

Annex A (INFORMATIVE): CONCEPT DIAGRAMS

The 12 concept diagrams in this informative Annex are intended to provide

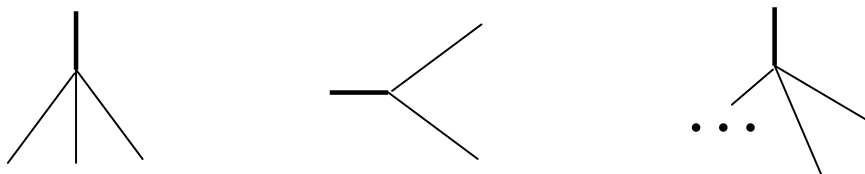
- a visual presentation of the relations between the concepts defined and termed in the preceding chapters;
- a possibility for checking whether the definitions offer adequate relations;
- a background for identifying further needed concepts; and
- a check that terms are sufficiently systematic.

It should be recalled, however, that a given concept may be describable by many characteristics and only essential delimiting characteristics are included in the definition.

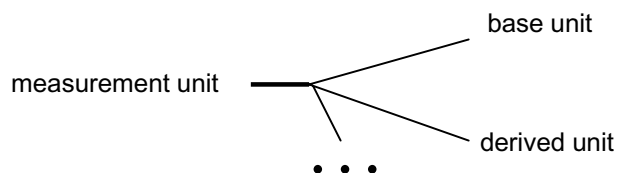
The area available on a page limits the number of concepts that can be presented legibly, but all diagrams in principle are interrelated as shown by some overlapping concepts with reference.

The relations used are of three types as defined by ISO 704 and ISO 1087-1. Two are hierarchical, i.e. having superordinate and subordinate concepts, the third is non-hierarchical.

The hierarchical generic relation (or genus-species relation) connects a generic concept and a specific concept; the latter inherits all characteristics of the former. The diagrams show such relations as a tree,

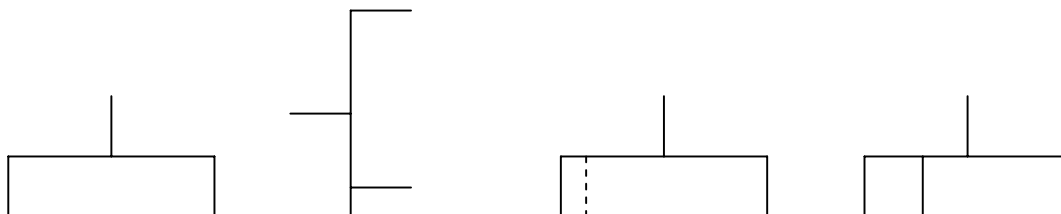


where a short branch with three dots indicates that one or more other specific concepts exist, but are not included for presentation. For example,

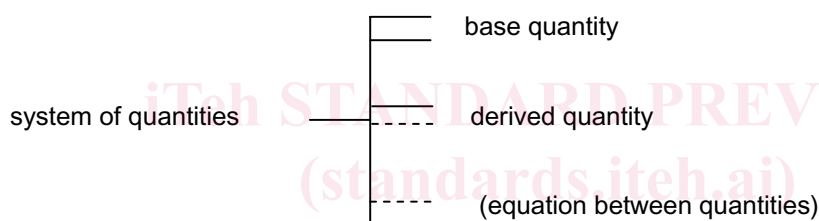


where the third concept might be 'off-system measurement unit'.

The partitive relation (or part-whole relation) is also hierarchical and connects a comprehensive concept to two or more partitive concepts which fitted together constitute the parent concept. The diagrams show such relations as a rake or bracket,

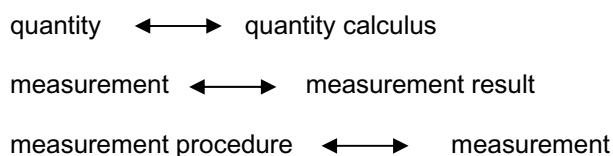


where a close-set double line indicates that several partitive concepts of a given type are involved and a broken line shows that such plurality is uncertain. For example,



where the parenthetic term indicates a concept that is not defined in the Vocabulary, but is taken as a primitive which is assumed to be generally understood. A continued backline without a tooth means one or more further partitive concepts that are not discussed.

