

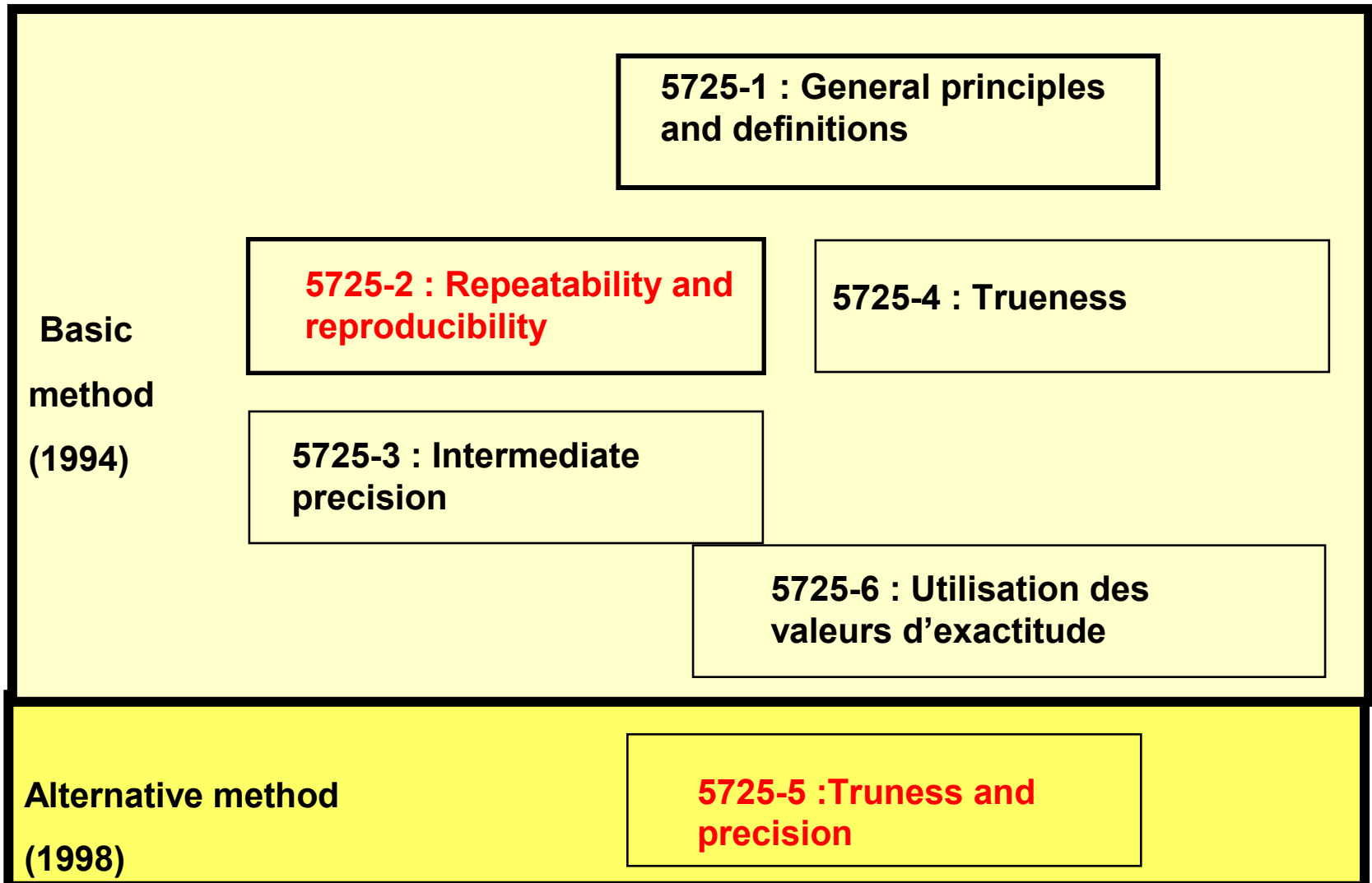


The « new » ISO 5725

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ISO 5725: Accuracy (trueness and precision) of measurement methods and results



