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ACS Certification Guidelines

Australian Computer Society
Professional Standards Board

2016

CONTENTS

1. AUTHORITY

The Australian Computer Society (ACS) administers certification activity, including all procedures and activities intended to demonstrate the qualifications of ICT practitioners.

2. PURPOSE

This document establishes a framework for the scheme for certifying persons as *certified technologists* and *certified professionals*. It provides the processes needed to establish, administer, and maintain the certification scheme.

3. SCOPE

These guidelines apply to the scheme intended to provide certification for persons working as ICT practitioners.

4. CERTIFICATION SCHEME

4.1 Normative References

The following referenced documents are indispensable for the application of these guidelines:

> STD - ISO/IEC 17024:2012, *Conformity Assessment – General requirements for bodies operating certification of persons*

4.2 Certification Scheme Description

4.2.1 Description of an ICT practitioner

ICT practitioners include (but are not restricted to) the following:

- those who are directly engaged in the usage and delivery of ICT for organisations including management and leadership – *the practitioners (both professionals and technologists)*
- those developing and delivering educational, learning and development products and services for practitioners - *the educators*
- those engaged in ICT research and development (new languages and utilities, new hardware and peripherals, fundamentally new applications, new techniques and tools for IT practitioners) including those in ICT supplier organisations as well as academic institutions – *the researchers*
- those who regulate, support (including legal and commercial) and represent practitioners and their organisations - effectively another set of people who collectively own ICT related knowledge assets – *the supporters*

4.2.2 Definition of a professional

The definition of a professional given by Professions Australia stresses both the possession "of special knowledge and skills in a widely recognised body of learning derived from research, education and training at a high level" as well as the possession of a Code of Ethics (Professions Australia, 2007).

A view compatible with the ACS charter is that a professional is one who:

- Possesses an underlying core body of specialised, in-depth, knowledge;
- Adheres to a code of ethics;
- Possesses the capacity for independent action, operating with a high level of responsibility and autonomy; and
- Engages in continuing professional development, enhancing relevant technical and professional skills.

4.2.3 Professional ICT standard

The ACS established a Professional ICT standard for the certification scheme.

The key features of the ACS Professional ICT standard include the following:

- The standard is vendor neutral and independent
- The Skills Framework for the Information Age (SFIA) is the reference document for establishing the minimum standard of competency.
- Maintenance of competency is through continuing professional development.
- The standard is supported by a disciplinary code with a process for public complaint and sanctions.

4.2.4 Roles and Responsibilities - Certified Technologist (CT)

The CT may be someone who has chosen a career as a technologist or is an early career professional without the necessary experience and or/ qualifications with which to meet the professional category of certification.

The CT focuses mainly on practical applications – they may be 'expert' in installing, testing and monitoring particular systems or applications of computing, in the operation and maintenance of a particular system or application and even in supervising people (including trainees) in these activities. In some cases they may even be involved in selecting systems and applications to meet required specifications. It is unlikely that they will be involved in developing the specifications except in small, less complex systems and applications.

The CT would be required to be familiar with standards and codes of practice and become adept in their interpretation and application in a variety of situations. In some cases the CT will have a greater knowledge on detailed aspects of a system component or application than the Certified Professional (CP). Often this detailed knowledge will be attained through a vendor certification in relation to the system, system component or application.

CTs will have a basic grounding in the fundamentals underlining ICT supplemented by experience in a particular system or application or a certification of knowledge and competencies in a particular system, component or application supplemented with some training in standards, codes of practice and the nature of systems (especially principles and analysis). Training and education is more likely to be competency-based, competencies that will allow them to implement, operate and maintain systems, components and applications under the control of standards and knowledge available in the public domain. Some may also have basic people management skills that allow them to lead or manage teams in these tasks.

4.2.5 Roles and Responsibilities - Certified Professional (CP)

A CP is often required to deliver high-quality solutions to clients (internal or external) in response to varying business requirements. They utilise a wide variety of product, technology, industry, architectural, and business skills. A CP utilises IT to add value to the organisation.

