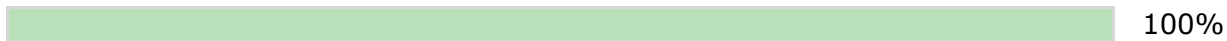


# Roadmap

## Milestone: Iteration1

Completed **6 months** ago (09/08/10 03:16:07)



Number of tickets: **closed: 8** **active: 0** **Total: 8**

## Iteration2→→

Our first iteration should give us a very basic prototype along with a database setup and a working environment running at the university. Technology questions should roughly be clear, initial requirements analysis should be done, i.e. we do have a full specification of what we want to do.

IterationOne is over. Please do no longer edit any contents here.

## Artifacts of the first Iteration

- **PimpMyBranch**
- Our Schedule (includes Meetings): **as of 2010-08-09**
- **Comparison of programming languages suitable for our purpose** ( PDF)

## Artifacts in progress

- **Entities**  
a general specification in natural language of the entities we deal with (updated throughout all iterations)
- **Relational Model**  
(for prototype implementation in iteration1)

## Use Cases (done)

- **The big picture**
- **Scheduler**

## Use Cases (to be completed)

- **Scheduler-DBMS**
- **ServersideGUI**

## Minutes

- **2010-05-10**
- **2010-05-20** Missing
- **2010-06-03**
- **2010-17-06** Missing
- **2010-01-07** Missing
- **2010-07-22** Missing
- **2010-09-08** to come

## Milestone: Iteration2

Completed **5 months** ago (10/04/10 16:15:26)

Number of tickets: *closed: 17* *active: 0* *Total: 17*

~~Iteration1~~ << - Iteration3 >>>

- ScoreSpecification (UseCases)
- Description of Entities (2010-09-11, PDF)
- RelationalModel
- RequirementsSolicitation?
- RequirementsSpecification?
- ArchitectureAndDesign
- ImplementationNotes?
- TestPlan?
- BrowserSupport
- Glossary

IterationTwo is over. Please do no longer edit any contents here.

## KW 36

- 2010-09-07 16:00 Meeting @ Schweppe
- 2010-09-08 16:00 Meeting @ Julian – Agenda, Minutes, Minutes Revision 1
- 2010-09-09 14:00 Meeting @ Julian – Starting to write UseCases
- 2010-09-11 13:37 Meeting @ Julian – Agenda: Unify UseCases – Minutes

## KW 37

- 2010-09-14 09:00 Meeting @ Hagen – Agenda: Unify UseCases, SchedulerDescription, RelationalModel – Minutes
  - Presentation: DevelopmentEnvironment? by Julian
- 2010-09-16 13:00 Meeting @ Hagen - Agenda: Form programming teams, documentation
  - Presentation: WebInterface? by André
  - ~~Presentation: XslXml? by David~~
  - Presentation: HibernateAnnotations? by Konrad
  - ~~Presentation: MetaMeta? by Julian~~
- 2010-09-18 15:00 HACKFEST

## KW 38

- Working in seperate programming groups:
  - Web Interface & Web Server by André and Julian
  - Ant building tool by David
  - Scheduler by Hagen and Konrad (Pair programming)

## KW 39

- Working in seperate programming groups:
  - Web Interface & Web Server by André and Julian
  - Ant building tool by David
  - Scheduler by Hagen and Konrad (Pair programming)
- 2010-10-03: Evaluation of Iteration 2

## Milestone: Iteration3

Completed 4 months ago (11/01/10 07:55:09)

100%

Number of tickets: closed: 48 active: 0 Total: 48

Iteration2 << - Iteration4 >>

### Artifacts from Iteration3

- Entities & Relationships
- Build System as of 2010-W43
- weave Annotations
- What is weave doing when a HTTP-Request comes in?
- meta + weave: an object-relational dream-team (DRAFT)

IterationThree is over. Please do no longer edit any contents here.

### KW 40

- 2010-10-04 13:00 Meeting @ University: Presentation of current work accomplishments; Evaluation of Iteration 2; Planning of Iteration 3 ( Protocol-2010-10-04 )
- 2010-10-05 16:00 Preparing slides and content for the Iteration 2 presentation @ Julian
- 2010-10-06 15:00 Presentation for Mr. Scheppe about results of Iteration 2 @ University Room K40

### KW 41

- **Wer hat was gemacht?**
  - Konrad: Servlets eingearbeitet, Scheduler und Unit Tests an ORM angepasst
  - Julian: Arbeit am ORM, as always.

