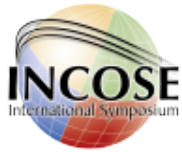




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Guide for Selecting an Appropriate Competency Assessment Instrument

Jack Ring

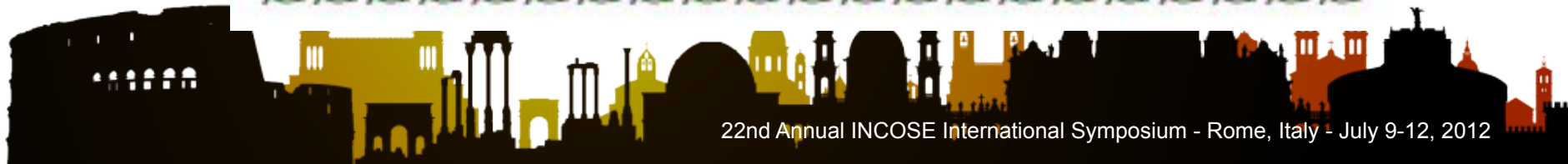
Leader, Action Item 09-03
INCOSE Fellows Committee
IS2012



22nd Annual INCOSE International Symposium - Rome, Italy - July 9-12, 2012

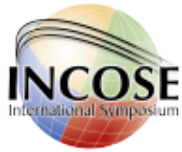


The Messenger
Requests
That He Please
Not Be Shot





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Agenda

Context

The Guide

Results to date

Beyond Competency Assessment





Context: Demand

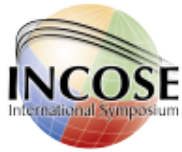
Manager and Person want to know

- ✓ competency of Person(i)
- ✓ relative to Situation(j)
- ✓ at Time(t)





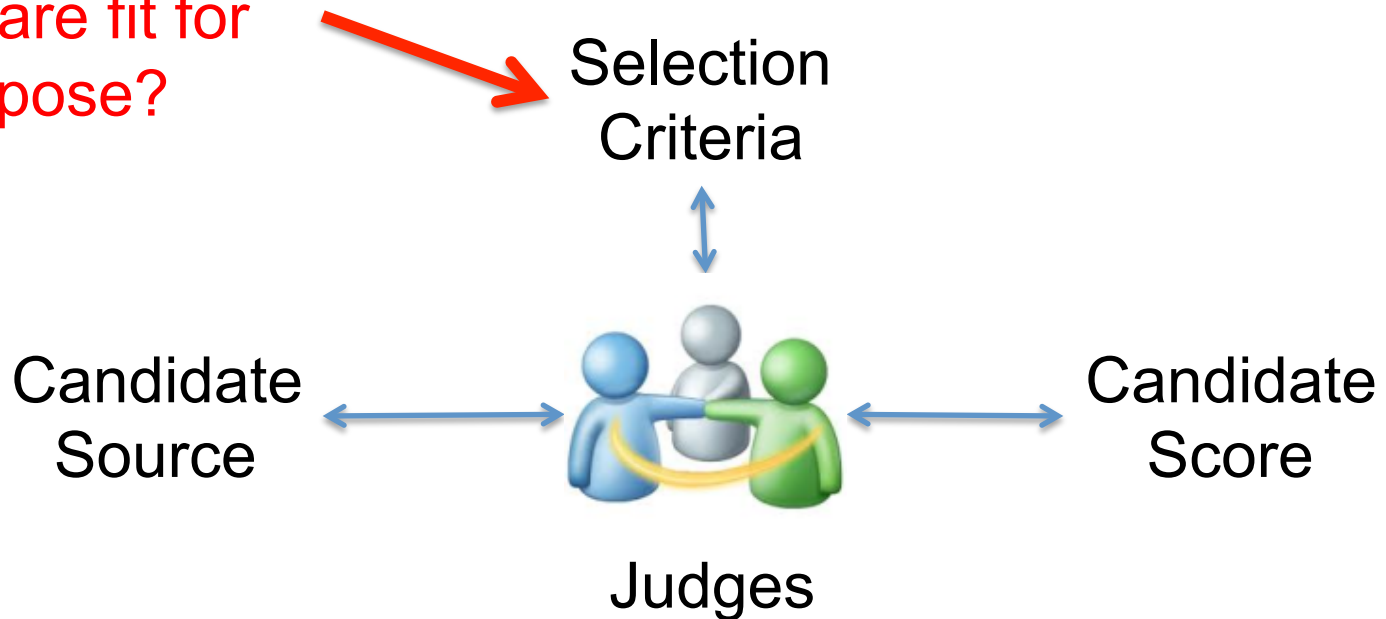
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Context : Quality