A CP will often use tools to manage, analyse, design, and implement solutions. CPs have an in-depth understanding of the technology, products, offerings, and services within their specialist area.

4.2.6 Criteria for Eligibility

Table 1: Criteria for CT and CP Eligibility

Certified Technologist	Certified Professional
• They can operate effectively at SFIA level 3 generic capability • They can demonstrate in-depth competence in at least one specialism at SFIA level 3 • They have demonstrated a breadth of knowledge of ICT • They have an understanding of and commitment to the ACS codes and standards • They undertake 20 hours each year of continual professional development to maintain certification. This can include studies towards CP certification.	• They can operate effectively at SFIA level 5 generic capability • They can demonstrate in-depth competence in at least one specialism at SFIA level 5 • They have demonstrated a breadth of knowledge of ICT • They have an understanding of and commitment to the ACS codes and standards • They undertake 30 hours of continual professional development each year, to maintain certification.

An effective CT typically possesses and exhibits the following:

Table 2: Certified Technologist Generic Competencies	
Autonomy	• Works under general direction. • Uses discretion in identifying and resolving complex problems and assignments. • Usually receives specific instructions and has work reviewed at frequent milestones. • Determines when issues should be escalated to a higher level.
Influence	• Interacts with and influences department/project team members. • Has working level contact with customers and suppliers. • In predictable and structured areas may supervise others. • Makes decisions which may impact on the work assigned to individuals or phases of projects.
Complexity	• Performs a broad range of work, sometimes complex and non-routine, in a variety of environments. • Applies methodical approach to problem definition and resolution.
Business Skills	• Understands and uses appropriate methods, tools and applications. • Demonstrates an analytical and systematic approach to problem solving. • Takes the initiative in identifying and negotiating appropriate personal development opportunities. • Demonstrates effective communication skills. • Contributes fully to the work of teams. • Plans, schedules and monitors own work (and that of others where applicable) competently within limited deadlines and according to relevant legislation and procedures. • Absorbs and applies technical information. • Works to required standards. • Appreciates the wider field of information systems, and how own role relates to other roles and to the business of the employer or client.

An effective CP typically possesses and exhibits the following:

Table 3: Certified Professional Generic Competencies	
Autonomy	• Works under broad direction. • Work is often self-initiated. • Is fully accountable for meeting allocated technical and/or project/supervisory objectives. • Establishes milestones and has a significant role in the delegation of responsibilities.
Influence	• Influences organisation, customers, suppliers, partners and peers on the contribution of own specialism. • Builds appropriate and effective business relationships. • Makes decisions which impact the success of assigned projects i.e. results, deadlines and budget. • Has significant influence over the allocation and management of resources appropriate to given assignments.
Complexity	• Performs an extensive range and variety of complex technical and/or professional work activities. • Undertakes work which requires the application of fundamental principles in a wide and often unpredictable range of contexts. • Understands the relationship between own specialism and wider customer/organisational requirements.
Business Skills	• Advises on the available standards, methods, tools and applications relevant to own specialism and can make appropriate choices from alternatives. • Analyses, designs, plans, executes and evaluates work to time, cost and quality targets. • Assesses and evaluates risk. • Communicates effectively, both formally and informally. • Demonstrates leadership. • Facilitates collaboration between stakeholders who have diverse objectives. • Understands the relevance of own area of responsibility/specialism to the employing organisation. • Takes customer requirements into account when making proposals. • Takes initiative to keep skills up to date. • Mentors colleagues. • Maintains an awareness of developments in the industry. • Analyses requirements and advises on scope and options for continuous operational improvement. • Demonstrates creativity and innovation in applying solutions for the benefit of the customer/stakeholder. • Takes account of relevant legislation.

4.2.7 Normal pathways to CT

There are several normal pathways to CT status.

