Restricted area**

- [Repository](#)
- [Other](#)

**Developer corner**

**Third Party development documentation**

- License agreement
- [How to install a SPENVIS local developer version](#)
- Models: [interface requirements](#)
- Template: [Directives Quick Reference](#)
- Template: [Actions Quick Reference](#)

**Tools**

- [List of SPENVIS exported tags](#)
- [List last Apache error logs](#)
- [Change your account settings](#)
- [Third party repository \(ViewVC browser\)](#)
- [Install third-party tag](#)
- [BIRA Phonebook](#)

**Additional resources**

- [SPENVIS 3rd-party Tool kit](#)
- [SPENVIS Demonstration package set](#)
- [TREND-4 MF format](#): <http://trend.aeronomie.be/trend4/format/>
- [TREND-4 UNILIB](#): <http://trend.aeronomie.be/trend4/unilib/>
- Links to [miscellaneous manuals](#)

Last update: Friday May 21, 2010



# Third-Party developer portal

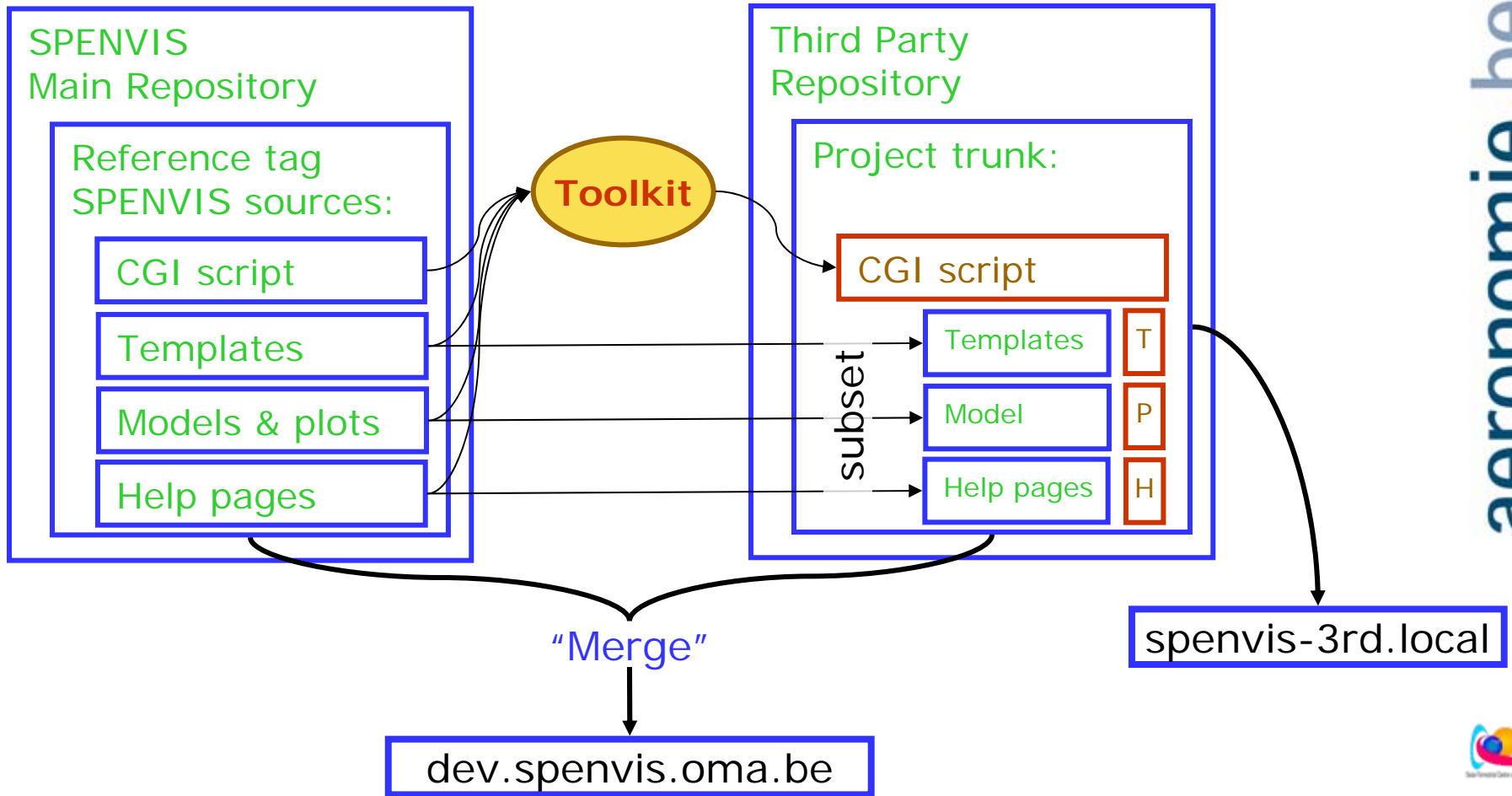


The screenshot shows a Mozilla Firefox browser window displaying the SPENVIS developer portal. The page title is "SPENVIS - Space Environment, Effects, and Education System". The URL is "http://dev.spennis.oma.be/dev/show\_installed\_tags.php". The page features a navigation sidebar on the left with sections for "Developer corner", "Quick access", and "Restricted area". The main content area is titled "Exported tags" and lists ten entries, each with a tag name, date, and ID, and a "Delete" button. The tags are: "third party" (2010-06-08) 3rd-odi-spennis-20100608-DH, "third party" (2010-06-08) 3rd-odi-spennis-ODI-20100608-DH, "(developer, 2010-06-06) dev-workshop2010\_rc01\_20100604-MK", "third party" (2010-05-26) 3rd-joverem-test4-20100506-DH, "third party" (2010-03-31) 3rd-odi-spennis-20100331-DH, "(developer, 2010-02-09) dev-feature\_GRAS\_20090924-NM\_RC6", "(www.spennis.oma.be, 2010-01-25) www-4.6.3.beta\_TST01\_20010122-MK", "(developer, 