### KW 42

- 2010-10-23: Meeting @ André: Itegration, Web Interface, Scheduler Integration Test, ORM ( Protocol-2010-10-23 )
- **Wer hat was gemacht?**
  - Julian: ORM mitsamt Unit-Tests (#42) implementiert (#69) und dokumentiert (#44), erste Aspekte definiert, Export hergestellt (#65), Installer angefangen

### KW 43

- 2010-10-26: Meeting @ Uni: 10:00 Taku- 9 ( Protokoll? (engl.: minutes) )
- 2010-10-29: Integration Scheduler (Konrad, Julian) als eigenständiges Servlet
- 2010-10-30: 10:00 Uhr, Treffen Julian & André
- 2010-10-31: Meeting @ Hagen: 13.30 Evaluation Iteration 3
- **Wer hat was gemacht?**
  - David: Buildsystem using Apache Ant (#16), deployment of WebArchive? (#83)
  - Julian: Build- und Installationsprozess automatisiert (#87), vereinheitlicht (#91, #97) und auf Ant 1.7 abgestimmt (#101)
  - Konrad: Scheduler Integration durch Anpassung an ORM Framework
  - Andre: StoredProcedures? erweitert zum Usermanagement, Unittests geschrieben, div. Installationen getestet (#84, #85, #86)

## Milestone: **Iteration4**

Completed **3 months** ago (12/05/10 14:48:47)

100%

Number of tickets: **closed: 67** **active: 0** **Total: 67**

~~Iteration3~~ << - ~~Iteration5~~ >>

### Artifacts from Iteration4

- ???

IterationThree is over. Please do no longer edit any contents here.

>>> Goal of overriding importance: Deliver basic Implementations for **UseCases** (all of them) <<<

### KW 44

- **Wer macht was? (bis zur Präsentation)**
  - André: global.xml, Building anlegen, Raum mit Building anlegen, CorporateDesign (Menüführung + Startseite)
  - Julian: Import, Export, @Commit
  - An+Ju: KVV-Daten
  - Konrad: Scheduler Präsentationsfertig machen, Algorithmen evaluieren
- **Ziele bis zum Ende dieser Woche (bis zum Sonntag, 7. November)**
  - Konrad+Hagen: **rsfs\_manuallyUpdateProposedSchedule** überarbeiten
  - enroll (möglichst sogar bis zur Präsentation)
- **Plan**
  - 2010-11-02 10:00 Meeting @ University: Finalize Scheduler
  - 2010-11-03 16:00 Meeting @ Julian: Presentation
  - 2010-11-04 18:00 Presentation @ University
  - 2010-11-05 17:00 Introduction to weave @ Julian
- **What has been achieved?**
  - David: HW: Zwei simple XSL-T für Lipsum entwickeln (XHTML, LaTeX)(**#115**)
  - Julian: @Commit
  - Konrad: Revised web module for scheduler control, implemented schedule presentation, revised **rsfs\_manuallyUpdateProposedSchedule**, implemented simple interruption policy for the Algorithm Thread

### KW 45

- **Goals till the end of this week**
  - André: CRUD Ressourcen damit man es als Vorlage für andere Entitäten nutzen kann (zirkuläre Beziehungen, 1:N, M:N Beziehungen), Setup für postgres 8.3
  - André+Ju: **iped\_CRUDEntities** steht
  - Konrad: Methods for Collaborative Scheduling, extend start Scheduling by Department and Academic Term parameters
  - Julian: **#120** (Search), **#121** (JOIN), **#122** (StringConverters for @Arg), **#123** (Constraints-Bug regarding Timeslots), **#125** (sort() for ORM-fetch), **#126** (User-Mgmt Module)
  - Hagen: Implement a basic testdata generator, **#51**(Create a Testdata Generator)
- **Plan**
  - 2010-11-09 Regular Meeting @ University

- 2010-11-10 Workshop @ Julian

- **What has been achieved?**

- André: CRUD coursemanagement angefangen (C, CE, AT, P), Installer gefixt, aber noch nicht 8.3 konform (siehe default-value für funktionen)
- David:
- Hagen:
- Julian: Mockup für FU-angelehntes Design, StringConverters (for Import and @Arg), Import (however: useless, lacks XSL-T for converting KVV-Data, lacks GUI, lacks specialized import)
- Konrad: Provided methods for Colloborative Scheduling (To-Do: evaluation and refacotring), extended start Scheduling by Department and Academic Term parameters, worked roughly into Java Profiler Visual VM (seems to be not that complex)