	Experience (years) - total	SFIA experience SFIA level 3 (years)	Required to demonstrate in-depth competence in at least one specialism at SFIA level 3	Required to demonstrate knowledge of ICT	Interpersonal skills
ICT degree – normal & accredited	1	1	Y	N	Y
ICT degree – normal & not accredited	2	2	Y	Y	Y
Non-ICT degree	4	3	Y	Y	Y
ICT diploma, advanced diploma AQF 5/6	3	2	Y	Y	Y
Vendor certification	4+ (depending on particular vendor certification)	3	Y	Y	Y
ICT AQF level 4 program	5	3	Y	Y	Y
Experience only	7	3	Y	Y	Y
Mutual recognition					English requirement for candidates from non-English speaking countries

Note: Graduates of an ICT degree that is not accredited by the ACS, but who are subsequently deemed to have graduated with an appropriate ICT qualification will be considered as graduates from the "ICT degree normal & accredited" pathway.

Pathway Acceleration

- Work integrated learning (WIL) - Where the work-based learning extends the study period beyond the normal three year program, the WIL component may be counted towards the experience requirements for ACS professional certification.
- Honours - The honours year may be counted towards the experience requirements for ACS professional certification, provided an Honours degree in ICT is awarded in an area relevant to the SFIA level 3 specialism(s) of the applicant.

4.2.8 Normal pathways to CP

There are several normal pathways to CP status.

	Experience (years)	SFIA experience (years)	Required to demonstrate in-depth competence in at least one specialism at SFIA level 5	Required to demonstrate knowledge of ICT	Interpersonal skills
ICT degree – normal & accredited	3	2 years level 5 (plus 1 year SFIA 4)	Y	N	Y
ICT degree – normal & not accredited	4	2 years level 5 (plus 2 years SFIA 4)	Y	Y	Y
Non-ICT degree	6	2 years level 5 (plus 2 years SFIA 4)	Y	Y	Y
ICT diploma, advanced diploma	5	2 years level 5 (plus 2 years SFIA 4)	Y	Y	Y
Vendor certification	7+ (depending on particular vendor certification)	2 years level 5 (plus 2 years SFIA 4)	Y	Y	Y
Experience only	10	2 years level 5 (plus 2 years SFIA 4)	Y	Y	Y
Senior manager	4	4 year level 6	Demonstrate in-depth competence in at least one specialism at SFIA level 6	N	Y
Academic	Employed in ICT school or research facility and holds either a Masters by research or a PhD	2 year level 6	Demonstrate in-depth competence in at least one specialism at SFIA level 6	N	Y
Mutual recognition					English requirement for candidates from non-English speaking countries

Note: Graduates of an ICT degree that is not accredited by the ACS, but who are subsequently deemed to have graduated with an appropriate ICT qualification will be considered as graduates from the "ICT degree normal & accredited" pathway.

Pathway Acceleration

For all pathways with the exception of Senior Manager and Academic:

- Completion of the CPeP program will reduce the experience requirement by 1.5 years
- Completion of an Advanced Professional degree may reduce the experience requirement by up to 2 years [Note: the total reduction from CPeP plus Advanced Professional is 2 years]
- Work integrated learning (WIL) - Where the work-based learning extends the study period beyond the normal three year program, the WIL component may be counted towards the experience requirements for ACS professional certification.
- Honours - The honours year may be counted towards the experience requirements for ACS professional certification, provided an Honours degree in ICT is awarded in an area relevant to the SFIA level 5 specialism(s) of the applicant.

4.2.9 Membership post nominal

National Regulations (NR 2.5.5 and 2.5.6) allow that candidates who meet the requirements of this policy are entitled to add CT (Certified Technologist) or CP (Certified Professional) after their membership post nominal.

All candidates must agree to the certification agreement in order to be certified by the ACS and hold a certification designation.

The ACS will maintain and publish on its website a Register of all current Certified Technologists and Certified Professionals where approval has been provided by the certificant. The Register will be preceded by details of the requirements for the certified status and may include any caveats or limitations as required.

4.3 Continuing Professional Development (CPD)

CPD is a requirement to maintain CT or CP status.