The associative relation (or pragmatic relation) is non-hierarchical and connects two concepts which are in some sort of thematic association. There are many subtypes of associative relation, but all are indicated by a double-headed arrow. For example,



To avoid too complicated diagrams, they do not show all the possible associative relations.

The diagrams will demonstrate that fully systematic derived terms have not been created, often because metrology is an old discipline with a vocabulary evolved by accretion rather than as a comprehensive de novo structure.

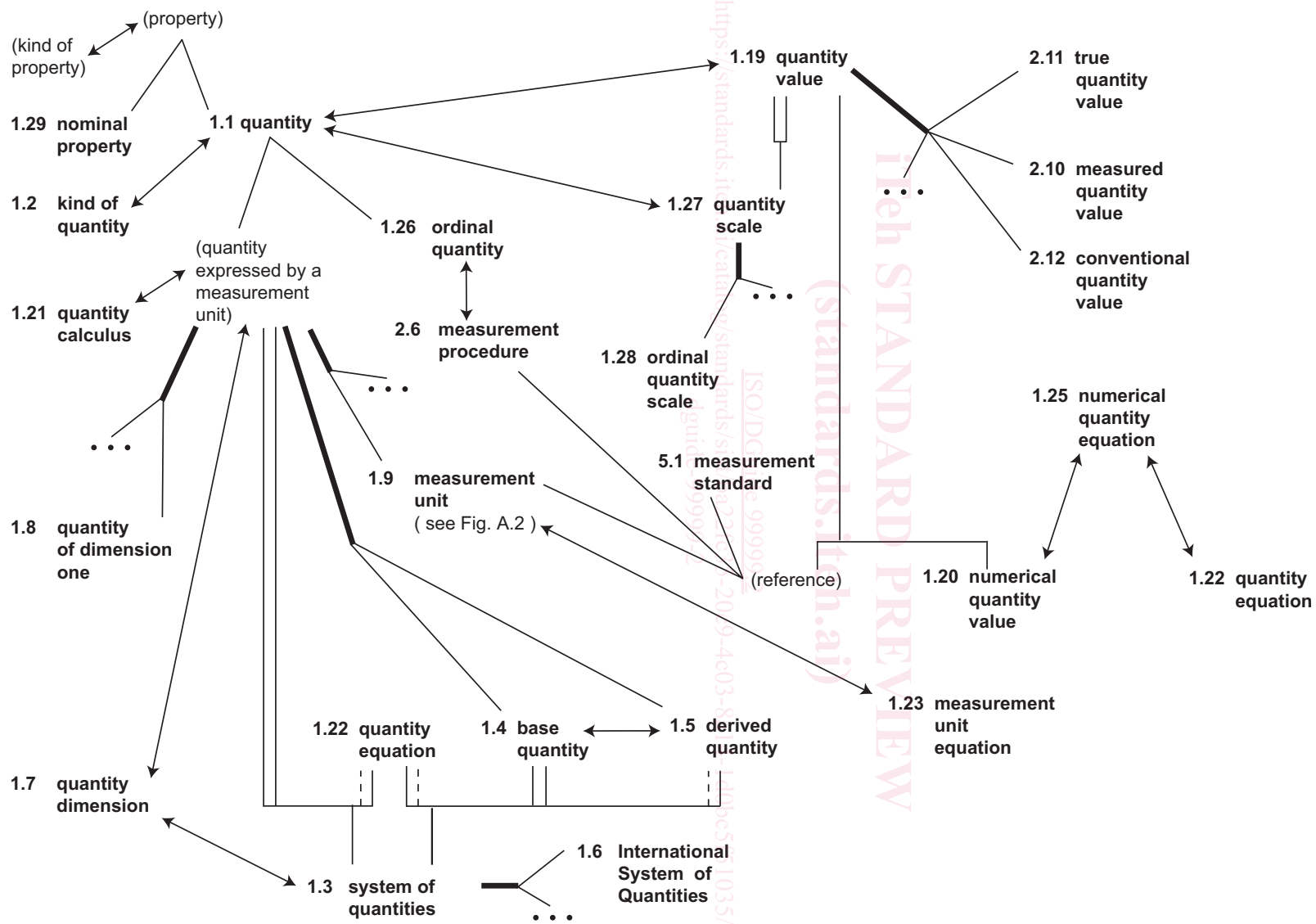


Figure A.1 Concept diagram for part of Chapter 1 around 'quantity'

