

## Topics

- Teaching Conference Update
- Reminder about combined unit reviews
- Seoul Accord
- CBOOK

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- Teaching Conference Update
- **Reminder about combined unit reviews**
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- CBOK

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## Seoul Accord

- **What is it:** A multi-lateral mutual-recognition agreement
- **Participants:** Agencies responsible for accreditation
- **What it Provides:** Receiving CIPS accreditation means that it is “recognized” under Seoul Accord
- **Implication:** CIPS accreditation is recognized by ABET and other Seoul Accord signatories

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## Core Body of Knowledge (CBOK)

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## Guide to the Core Body of Knowledge

- Lists knowledge expected to be known by *all* computing and IT professionals in Canada
  - Computer scientists, software engineers, business technology managers, CIO staff, database administrators, data centre managers, etc.
  
- Replaces our 2005 CBOK
  - Used for certification, calibrating accreditation requirements, etc.

## CBOK committee members 1

- CIPS British Columbia
  - Mukesh Kashyap
- CIPS Alberta
  - Vincent Chiew
- CIPS Saskatchewan
  - Brenda Byers, Dale Field, Ron Lepage (2010)
- CIPS Manitoba
  - Kerry Augustine
- CIPS Ontario
  - Robert Fabian (until July 2010)
- CIPS New Brunswick
  - Danny Yakimchuk (during 2010)
- CIPS Prince Edward Island
  - Wayne Cutcliffe

## CBOK committee members 2

- Director, Accreditation
  - Peter King (and initial CBOK Committee Chair)
- Computer Science Accreditation Council (CSAC) Representative
  - Timothy Lethbridge (and CBOK Committee Chair from Spring 2010)
- Co-Director Professional Standards
  - Jon Nightingale
- Co-Director Professional Standards
  - Rick Penton
- ISTAC (College) Representative
  - Mary Lynn Manton (and CBOK Committee Vice-Chair)
- Canadian Association for Computer Science (CACS) Representative
  - Ali Ghorbani
- CCICT Representative
  - Anthony Upward (participated until early 2011)
- Manager, Professional Standards
  - Gina van Dalen, CAE

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## Process used by the CBOK Committee

- Committee work: Late Fall 2009 to Spring 2011
  - CBOK committee has representatives from business, colleges and universities
  - Input from industry needs, other BOKs (e.g, UK (SFIA), Australia, SWEBOK, ACM curricula, etc.
  - Refined terms of reference, definition of professional, scope, etc.
  - Many iterations
    - Subcommittees in each knowledge area
  - Sought good references for all topics

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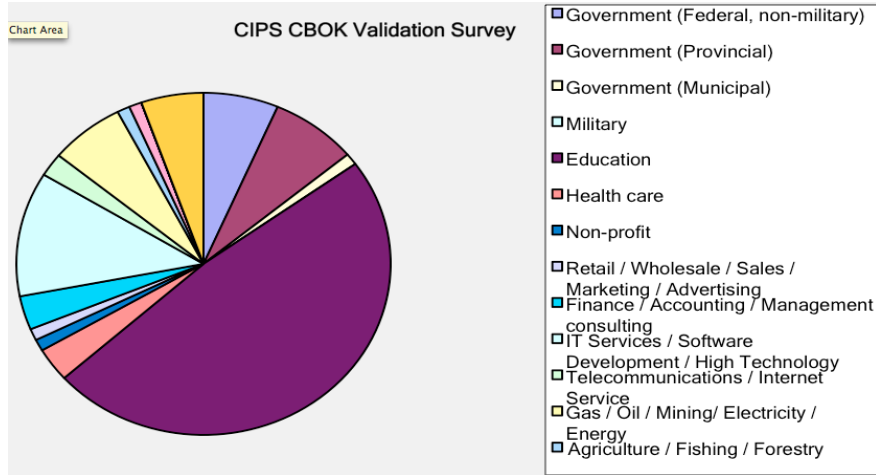
## Process used - continued

- Administered an online survey: Summer 2011
  - Asked for comments on every topic and reference
  - Sought rating of importance and knowledge level of each topic
  - Survey sent through many channels
    - CIPS newsletters, university and college departments, etc.
- Revised and updated CBOK according to survey results: Fall 2011 to Winter 12
  - Adjusted topics and knowledge level required
  - Added and deleted some references

