



# IEQAS Conference 2002

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New IEQAS report format

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# Talk itinerary - progress

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- Aims of the new software
  - ❑ The application platform
  - ❑ New statistics module
  - ❑ New report format



# Software project objectives

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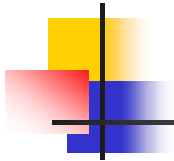
- To improve and streamline the existing service
- To facilitate the future expansion of the scheme
- To enable the scheme to become fully web based in the future
- To base the scheme statistics and reporting protocols on recognised international standards i.e. ISO/IEC Guide 43-1 and the new draft standard: ISI/DIS 13528



# Talk itinerary - progress

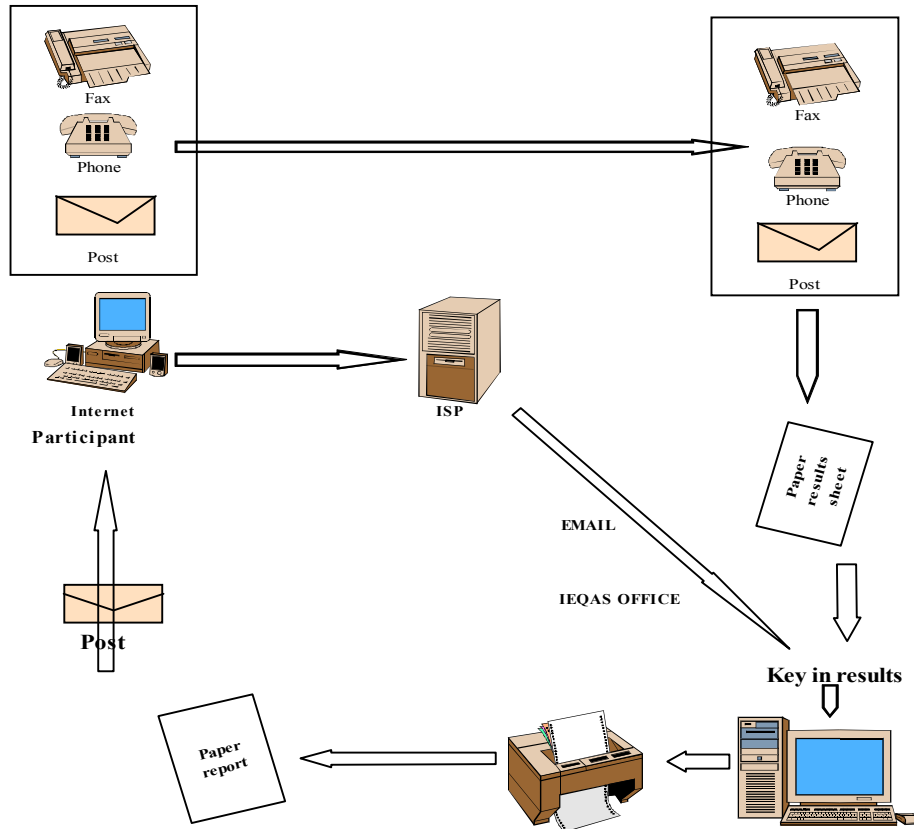
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- Aims of the new software
- The application platform
- New statistics module
- New report format



We will use a web browser  
based application  
Why?

# Present paper based process





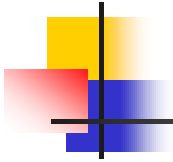
## In summary:-

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Participant has to transcribe results onto paper,  
**errors possible**