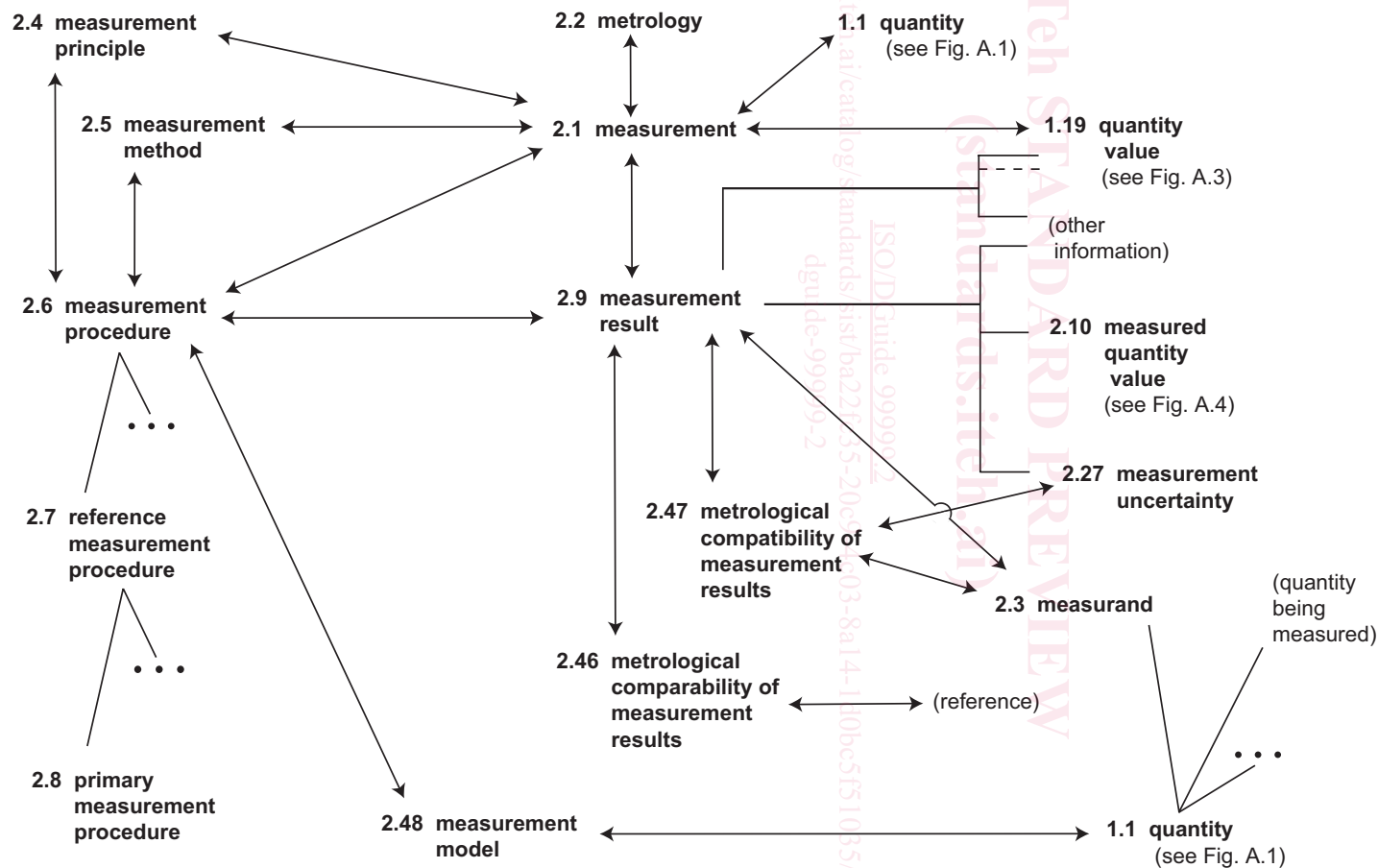


Figure A.3 Concept diagram for part of Chapter 2 around 'measurement'