To maintain CT status a member must:

- certification requires the attainment of Continuing Professional Development (CPD) hours over an annual certification period, and must attain and report an annual minimum of twenty (20) CPD hours.
- undertake any directed professional development as required
- have been actively practicing in the profession certification period and provide two referees who can attest to their professional activity

To maintain CP status a member must:

- Must attain and report an annual minimum of thirty (30) CPD hours
- undertake any directed professional development as required
- have been actively practicing in the profession in the certification period and provide two referees who can attest to their professional activity. In the case of a specialism certification the practice must have been in the specialism.

CPD activities must be structured in that they have a clear set of objectives and a logical framework – they can include lectures, seminars, formal education, discussion groups and special interest groups, writing and delivering papers and conducting research.

As part of the ACS commitment to service and values in the profession CP's are encourages to contribute to voluntary service in the area of their expertise.

We recommend adopting a structured approach and planning your development to ensure you demonstrate your continuing commitment to your profession, and to develop the good practice of regularly reviewing your needs and selecting relevant learning activities to help you fulfill them. As part of this, an appropriate recording system will help you to track your activities and review progress.

The ACS expects its members to be able to demonstrate, if requested, their commitment to CPD. Written evidence will be required at re-certification. At other times members may be surveyed to establish whether the ACS policies and support services for professional development are useful and effective.

4.4 Monitoring CPD compliance with requirements

The ACS will audit a sample selection of Activity Statements on reapplication for certification. The extent and frequency of audits will depend upon varying circumstances such as results of previous audits, relative risk associated with activities, and the adequacy of systems of internal control, as described in OP - *Activity Statement Internal Audit,* Operating Procedure, and Certification Support Practices. Activity Statement Internal Audits are part of compliance of internal audits of the ACS.

4.5 Sanctions for non-compliance

Certificants who fail to comply with the ACS Professional Development requirements will have their CT or CP credential revoked and will no longer be allowed to present themself as a CT or CP.

Any deliberate attempts to misrepresent activity will be regarded as a breach of the Code of Ethics and subject to disciplinary action.

The Disciplinary Committee may revoke the certification of any member following a proper enquiry under the ACS regulations.

4.6 Appeals

Certificants who have had their certification revoked due to non-compliance with certification requirements may appeal such revocation by submitting a written application to the CEO. This request must be received no later than sixty days after notice of revocation and should include a detailed explanation for the appeal.

In the event that a candidate or certificant desires to appeal a decision made by the ACS by invoking the appeals process defined in OP- *Certification Process: Guidelines for Candidates*, Operating Procedure, and wants the appeal to be anonymous, the ACS will facilitate an anonymous review on behalf of the candidate.

If a candidate or certificant is found to have colluded on, falsified or forged any documents then the case will be closed without the issue of result and referred to the Chair: Disciplinary Committee.

4.7 Confidentiality and disclosure

- ***Confidentiality***

  All information relating to a candidate will be held confidential to the ACS during the certification process; that is, prior to the award of certification. This includes information related to the Application Form, Review and Appeal Forms.

  Candidate's Certification Application will always be considered confidential information and shall not be disclosed in any publicly available document or to any third party by the ACS.

  In addition the ACS will hold confidential all information on unsuccessful applications for certification.

- ***Disclosure of Information***

  Any claims of conformance or information related to the certification process may only be made public after the ACS has notified the candidate in writing that they have successfully completed the certification process.

5. DEFINITIONS AND ABBREVIATIONS

For the purposes of this document, the terms and definitions given in ISO/IEC 17024:2003 and the following apply.

- ***body of knowledge***

  A collection of knowledge items generally agreed to be essential to understanding a particular subject area. A body of knowledge is particularly useful when it is collected, explained, and/or organized by a guidance document. Such a document can be used as a basis for examination or comparison.

- ***cognitive level***

  Qualitative assessment of an individual's familiarity with a given topic.

- ***qualification body***

  Entity issuing certificates of qualification under Sections 1 to 6 of this document.

- ***stakeholder***

  Individual or organization actively involved in a software project or whose interests may be positively or negatively affected as a result of project execution or completion.

Refer to the QS Glossary located on the ACS website for definitions and abbreviations.

