Worldwide Standardization of Requirements Engineering Education

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2nd chair IREB e.V.

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Worldwide Standardization of Requirements Engineering Education

1. Introduction of IREB and the CPRE
2. Explanation of the CPRE exams
3. Homework sample
4. Wrap up
Basics

Goals of the IREB and the CPRE

- Standardizing education in the field of RE - Worldwide
- Improving the use of and implementation of RE
- Creation of an international understanding and basis for communication about RE

International Requirements Engineering Board e. V.
The certification model

Certification levels

**CPRE FL - Foundation Level**
- Fundamental understanding of domain, methodology and available techniques

**CPRE AL - Advanced Level**
- Utilization of methods and techniques
- Specialisation in one or more modules

**CPRE EL - Expert Level**
- If three or more CPRE-AL certificates have been gathered
Success story

Examinee numbers since inception

Over 6,400 Examinees in total
Surplus of the certification
... personally...

A proof of proactivity and the resolve for continued personal development

Become internationally deployable for matters of RE

An additional reference of competence

Signal an approval of scientifically validated, up-to-date standards

Knowledge transfer to colleagues
Surplus of the certification
... for enterprises...

- Become internationally deployable for matters of RE
- Commissions by corporations where the IREB-standards are a prerequisite
- An image-builder and sign of excellence for the organization
- Signal an approval of scientifically validated, up-to-date standards
- Signal your demand for high-quality standards of the requirements engineering processes carried out in your enterprise
- Knowledge transfer to colleagues
International Requirements Engineering Board (IREB) e. V.

- **Members of the board**
  - Are all renown experts from the sectors of industry, research, consulting and education

- **Activities of the board**
  - Elaboration of the curriculum and the exam questions for the „Certified Professional for Requirements Engineering“
  - Coordination and organization of training providers and certification bodies
  - Marketing of the CPRE certificate
  - Press and media releases
  - Publishing of articles, textbooks and references
IREB e. V. – the personal members

Experts from industry, research, consulting and education

1st Chairperson:
Chris Rupp
SOPHIST GmbH

2nd Chairperson:
Rainer Grau
Zühlke Engineering AG

Treasurer:
Karol Frühauf
INFOGEM AG

1st Chairperson:
Chris Rupp
SOPHIST GmbH

Prof. Dr. Klaus Pohl
University of Duisburg-Essen

Dr. Peter Hruschka
The Atlantic Systems Guild

Treasurer:
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University of Duisburg-Essen

Dr. Peter Hruschka
The Atlantic Systems Guild

2nd Chairperson:
Rainer Grau
Zühlke Engineering AG

Dr. Frank Houdek
Daimler AG

Prof. Dr. Martin Glinz
University of Zurich

Emmerich Fuchs
Fuchs Informatik AG

Prof. Dr. Martin Glinz
University of Zurich

Colin Hood
Free Consultant

Prof. Dr. Klaus Pohl
University of Duisburg-Essen

Dr. Peter Hruschka
The Atlantic Systems Guild

Suzanne Robertson
The Atlantic Systems Guild

Dr. Peter Hruschka
The Atlantic Systems Guild

Treasurer:
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Emmerich Fuchs
Fuchs Informatik AG

Prof. Dr. Martin Glinz
University of Zurich

Dr. Camille Salinesi
Université Paris 1

Prof. Dr. Klaus Pohl
University of Duisburg-Essen

Dr. Peter Hruschka
The Atlantic Systems Guild

Suzanne Robertson
The Atlantic Systems Guild

Dr. Camille Salinesi
Université Paris 1
Workgroups and supporting Members

The work of the IREB

Elaboration of the Advanced Level curriculi

Elaboration of the Foundation Level curriculum

Exam and exam questions for Foundation and Advanced Level

Internationalization
- French Syllabus February 2011
- Spanish Syllabus, Mid/End 2011
- Portuguese Syllabus, End 2011

Exam and exam questions for the Advanced Level

Marketing
The parties involved with CPRE
Certification bodies and training providers

International Requirements Engineering Board (IREB)
- Elaborates curricula
- Designs the exams
- Coordinates training providers
- Licenses certifying bodies
- Markets CPRE

Training providers
- Elaborate trainings based on the IREB curricula
- Hold CPRE training courses

Trainees and/or exam candidates

Certifying bodies
- Administer exams
- Issue the certificates
- Manage the exam questions

Conform to the rules of the ISO/IEC 17024:2003!