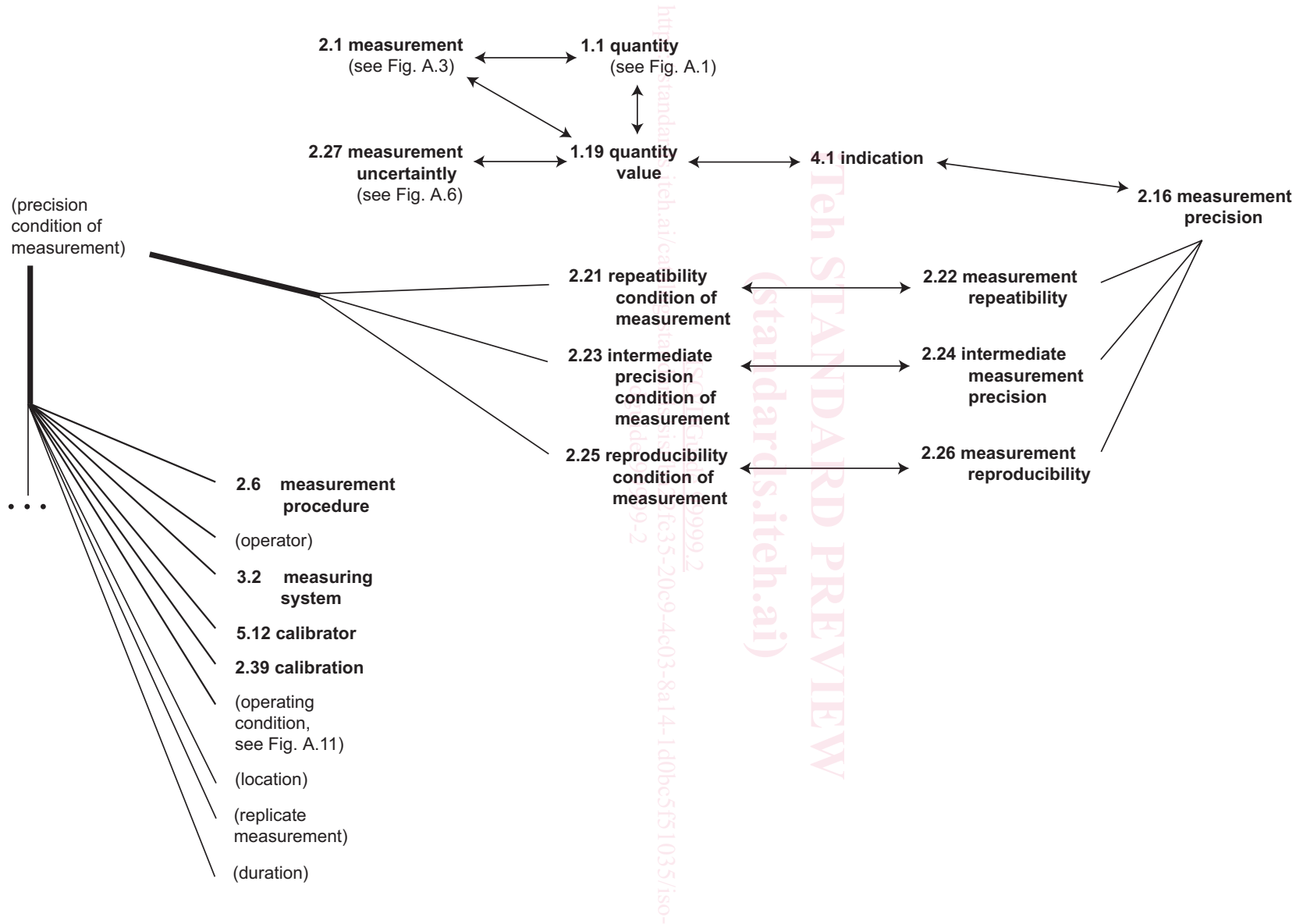


Figure A.5 Concept diagram for part of Chapter 2 around 'measurement precision'