## KW 46

- **Goals till the end of this week**

- Julian: ~~#121~~ (JOIN), ~~#123~~ (Constraints-Bug regarding Timeslots), ~~#126~~ (User-Mgmt Module)
- Andre: plpgsql auf 8.3 umstellen (~~#138~~), Tickets zu Coursemanagement mind. 40% (~~#142~~, ~~#143~~, ~~#144~~, ~~#145~~, ~~#149~~, ~~#150~~, ~~#151~~, ~~#152~~, ~~#153~~, ~~#154~~), 100% bis Di.
- David: ~~#137~~ -> ~~#146~~, ~~#147~~, ~~#148~~ (Department)
- Konrad: Implement basic test-data generator (~~#51~~), implement basic benchmark (~~#136~~, ~~#104~~), evaluate Scheduler implementation with benchmark (~~#165~~), refactor colloborative Scheduling methods (~~#166~~)
- Hagen: Summary Report ersten Entwurf, Konrad mit dem Testdatengenerator helfen

- **Plan**

- 2010-11-16 Regular Meeting @ University
- 2010-11-21 Julian @ André / ~~#164~~ (Integrate Scetris / Fourtris)

- **What has been achieved?**

- André: ~~#27~~/~~#135~~ (output XSL-FO -> PDF),
- David: ~~#137~~ -> ~~#146~~, ~~#147~~, ~~#148~~ (Department)
- Hagen: Summary Report v0
- Julian: ~~#75~~ (aspects.Configuration), ~~#67~~ (Unit Tests für Import/Export), ~~#128~~ (translations), ~~#163~~ (login in fourtris), ~~#159~~ (pluggable output modules), ~~#169~~ (output plain), ~~#134~~ (output JSON), ~~#168~~ (fancy forms)
- Konrad: Implemented first working version of test-data generator, implemented basic benchmark (~~#136~~, ~~#104~~), Scheduler evaluation cannot be done properly (~~#165~~)

## KW 47

- **Goals till the end of this week**

- Hagen: Finish Summary Report v0, start working on v1
- Andre: Tickets von letzter Woche (~~#143~~, ~~#144~~, ~~#150~~, ~~#151~~, ~~#152~~, ~~#153~~, ~~#154~~) + Raumplanausgabe (tickets to come)
- Konrad: refactor schedule data upload (~~#181~~), implement scheduler resume (~~#184~~, ~~#182~~), refactor/integrate colloborative scheduling (~~#166~~ -> ~~#186~~), enhance scheduler performance (~~#105~~ -> ~~#183~~ Greedy Algorithm Setup)

- **Plan**

- Di Treffen
- Do Treffen bei Prechelt zum Score-Summary (15:00)
- So Teffen Konrad+André @ Konrad : Scheduler Integration (colloborative scheduling)

- **What has been achieved?**

- André:
- David:
- Hagen:
- Julian: ~~#121~~ (JOIN), ~~#156~~ (timekey)
- Konrad: refactor edschedule data upload (~~#181~~), implemented scheduler resume (~~#184~~,

~~#182~~), refactored collaborative scheduling (~~#166~~), implemented first working sketch of Greedy Setup, further enhancements are needed

## KW 48

- **Goals till the end of this week**

- André: Layout reworken, damit man alles klicken kann (~~#189~~), CEI verschieben im proposed scheduling, User kann sich für Kurse eintragen + Ansicht SEINES stundenplans (~~#196~~, ~~#197~~)
- Julian: bis Mittwoch abend: FORMS + Wall of Text about Forms, bis Donnerstag Mittag: Präsentation; bis Donnerstag Abend (20 Uhr) Feedback von \*allen\*; Freitag+Samstag: Review, Review, Review
- Konrad: Extend Test Data Generator in order to test the Greedy Setup; Refactor Greedy Setup

- **Plan:**

- 05. 12. @ Hagen Meeting
- 06. 12. @ University Presentation

- **What has been achieved?**

- André:
- David:
- Hagen:
- Julian:
- Konrad:

## Milestone: **Iteration5**

Completed **8 weeks** ago (12/30/10 18:29:01)



~~Iteration4~~ << - ~~Iteration6~~ >>

Minutes Iteration 4 Evaluation: **minutes-2010-12-05.txt**

Minutes **KoordinationEndspurt** (since they are in german, I dare giving a german name to the wiki page, too)

IterationThree is over. Please do no longer edit any contents here.