## Survey results overview

- 173 responses
  - 93 completed all sections, including demographics

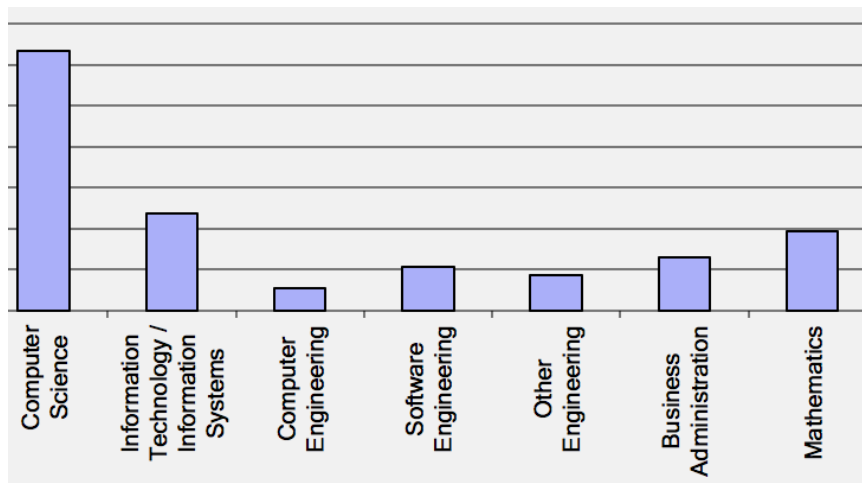
## Survey respondents by industry



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## Survey respondents by education



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## CBOK knowledge levels

- **Vocabulary:** Every computing and information technology professional should be able to understand the terminology in a conversation about this topic, to "know what they don't know" so they can delegate to others, and to know when others may or may not be competent in the area.
  - A minimal requirement: Expected to be achievable by most professionals with a few year's experience with little need for study
- **Comprehension:** Every computing and information technology professional should be able to intelligently discuss the topic and perform basic tasks using knowledge of the topic.
- **Application:** Every computing and information technology professional should be able to apply the knowledge so as to perform tasks in the area with a level of competence ordinarily expected in a work environment.

## Knowledge levels continued

- The CBOK has a universal minimum knowledge level for each topic
  - Every certified professional should have achieved this
  - These are set based on the survey results
  - Applies to all categories of professional
- Suggested levels are provided in the spreadsheet for CS/SE/IT new graduates and specific professional subdisciplines

## CBOK Overview: Areas A-D

- A. Professionalism and Ethics in Computing and IT
  - 8 topics (history, professionalism, environment, etc.)
  - Only 1 'application' level: Codes of ethics
- B. Law and Regulations Relevant to Computing and IT
  - 9 topics (liability, contracts, IP, computer crime, etc.)
  - None 'application' level
- C. Mathematics Foundations for Computing and IT
  - 6 topics (logic, probability, etc.)
  - Only 1 'application' level: Boolean logic
- D. Technical Knowledge for Computing and IT
  - 18 topics (programming, networks, web, etc.)
  - Basics of programming and databases are 'application' level

## CBOK Overview: Areas E-H

- E. Quality Issues for Computing and IT
  - 6 topics, none at the 'application' level
- F. Process Knowledge for Computing and IT
  - 16 topics
  - Requirements, design, testing, change management at the 'application' level
- G. Business Knowledge for Computing and IT
  - 9 topics, none at the 'application' level
- H. Soft skills
  - 10 topics
  - Problem solving, communication, teamwork at the 'application' level

## References

- Almost all topics have references
  - Intended to
    - Help test creators determine material to test
    - Help learners master the material
    - Serve as a resource so people can look up information
- Total number of references: 264
  - Books, web pages, papers
- The CBOK is the 'guide' pointing to these references which are the 'body of knowledge'
  - Clearly no intention for everybody to learn everything in each reference

## The direction forward

- Approval sought from CIPS PSAC, OEC, CCITP
- Publication on CIPS website
  - CIPS newsletter announcement
- Academic publication of method +study results
- Plan for evergreening:
  - Suggestion:
    - Committee + public input to update areas on a rotating basis
      - In 2014, 2017 and every 3 years: Areas C, D
      - In 2015, 2018 etc.: Areas A, B, H
      - In 2016, 2020, etc.: Areas E, F, G

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## The direction forward

- Putting the CBOK to use
  - Development of:
    - Certifications, certification exams, study guides
    - There is a task force on this
  
  - Cross-referencing by accreditation councils to assist accreditors
  
  - <http://www.cips.ca/CBOK>