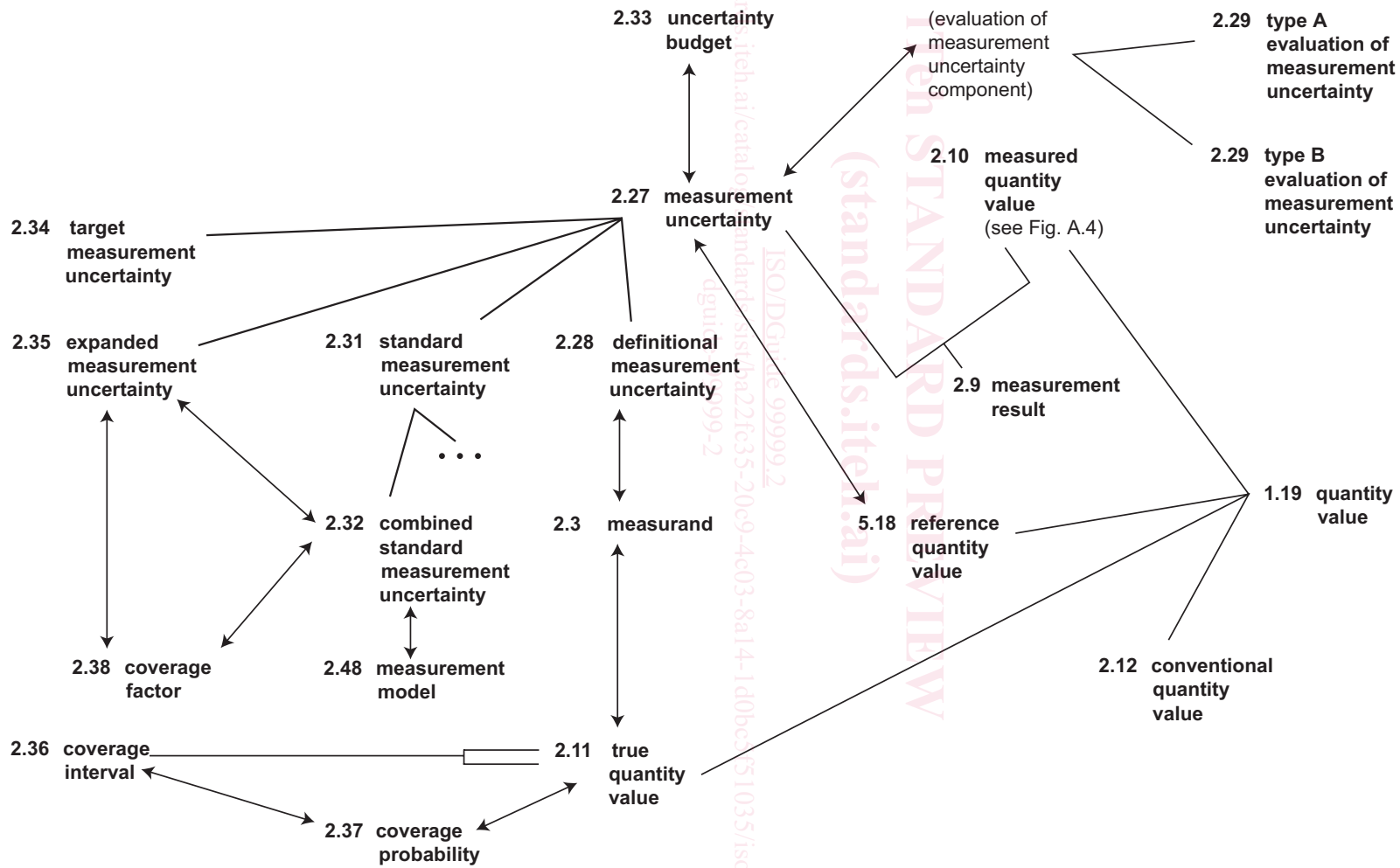


Figure A.6 Concept diagram for part of Chapter 2 around 'measurement uncertainty'