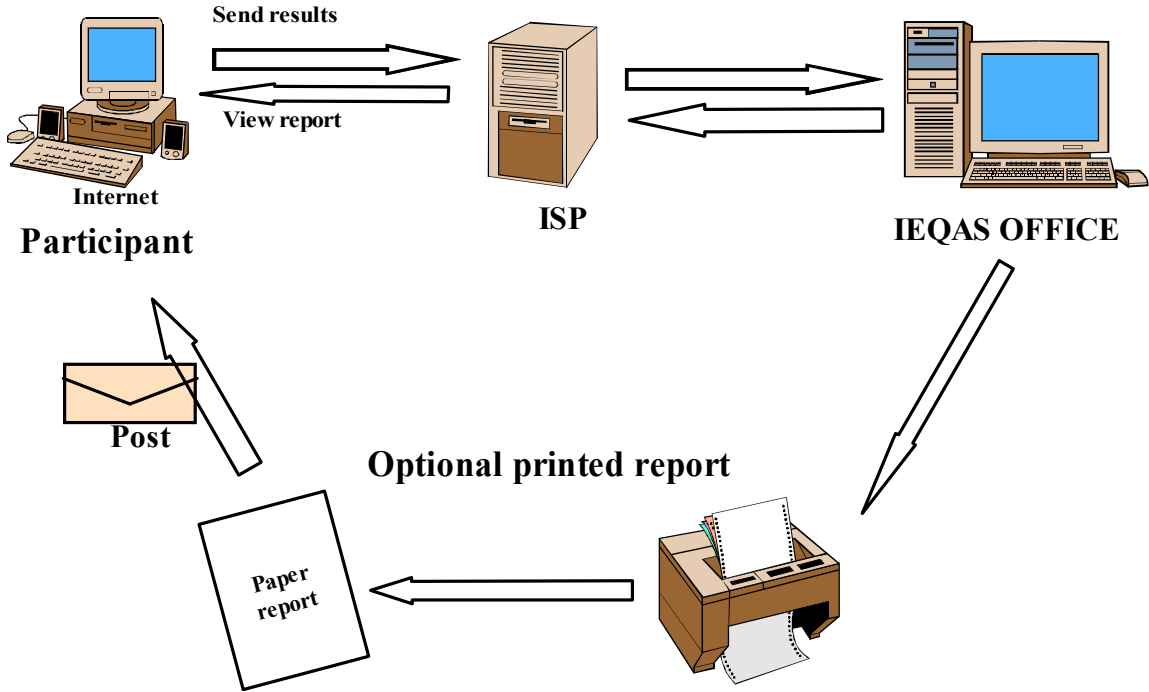
All results have to be keyed in by the IEQAS  
staff, **errors possible**

Results sent by post – **slow**, participants have  
to use paper based review of reports -  
**inefficient**



# *The web solution:*

# Future web based service

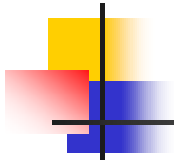




# Long term vision

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- No need to key in results submitted by **e-mail** or internet
- Able to access reports, long term analysis on-line
- Eventually? Analyser direct to IEQAS using e-mail
- Able to distribute digital images for blood film morphology, cytology, histology, microbiology



## *Talk itinerary – midway!*

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- Aims of the new software
- The application platform
- **New statistics module**
- New report format

# Aims of the new statistics and reporting format:



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To enable us to run:-

- Multi instrument reports
- Multi sample
- Repeat sample

BUT:

We wanted to keep the clear and concise style of the existing report



## New statistics module:

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- The new IEQAS statistics module will adhere to the ISO/DIS 13528:2002 specifications as far as practicable.
- Adopting this standard will involve some significant changes to the way we calculate and report participants survey results i.e.



# Major Changes:

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## A new method of calculating the consensus mean, the standard deviation and of treating outliers;

- instead of being eliminated outliers are now **truncated** using a robust statistical method (Algorithm A ISO/DIS 13528:2002)

## A new method of assessing relative performance:

- the **variance index score will be abandoned**. It will be replaced by the **z-score**.
- likewise the **MRVIS will no longer be used**
- the SD used in the z-score calculation for a test will be derived from a running average of the last 10 valid cv's for that test

## Tables and graphs

- for long term performance and **summary reports** which do not rely on the variance index score



# Interpretation of z-score:

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The z-score is similar to the SDI with which you may be familiar from other schemes

- a z-score of between 2.0 and 2.99 will be given a **warning alert flag**
- a z-score of 3.0 or more will be given an **action alert flag** (this flag will be printed **on the report next to the z-score**)