>> Have look at **JuliansDeveloperPage**

>> **HOWTOs**

## The Green Mile

### Goals for the Green Mile:

- Konrad (with \* beging the priority tasks)
  - checkScore has to work on every program not only the current program being scheduled (\*) ~~#207~~
  - implement year constraint ~~#214~~
  - extend checkScore by text output of the unsatisfied constraints (\*) ~~#208~~
  - extend test data generator by soft constraints ~~#209~~
  - extend test data by further departments ~~#210~~

- extend Greedy to set courses with preferred room and preferred time slot directly
- extend the Scheduler benchmark by graphical output using gnuplot (for summary report)
- genetic algorithms are a subset of embarrassingly parallel programs -> introduce concurrency to the scheduler
- Quality Management: Rewrite JUnit tests, refactor critical parts of the scheduler
- ~~write the chapter Scheduler with schemes for the Summary Report~~
- Julian
  - Review modules and overhaul UI, maintenance of backend-components (fixing bugs)
- David
  - preparing the Installer script with IzPack
  - help where it is possible (free for task-assignment)

## KW 49

- **Goals till the end of this week**
  - André:
  - Julian:
  - Konrad: blocked (Marketing midtermtest)
  - David:
  - Hagen:
- **Plan:**
  - 2010-12-06 @ University (K40) Presentation 13.00 - 14.00
- **What has been achieved?**
  - André:
  - David:
  - Hagen: **I can't see any changes in the dropbox since 2010-12-09, so I guess there has not been any progress regarding the report, hasn't it (it's only a text-file, so there are no graphics, diagrams, etc. i guess)? --Julian**
  - Julian: ORM-Query-Cache (~~#202~~)
  - Konrad: Didn't actually accomplish anything real, however compared Scheduling with and without query cache, started to rewrite Algorithm section in summary, designed a little graphic and improved the text slightly

## KW 50

- **Goals till the end of this week**
  - André:
  - Julian: ORM: ~~#204~~ (defective JOIN), Review of existing modules (integration with lego+form-validation etc.)
  - Konrad: write sections: Scheduler Algorithm, Implementation, Verification and Validation
  - David: Write sections 8 and 9 of the summary report.
  - Hagen: Write Sections 1 through 3 and 4.1 and whatever is left of SR
- **Plan:**
- **What has been achieved?**
  - André:
  - David:
  - Hagen:
  - Julian:
  - Konrad: summary report - wrote sections (especially concerned with the scheduler)

## KW 51

- **Goals till the end of this week**
  - André:
  - Julian:
  - Konrad: ~~#207~~, ~~#208~~, ~~#209~~, ~~#210~~
  - David: Writing the installer using IzPack? ( <http://izpack.org/>)

- Hagen:

- **Plan:**

- **What has been achieved?**

- André:
- David:
- Hagen:
- Julian:
- Konrad:

## KW 2

Meeting 01-11-11

### Milestone: **SCORE Document**

Completed **5 weeks** ago (01/16/11 06:13:37)

See also **KoordinationEndspurt**

## To-Do

- list the technologies and programs we have used and reason why we choose to use them (for instance, why using UML)
- describing the Scheduler with graphical aid
- reformulate to use of short-sentence
- describing the generic database scheme as key aspect of the software design
- graphics:
  - project timeline
  - scheme of our whole design (see presentation slides, scetris roof)
  - more schemes of selected designs
  - database scheme
  - sequence diagram (scheduling work-flow)
  - screenshots of the GUI including comments