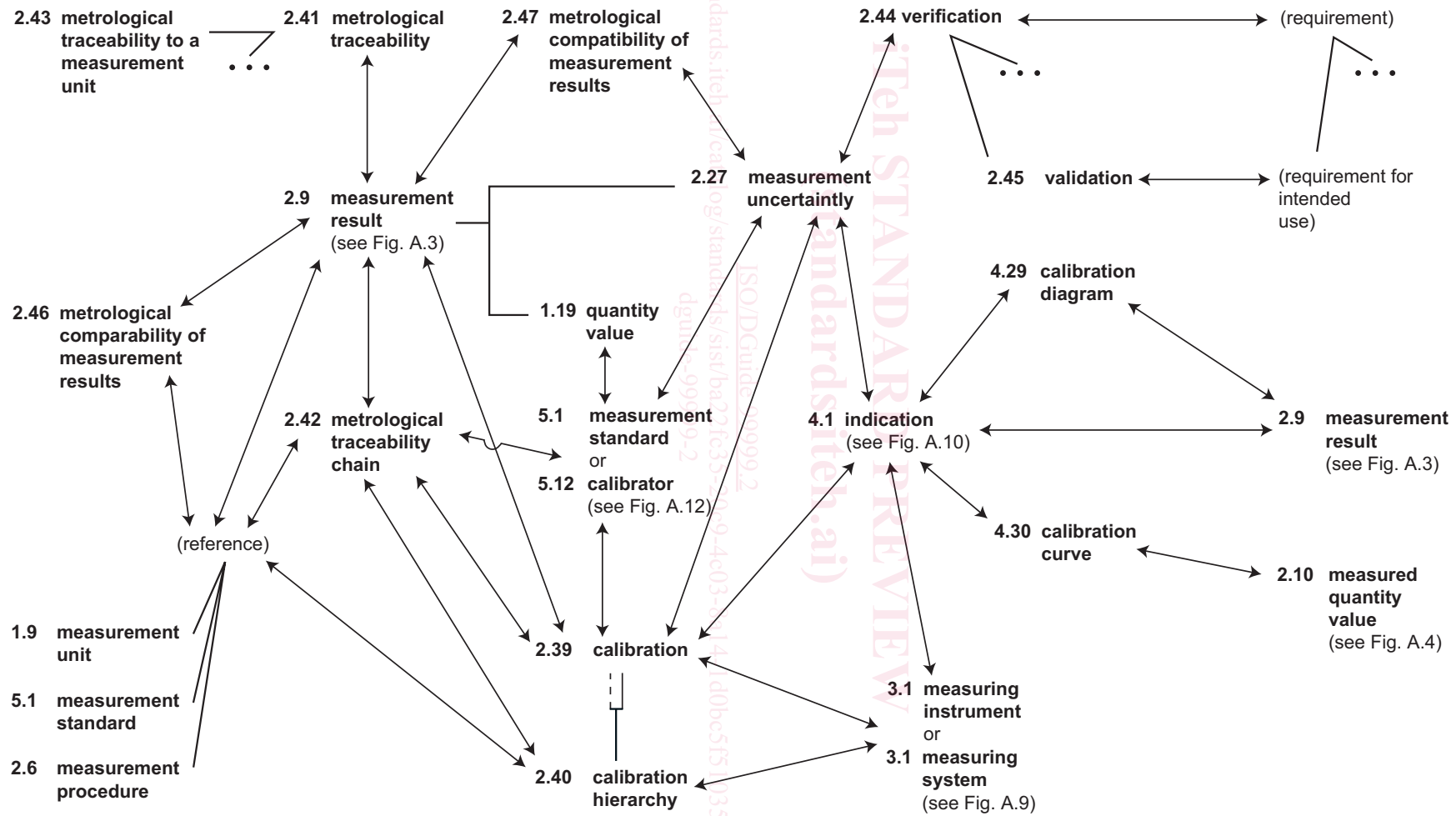


Figure A.7 Concept diagram for part of Chapter 2 around 'calibration'