2010-01-11) dev-4.7.0\_RC12\_20100111-MK", "(developer, 2010-01-05) dev-feature\_IDLRUN\_20100104-MK\_RC03", and "(developer, 2009-11-13) dev-feature\_SAPRE\_20090924-NM\_RC3". A "Back" button is located at the bottom of the list. The page footer indicates "Last update: Saturday 5 June 2010".

Tag	Date	ID	Delete
third party	2010-06-08	3rd-odi-spennis-20100608-DH	X
third party	2010-06-08	3rd-odi-spennis-ODI-20100608-DH	X
(developer, 2010-06-06)	2010-06-06	dev-workshop2010_rc01_20100604-MK	X
third party	2010-05-26	3rd-joverem-test4-20100506-DH	X
third party	2010-03-31	3rd-odi-spennis-20100331-DH	X
(developer, 2010-02-09)	2010-02-09	dev-feature_GRAS_20090924-NM_RC6	X
(www.spennis.oma.be, 2010-01-25)	2010-01-25	www-4.6.3.beta_TST01_20010122-MK	X
(developer, 2010-01-11)	2010-01-11	dev-4.7.0_RC12_20100111-MK	X
(developer, 2010-01-05)	2010-01-05	dev-feature_IDLRUN_20100104-MK_RC03	X
(developer, 2009-11-13)	2009-11-13	dev-feature_SAPRE_20090924-NM_RC3	X
(developer, 2009-10-06)	2009-10-06	dev-4.6.2_PM08_20091006-MK	X

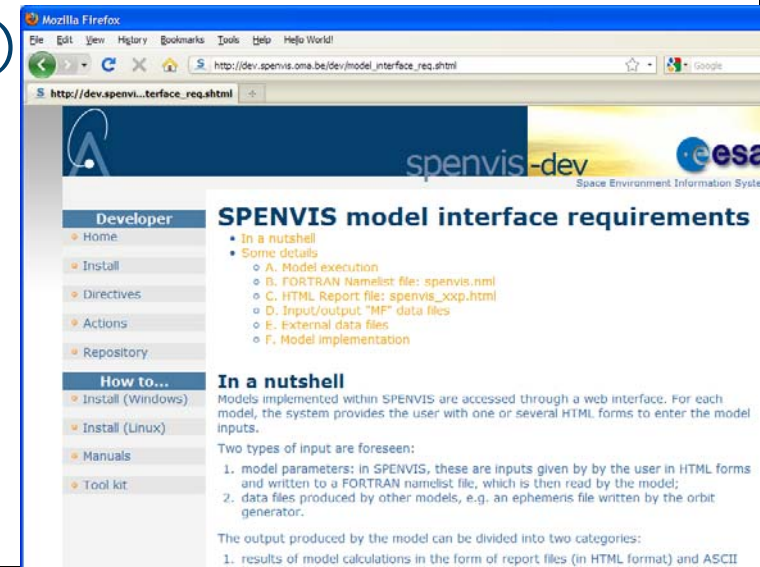


# 3rd-party SPENVIS version



# Current or past third party projects

- MarsRem
- MC-Scream
- ODI
- JoveRem
- Need a good knowledge of SPENVIS internals
  - Slow learning curve
    - D. Heynderickx
- Making a model SPENVIS compliant
  - Model API (input, output, reporting)
  - = first step
  - could be done independently
  - could be reused



# Conclusions

- Third party development — Today
  - it works ! BUT not easy
  - Success stories: MarsRem, MC-Scream, ODI
  - Developing “SPENVIS compliant models”
    - First step, more easy
- Third party development — Tomorrow
  - SPENVIS-NG
    - Modularity should be a top requirement
    - Using widely accepted standard (learning curve)



# SPENVIS



The Space Environment Information System



aeronomie.be