Related standards

ISO 5725

Accuracy (trueness and precision) of measurement methods and results

**Standards on
interlaboratory
comparisons**

**Standards on
measurement
uncertainty evaluation**

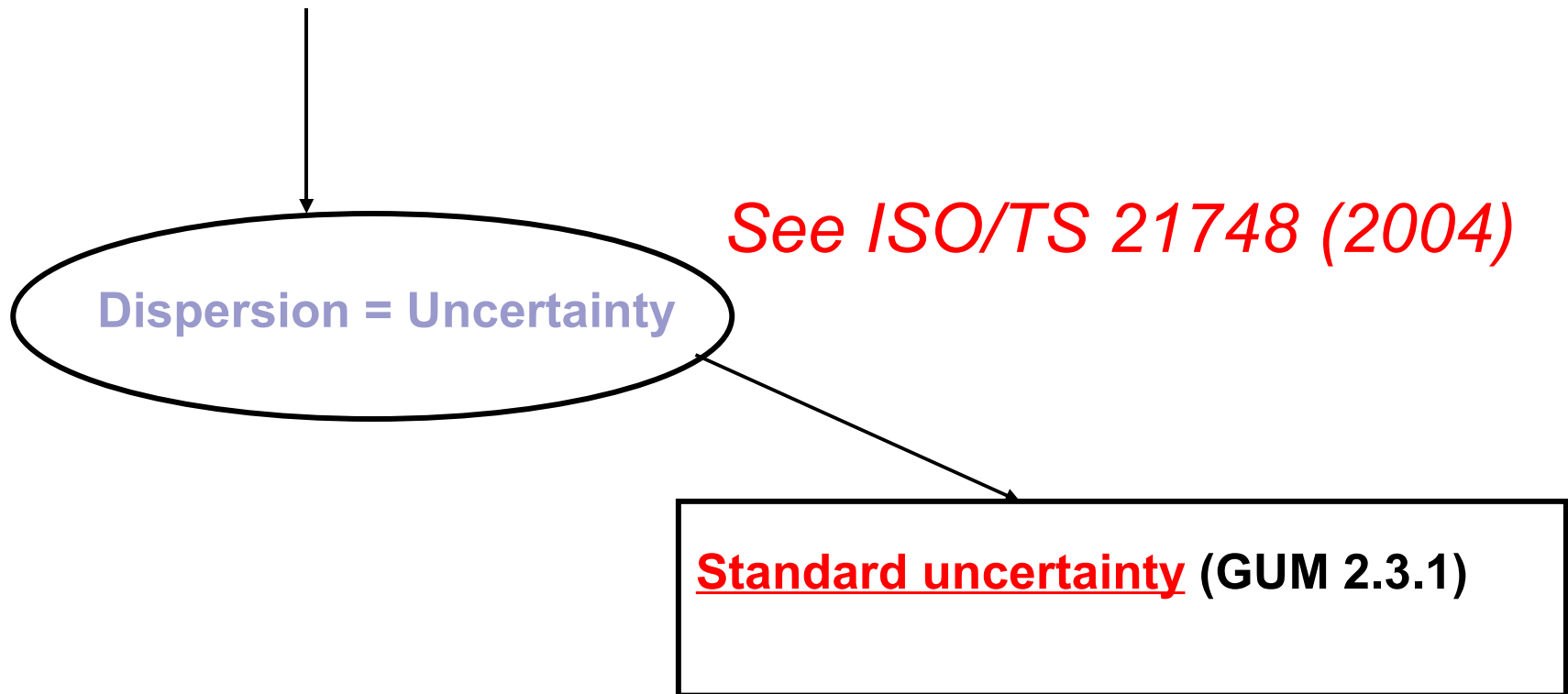


Issues

- Relation with GUM
- Analysis of variance models
- Outliers detection
- Readability
- Use of software
- Bibliography and references

ISO 5725 and Uncertainty of measurement

ISO 5725 is designed to evaluate trueness and precision of a measurement method by means of an interlaboratory comparison



ISO 5725: basic statistical model

A measurement result can be expressed as the sum of three components:

$$y = m + B + e$$

m : general mean

B : laboratory component of the bias under repeatability conditions

e : random error (residual) under repeatability conditions

ISO/TS 21748 (2004)


$$u^2(y) = u^2(\hat{\delta}) + s_R^2 + \sum c_i^2 u^2(x_i)$$

Bias variance and reproducibility variance evaluated from an interlaboratory experiment

Supplemental variances when the measurand is not the measurand of the interlaboratory experiment

The « new » ISO 5725 project

- To design a new organization in 4 parts
 - Part A: Introduction and basic principles
 - Part B: Basic method to evaluate the accuracy of measurement method
 - Part C: Alternative methods to evaluate the accuracy of measurement method
 - Part D: Practical uses of accuracy values
- Most of the existing material will be kept but reorganized according to the expectations of the end-users.
- New additions will be made in relation to :
 - detailed logigram as a help for the end-user,
 - new algorithms and computational techniques,
 - treatment of unbalanced data,
 - new approaches for outliers' identification,
 - updating of the definitions with reference to related ISO standards

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- NWIP for ISO/TC 69 meeting: October 2008
 - Part A revision target date october 2010
 - Part B revision target date 2009 -2011
 - Part C revision target date 2010 -2012
 - Part D revision target date 2011 -2013
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- Work project conducted by ISO/TC 69/SC 6/WG 1

- **faire en sorte que la norme soit autoporteuse, écrire des annexes normatives, écrire des annexes informatives, tenir compte uniquement des références internationales.**

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Les annexes normatives devront contenir de bons exemples et également des exemples « terrains » plus complexes et

dont l'exploitation montrerait la limite de l'application des méthodes dans certains cas. Les annexes informatives contiendraient les références bibliographiques, normatives et Internet quoique que ce dernier

point reste à discuter au sein du groupe de travail. Ces annexes feront aussi référence à des logiciels idoines pour mener à bien les calculs de la norme.

Il faudra une note explicite dans la norme pour renvoyer aux documents ISO/TR 22971 et ISO/TS 21748 et à leurs objectifs respectifs.

En outre il sera possible d'adapter dans cette annexe une rédaction différentielle permettant ainsi de prendre en compte les besoins des deux types d'utilisateurs ; certaines précisions ou démonstrations développées uniquement pour l'utilisateur averti pourront être éludées par le simple utilisateur.

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- Resolution 6/ 2007: Full revision of the ISO 5725 series
 - **ISO/TC69/SC6 resolves that WG1 will prepare a New Work Item Proposal by the end of**
 - **2007 for the full revision of the ISO 5725 series of documents. SC6 also resolves that**
 - **the New Work Item Proposal will be promoted throughout ISO member bodies and**
 - **organizations that should be interested in assisting with this work item**