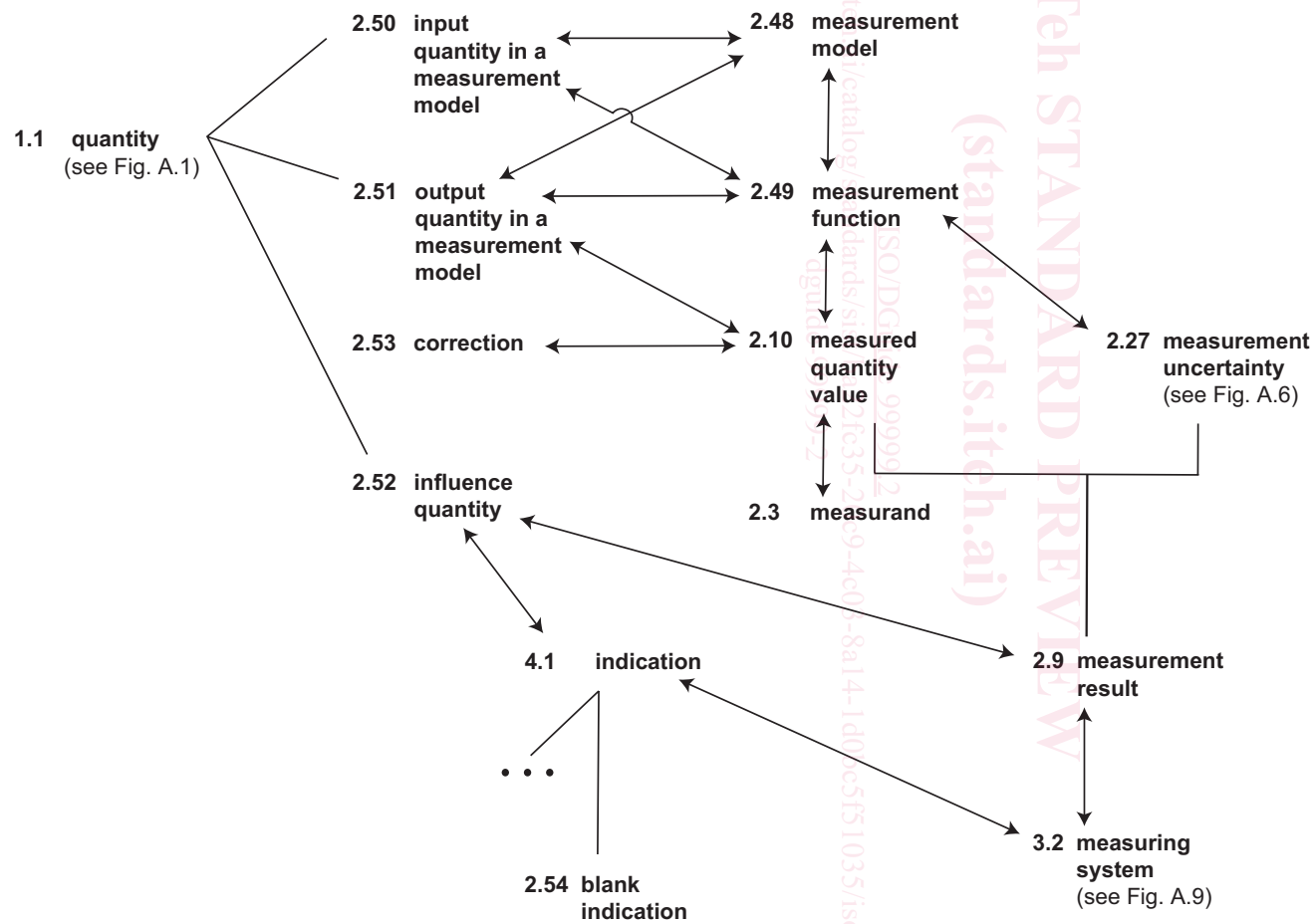


Figure A.8 Concept diagram for part of Chapter 2 around 'measured quantity value'