6. REFERENCES

[Bloom] B. Bloom, ed. Taxonomy of Educational Objectives: Classification of Educational Goals, Mackay, 1956.

ISO/IEC 17024:2003, *Conformity Assessment – General requirements for bodies operating certification of persons*.

SFIA (2011) Skills Framework for the Information Age Foundation, 5.0, SFIA Foundation, United Kingdom. URL: http://www.sfia.org.uk/

7. APPENDICES

Appendix A – Skills Framework for the Information Age (SFIA)

In developing the ACS Certification Scheme, SFIA is used as an underlying structure to help with the organization of the competence descriptions and as a resource to help in their validation. It is recommended to base competence descriptions neither on jobs (or job titles) nor on technology (software environments), as *stability of profiles* is of great importance.

The specifics of technology may form part of the profile description but should not influence the structure of the ACS Framework. These descriptions provide information as to what is required to be competent in a role. Levels should be attributed to the stated performance expectations.

Table 1: The SFIA (Skills Framework for the Information Age) Framework.

The **Skills Framework for the Information Age (SFIA)** provides a common reference model for the identification of the skills needed to develop effective Information Systems (IS) making use of Information Communications Technologies (ICT). It is a simple and logical two-dimensional framework consisting of areas of work on one axis and levels of responsibility on the other.

It uses a common language and a sensible, logical structure that can be adapted to the training and development needs of a very wide range of businesses – or simply used 'off the shelf'. SFIA enables employers of IT professionals to carry out a range of HR activities against a common framework of reference - including skill audit, planning future skill requirements, development Programs, standardisation of job titles and functions, and resource allocation.

It is easily accessible to:

- ICT practitioners and users
- employers
- education and training providers; and
- government

The framework provides a clear model for describing what ICT practitioners and users do. It is constructed as a two-dimensional matrix. For a full scale version of the SFIA Framework Chart, please visit: **http://www.sfia.org.uk**.

Skills: One axis divides the whole of ICT into 'skills'. Skills are grouped for convenience into subcategories or 'business roles'. Subcategories are grouped into six categories or work areas - strategy & planning, management & administration, development and implementation, service delivery, sales & marketing, and use. The SFIA structure allows a consistent approach to ICT skills across the organisation and is not limited to a specialist department.

Levels: The other axis defines the level of responsibility and accountability exercised by ICT practitioners and users. Each of seven levels - from new entrant to strategist level - is defined in terms of autonomy, influence, complexity and business skills.

Descriptors: The matrix shows the complete set of skills used by ICT practitioners and users. For each skill at each level, 'descriptors' provide examples of typical tasks undertaken. A typical task for systems design at level 5 is 'reviews others' system design to ensure selection of appropriate technology, efficient use of resources, and integration of multiple systems and technology.'

The matrix is not fully populated, as most roles do not require people at every level of responsibility.

Skills: At the heart of the Framework are a set of skills which together aim to describe all the abilities that are needed to deliver and exploit effective information systems.

www.sfia.org.uk

Candidates assessing themselves against SFIA are likely to find that they meet the SFIA criteria in several different categories.

ACS Certification Guidelines

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Version History

Date	Document Version	Revision History (reason for change)	Author /Reviser
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July 2009	V2.0	Revised for open membership proposal and inclusion of CT pathways	Mr R V Hart
September 2011	V2.1	Revised for specialism and changes to CPD requirements	Mr R V Hart
18 May 2012	V2.2	Alterations in ACS Branding	Ms R Graham
2 November 2012	V2.3	Clarification on CPD hours	Ms R Graham
5 August 2013	V2.4	Clarification on CPD hours	Ms E Horgan
25 November 2013	V3.0	Streamlined pathways	Mr G Low
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17 December 2015	V4.1	Amendment of voluntary service on page 12 as per the outcome of item 8 from the Oct 15, 2015 PSB meeting.	Berny Martinez
12 May 2016	V4.2	Change of wording from “Advanced Masters” to “Advanced Professional” as per outcome of PSB meeting on 5 May 2016.	Berny Martinez

Approvals

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