

Submission to the Commission's Research Study into Standards Setting and Accreditation. Ian Hirst

Introduction

I am currently involved in voluntary standards committee work in the domain of Software Engineering and have been for some 8 years. For this domain, most AS/NZ Standards are adoptions of ISO standards which have been contributed to at an international level by Australasian voluntary representatives. This involves extensive committee member involvement spanning multiple years, usually including 1 to 2 overseas meetings per year. In addition, Committee members are supported by a number of other volunteers who provide comments and advice to committee members. As a result, a large amount of time and effort is committed to development or maintenance of every Software Engineering standard.

During my period of involvement I have collected some opinions on the efficiency and effectiveness of the standards development models in use (TOR Item a.). This paper highlights some observations and suggests some improvement opportunities.

Efficiency

Regarding the benefit and value derived from the available expertise, skill and inputs of standard contributors the following observation and recommendation are offered:

Observation 1: The cost to produce (or adopt an ISO standard as an AS/NZS) is excessive when compared to the number of standards purchased from Standards Australia.

Supporting facts:

- Production of a standard typically takes 3 to 5 years
- A typical (full) annual commitment from a committee member includes:
 - 50 – 250 hours of development and/or review work per standard
 - 1 or 2 overseas trips per year
 - Attendance at two national body meetings per year
- A resultant expenses cost per person of approximately \$6,000 to \$11,000 per annum
- A committee member opportunity cost (effort spent on standards that could otherwise be used to benefit the Australian IT Industry) of the order of magnitude of \$3,500 - \$25,000 is incurred for each standard (assuming only one Australian volunteer is involved per standard)
- A support network opportunity cost (effort spent on standards that could otherwise be used to benefit the Australian IT Industry) of the order of magnitude of \$10,000 - \$50,000 is incurred for each standard (assuming only 5 Australian volunteers are involved per standard. For some standards work the support groups number in excess of 50 people)
- Total per year development cost per standard may thus be \$19,500 - \$86,000
- Overall cost for developing a standard would be in excess of \$58,500 - \$258,000 (the first 3 years are most intensive, but some tapered effort in years 4 and 5 would be required but has not been allowed for in these calculations)
- Sales of standards in the Software Engineering domain are relatively low when compared to the effort and expense incurred when developing standards. The total

sales reported are in the order of 1000. Some current AS/NZS Software Engineering standards have nil reported sales.

Recommendation 1: Standards development activities be prioritised and focussed on work that has a high likelihood of benefit to the Australian IT industry.

Effectiveness

Regarding the effectiveness of the processes used to develop standards the following observations and recommendations are offered:

Observation 2: There is little or no market demand information available to standards development committees.

Recommendation 2: Standards Australia develop a market engagement and demand analysis capability to assist committee work prioritisation and planning.

Recommendation 3: Standards Australia collect and report on market needs and standards sales to each committee on a regular basis.

Observation 3: The decision to develop or maintain a standard is primarily based on the areas of interest or concern of volunteer contributors and not derived from measured and evaluated market or government needs.

Recommendation 4: Committees use market demand information as a primary input when considering standards development priorities and activities.

Recommendation 5: Committees develop and maintain formal Business Plans and measure and report performance against those plans on a regular basis

Recommendation 6: An executive governing or steering committee be formed to direct and review IT standards development work. This committee could set strategic direction that would align work with government and industry needs and allocate resources or funds for endorsed work. The committee should include representatives from government, industry, and significant professional organisations.

Recommendation 7: Government directly commission, fund and staff development of standards that will provide measurable benefits to government agencies or industry.

Observation 4: There is little or no recompense for travel expenses incurred by committee members (this year approximately \$1,000 will be made available per qualifying (unsupported) person against an expenses cost of up to \$11,000) and this constrains the number of people willing to commit to standards development work.

Recommendation 8: Standards stakeholders (primarily Requesters and Users) contribute more substantially (via funds or 'in kind' services) to the underwriting of standards development costs.

Recommendation 9: A percentage of revenues resulting from standards sales be directed to committees producing those standards for underwriting of expenses incurred by volunteers.

Recommendation 10: A government grants system be developed that recognises measurable benefits to industry (for example, based on number of standards sales) be directed to committees producing those standards for underwriting of expenses incurred by volunteers.

Observation 5: AS/NZS Standards in the Software Engineering domain have commercial rivals that are generally more widely accepted and used, cheaper to acquire (or free), and generate more commercial advantage.

Recommendation 11: Standards be made either freely or cheaply available to educational institutions and bona fide students.

Recommendation 12: Bundling of related standards and sale at reduced prices is implemented.

Recommendation 13: Discounts are offered for bulk orders of multiple copies of a single standard

Recommendation 14: Discounts are offered for organisations or individuals who are 'upgrading' from a previous version of the same or predecessor standard.

Concluding remarks

It is likely that the high costs of standards development will result in a continuing contraction of volunteer involvement over the next 5 years unless a means for more equitable sharing of the costs is developed. It is even possible that the volunteer model will become unviable within this period.

For future standards development success in my area of involvement the following aspects require adoption:

- Improved market engagement and market driven work prioritisation
- Increased stakeholder commitment and funding
- Flexible and competitive sales and pricing models

Ian Hirst
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