A Source Selection Authority

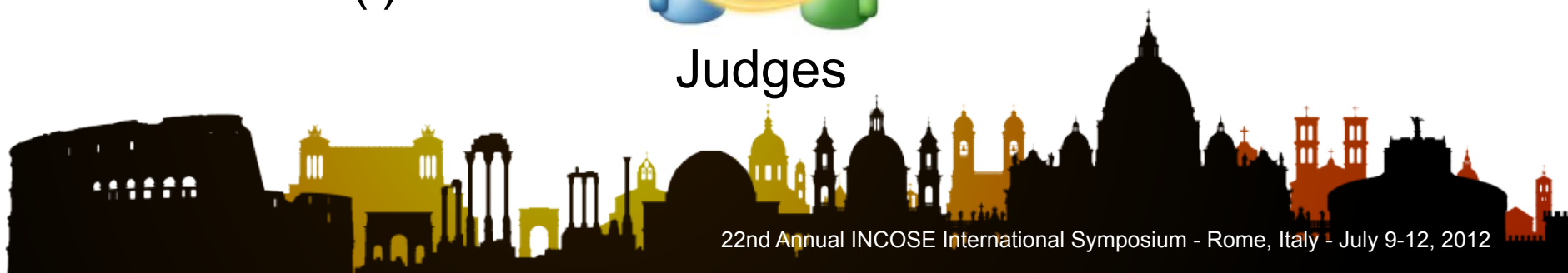
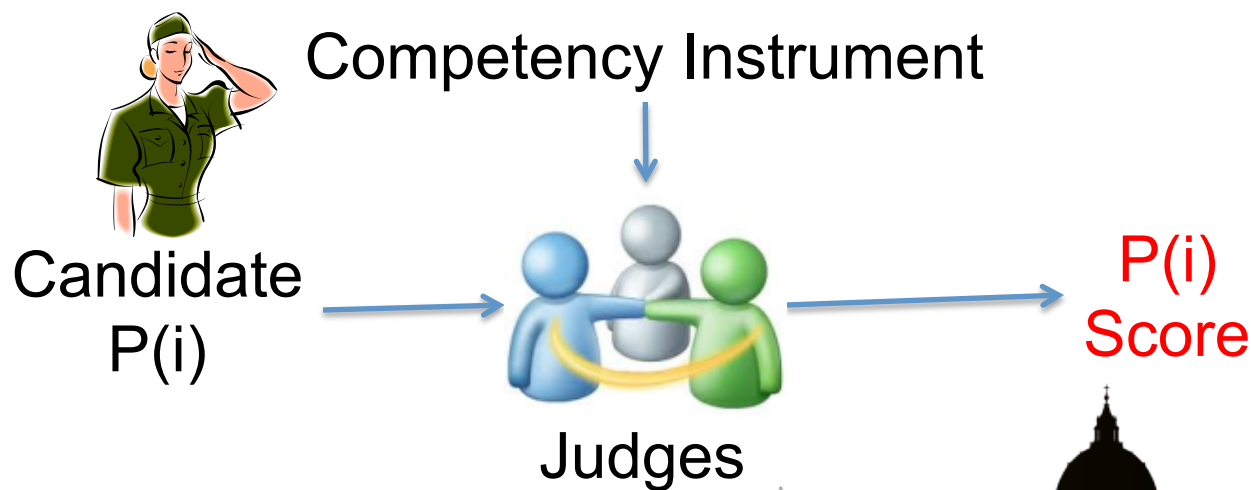
How to ensure that
these are fit for
purpose?





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Context: Competency Assessment





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Quality: CI Selection

This Guide

Candidate
Competency
Instruments



**Selected
Competency
Instrument**

fit for purpose



Competency Instrument

Candidate
 $P(i)$



$P(i)$
Score



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This Guide



Provides criteria – 12 MoEs - for judging both aspects of a candidate Competency Instrument:

Regarding SE Competency (5 MoEs)

Regarding Assessment Viability (7 MoEs)

Suggests a Bayesian approach for extracting maximum knowledge and indicating degree of validity of score.





SE-oriented Criteria

Competency Instrument ---

- a)Applicability clear. States scope or limits of competency instrument.
- b)Assesses span and depth of knowledge regarding SE
- c)Assesses candidate's achievements and apparent limits.
- d)Assesses candidate's style.
- e)Assesses span and depth of candidate's Domain(s) Knowledge.





Viability-oriented Criteria

Competency Instrument ---

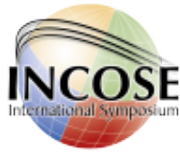
- f) Avoids subjective judgments.
- g) Estimates likely error in assessment.
- h) States relevance of competencies to anticipated usage.
- i) Specifies meaningful conditions for initiating assessment.
- j) Assessment findings are worth the cost of performing assessment.
- k) Confirms validity of assessments.
- l) Is rooted in competency assessment literature.





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Scorecard



For each Source Selection Judge (>2)

For each of 12 Selection Criteria

Score 1 = Conformance

Score 2 = Confidence

Combine Scores using “Bayesian Estimation tool”

For each of the 12 Criteria

For each Judge across all criteria

Across all judges and criteria

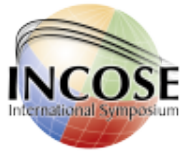
Resolve any outliers as necessary.





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Usage of Guide to date ---



Fellows Committee reviewed and approved release.

Shared with existing INCOSE Competency Model(s) authors.

Shared with INCOSE Competency Assessment WG

Offered to INCOSE CAB

Shared with NDIA-selected SE organizations.

Two responses “Yes, our competency model does that.”

However, no actual scorecard data to date.





Current focus is on CAIs that assess P(i) current state

Does not address efficacy of job design*

Does not address P(i) competency development*

Intent, Goals, Action Plan

* c.f., *International Society for Performance Improvement*.

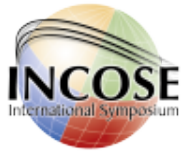
Let's design and construct systems that learn!

INCOSE-TP-2003-015-01 ConOps of a SEEC





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Thank You



Questions?