## *Nearly finished!!*

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- Aims of the new software
- The application platform
- New statistics module
- **New report format**



## Main features of the new reports

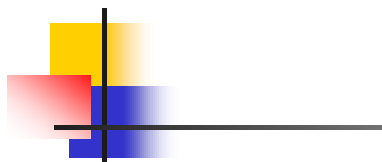
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- Incorporates new summary tables
- Retains clear uncluttered style as far as possible

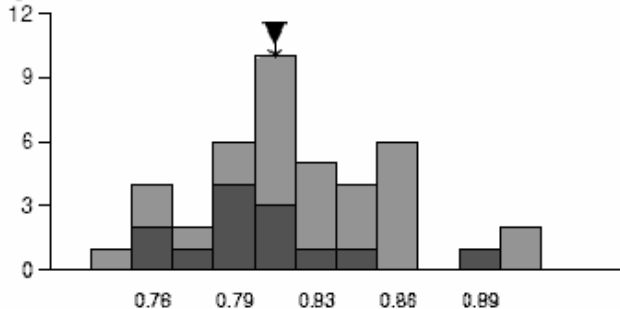
Some examples:-



Single instrument report		Clinical Chemistry			EQA survey A0006	Member ####
Test	Result	Mean	% D	Z score	CV%	Comment
Albumin	45.2	44.1	5	0.66	3.9	
Alk Phos	230	238	6	- 0.73	8.6	
ALT	82	79	7	0.89	6.2	
AST	244	239	7	0.91	6.0	
Chol	4.5	4.7	8	-1.11	5.4	
CK	510	501	4	0.55	7.5	
Creat	210	201	9	1.44	6.4	
Ca	2.78	2.38	22	2.55	3.4	OUT of CONTROL!!
Cl	90.5	86.2	9	0.88	3.6	
GGT	100	94	11	1.21	6.6	
Gluc	6.55	6.63	8	- 0.99	4.9	
HDL-C	1.44	1.33	11	1.22	11.3	
K	5.55	5.50	7	0.88	2.6	
LDH	555	548	13	1.44	6.6	
Na	145.2	147	6	- 0.77	1.9	
Phos	1.66	1.51	14	1.55	4.6	
Bili	39	37	6	0.66	8.7	
TP	66	69	15	- 1.77	3.8	
Trig	1.65	1.57	9	1.11	6.0	
Urate	666	654	12	1.31	19.9	
Urea	12.6	12.1	8	1.02	5.2	
Comments						



### Mg mmol/l



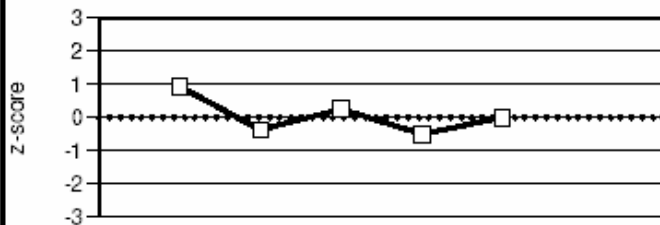
Your Group : Olympus AU Series

Target ▼ (n = 41) 0.81

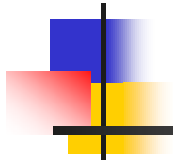
Your Result ↓ 0.81

Your z-score 0.0

Your Long Term Bias



Sample	A0202	A0203	A0204	A0205	A0206
z-score	0.9	-0.4	0.3	-0.5	0.0
Target	0.92	1.50	1.13	1.71	0.81



*For a more detailed look at the new  
scoring system and report format plus  
a chance to have your say... Participate  
in the workshop!*



# IEQAS software committee

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- Gerard O'Connor, AMNCH
- Gerard Boran, AMNCH
- Des Kenny, OLHSC
- Frank Clarke, DIT Kevin Street
- Aengus O'Marcaigh, OLHSC
- Patricia Howley, IEQAS
- Hazel Graham, IEQAS
- Alan Carr, Peamount