## 12-12-2010

- Abstract?
- Mention Scetris Team Name
- Profile of each team member, group photo in new year
- spirale model, but no risk management at all
- rewrite project process according to the spiral model
- coloring the spiral model graphic from wikipedia with our project time line
- strict use of american-english spelling
- nomalization of list enumeration
- naming trac a core component to proof our development process
- paragraphig the timeline
- timeline content contains only what actually happened
- more details on the content: "worked on the web-interface is too vague"
- graphic showing the shift of deadlines
- requirement specification: name scaleability, configureabilit<
- requirement specification: name use cases, specify the requirements: concretize
- section name "Architecural Design"
- graphical overview of all architectural components
- distinguish between heuristic algorithm and genetic algorithm
- explain genetic algorithm concrete on course scheduling in an extra paragraph
- Design: data model Data-structure; implementation
- when introduce new terms, define them (select, population, optimum schedule)
- bigger size in scheduler illustration, two-sided arrow -> one-sided arrow
- describe crossover and mutation in a paragraph



- abstract to Implementation
- Implementation section: database-access-layer, web-frame
- remove content containing implementation process
- outcomes: side products released within the project (junktion, etc.)
- bakery => rename => code-generation
- Verification and Validation: Corbertura, Benchmark,
- The Application: What we have actual accomplished,

## Outline

David: What we learned, Conclusion

Hagen: Who we are, Development Process, Requirements, 4.1 Technologies

Konrad: Scheduler Algorithm, graphic for Technology overview, Scheduler part of Implementation

André: The Application

Julian: Architecture / Design / Implementation (parts regarding the web application)

## Milestone: Iteration6

Completed **4 weeks** ago (01/25/11 18:32:02)



~~Iteration5~~ << - IterationN+1 >>

## KW 01

- Meeting tuesday @ university

## KW 02

- Meeting tuesday @ university
- Report-a-thon @ Ju @ weekend **SUMMARY REPORT IS DUE**
- Summary report was done: **Officially submitted version**

## KW 03

- free -

## KW 04

- **Meeting 01-25-11**

'invidivudal goals & TODOs in **the running week**

Konrad: Test data generator extension to time: fix course generations for n-Programs, Unit test Greedy Setup, some Use Cases (Scheduler+Template)

André: Scheduler controller, integration, timetable

Hagen: busy

David: busy

Ju: sanitizes Trac, otherwise busy

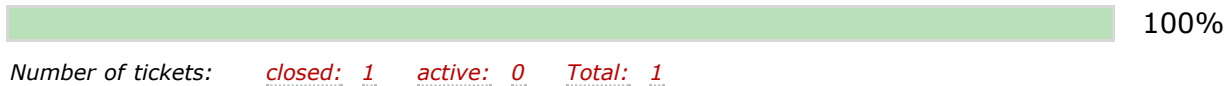
## Milestone: Knowledge Management

Completed **4 weeks** ago (01/25/11 18:32:50)



## Milestone: Polishment

Completed **4 weeks** ago (01/25/11 18:33:00)



to pimp, to pimp, to pimp.

## Milestone: IterationN+1

Due in **5 days** (02/28/11 00:00:00)



**Iteration6** ←←

## FINAL SOLUTION DELIVERABLE

- Starting points for getting involved with development in Scetris
- HOWTOs
- Active Tickets by owner
- FinalArtifacts

## KW 5 : 2011-01-31 - 2011-02-06

- David:
  - Create a Document that specifies how the installer should work
  - Extend the Installer to setup the postgres tables
  - Make Deployment of WARs easy
- Konrad:
  - **DONE:** finish the unit test to Greedy Setup which implies the refactoring of Greedy Setup
  - **DONE:** refactor Schedule Score - tracking only the violated constraints
  - **DONE:** write two use cases of regarding the scheduler work flow
  - **DONE:** revise the scheduler benchmark output to a fitness score per time unit measurement
  - **DONE:** start to complete Java Doc on the scheduler

## KW 6 : 2011-02-07 - 2011-02-13

- Konrad:
  - **DONE:** write all use cases regarding the scheduler
  - **DONE:** revise the unit test for fitness calculation which implies the refactoring of soft and hard fitness calculation
  - create a sequence diagram of the scheduler work flow
  - create a UML illustrating the scheduler architecture

## KW 7 : 2011-02-14 - 2011-02-20

- Konrad:

- complete Java Doc of the scheduler
- write 1-2 documents about the scheduler

## **KW 8 : 2011-02-21 - 2011-02-27**

- 2010-02-22: ALP V Exams
  - Konrad: blocked for ALP V exam and minor subject exams
- Andre:
  - (50% working) Verschieben von CEI in PS-Ansicht für Room/Lecturer?

## **KW 9**

- Konrad: blocked for minor subject exams

**DEADLINE: 2011-02-28 (Monday)**