The crucial difference between the CPRE certification and other certification models: the roles and duties are divided between independent organizations, thus ensuring neutrality and fairness.
• Facts
  – Starting on April, 1st 2011
  – All shares hold by IREB e.V.
  – Located in Karlsruhe (Germany)

• Activities
  – Organizational support for the board, workgroups and supporting members
  – Coordination of IREB tasks like
    • Elaboration of the curriculum and the exam questions for the „Certified Professional for Requirements Engineering“
    • Coordination and organization of training providers and certification bodies
    • Marketing of the CPRE certificate
    • Press and media releases
    • Publishing of articles
Responsibilities of the involved
IREB e.V. – the board

- Responsibilities of the IREB e.V.
  - Elaboration of the curriculum
  - Design of the exam questions
  - Contracting training providers and certifying bodies

- Responsibilities of the IREB GmbH on behalf of IREB e.V.
  - Contracting training providers and certifying bodies
  - Contact for
    - Contents of the curriculum
    - The internationalization of the CPRE
    - Validity of certificates
    - Contact data of training providers and certifying bodies
Responsibilities of the involved
Certification bodies

- Responsibilities of certifying bodies
  - Organization of certifications
  - Carrying out certifications
  - Evaluation of certifications
  - Mailing certificates

- Contact for questions about
  - Certification dates
  - Details about the exam
  - Testing locations
  - Exam results
Responsibilities of the involved

Training providers

- Responsibilities of training providers
  - Hold trainings
  - If necessary, negotiate the exam dates with certifying bodies

- Contact for questions about
  - Details about trainings
  - Content of trainings
  - Training dates
The training providers

Current list
The syllabi of the CPRE

Foundation Level

- Fundamentals
- Scope and system context
- Eliciting requirements
- Documenting requirements in natural language
- Model-based requirements documentation
- Requirements negotiation and consolidation
- Managing requirements
- Tool support
The syllabi of the CPRE

Advanced Level

- Released Modules
  - Requirements Elicitation & Consolidation, March 1<sup>st</sup> 2011
  - Requirements Modeling, March 1<sup>st</sup> 2011

- Modules in work
  - Business Analysis, planned end of 2011
  - Requirements Management, planned for 2012

- Languages
  - Currently German only, English after approx. 100 exams
The book for the CPRE
Covering the essentials

- The textbook to go with the Foundation Level CPRE certificate
- Goal-oriented preparation for the certification exam
- Equates CPRE (FL) Syllabus 2.1

Klaus Pohl / Chris Rupp
1st edition, Rocky Nook
192 pages, 30 April 2011
ISBN 978-1933952819
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The exams of the CPRE

- **Foundation level**
  - Multiple choice questionnaire

- **Advanced level**
  - Multiple choice questionnaire
  - Homework, 2-3 days of effort
The exams of the CPRE

Foundation Level

- Duration: 75 minutes – 15 minutes extension for non native speakers
- 45 Multiple Choice questions
- Each question yields 1 to 3 points
- 60% of the points needed to pass
- Incorrect checked answers lead to a deduction of points! Not all choices need to be taken!
- Three different types of questions:
  Type A: Pick one correct answer
  Type P: Pick two or more correct answers
  Type K: Decide for each answer whether it is true/false, correct/incorrect.....
The exams of the CPRE

Advanced Level

- Step one: MC exam as in FL
- Step two: Elaboration of a homework
  - Description of a complex project according to the context of the syllabus.
  - Detailed justification of the chosen techniques and documentation forms
  - Size and format of deliverables depending on AL module
  - Estimated effort: Two days
  - Submission 90 days after registration
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Homework sample

- Presentation of the exercise
- Elaboration of a solution
- Presentation of the solutions (vernissage)
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International Requirements Engineering Board e. V.
Wrap up

Where to go from here

- Visit IREB’s website [www.ireb.org](http://www.ireb.org)
- Get a supporting member and join our working groups

Have a drink with us!

- Read the book
- Follow a CPRE training
- Get certified
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