

# ISO/IEC JTC1/SC 38: Cloud Computing and Distributed Platforms

## Debriefing meeting SC 38 Cloud Computing and Distributed Platforms – Plenary Meeting

## **CLOUD COMPUTING**



09:05 - 09: 15	<b>ILNAS</b>	and the	<b>National</b>	<b>Standards</b>	Body

Dr. Jean-Philippe HUMBERT – Deputy

**Director - ILNAS** 

Mr. Micael BORGES – Attaché Stagiaire -

**ILNAS-OLN** 

09:15 – 09: 35 Debriefing 16<sup>th</sup> Plenary Meeting ISO/IEC

JTC 1/SC 38 - Dr. Johnatan PECERO -

**ANEC GIE** 

09:35 – 10: 05 Round Table Discussion



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# ILNAS & THE NATIONAL STANDARDS BODY

Meeting NMC ISO/IEC JTC 1/SC 38

05/10/2017





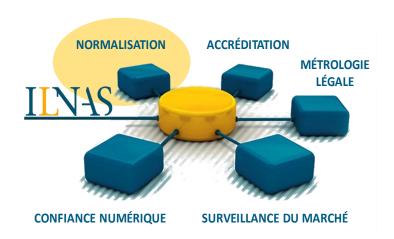
### 1. Presentation of ILNAS

#### **ILNAS**

- > Public administration under the authority of the Minister of the Economy
- Created by the law dated July 14, 2014 (repealing the amended Law of May 20, 2008)
- Total staff: 42 (September 2017)

#### **National standards body**

- Composed of 5 persons
- Close collaboration with the G.I.E. ANEC-N (6 persons)





### 2. Luxembourg's Standardization Strategy 2014-2020

## PILLAR 1 Information and communication technologies (ICT)

- Support and constant development of the standardization field dedicated to ICT
- > Implementation of the Luxembourg's Policy on ICT standardization (2015-2020)
- Detection of niche opportunities for economic developments

PILLAR 2 National influence and compliance with legal attributions

PILLAR 3 Products and services



## 3. ILNAS Standardization activities in Luxembourg

#### > Creation of national standards

- National Annexes of the Eurocodes
- National Annex concerning the Winter Diesel
- National standard about the living surface
- Creation of a national standards office in the field of construction

#### > Create a normative culture in Luxembourg

- University Certificate "Smart ICT for Business Innovation" at the University of Luxembourg
- Promotion in the field of standardization (Newsletter, portail-qualite.lu, LinkedIn, events, ...)
- Trainings and research in the field of standardization
- Awareness raising sessions in high schools
- Communication plan for SMEs



## 4. Availability of standards

#### 4.1 Standardization catalogue

62 national standards



56.996 European Standards from CEN, CENELEC and ETSI





58.812 International Standards from ISO and IEC





45.514 DIN standards



→ More than 160.000 normative documents at your disposal



## 4. Availability of standards

#### 4.2 ILNAS e-shop

- Format: electronic
- Language: French, German and English
- Competitive prices
- Free access to documents in public enquiry



















## 4. Availability of standards

#### 4.3 Free access on lecture stations

Availability of all EN (CEN,CENELEC et ETSI), ISO, IEC and ILNAS standards (despite DIN)

Location of the lecture stations:

1) Université du Luxembourg

Campus Kirchberg

2) Chambre of Commerce

House of Entrepreneurship

3) Bibliothèque nationale de Luxembourg

Luxembourg city-center

4) ILNAS

Esch-Belval

5) LIST

Esch-Belval (Maison de l'innovation) & Belvaux







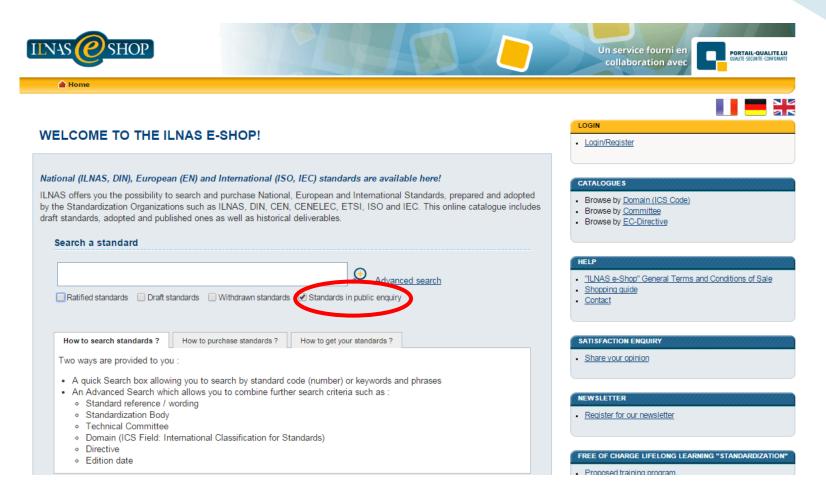
How to participate in the development of national, European and international standards?

- 1) Comment of draft standards in public enquiry
- 2) Active participation in a technical committee





### 5.1 Public enquiry





### 5.1 Public enquiry

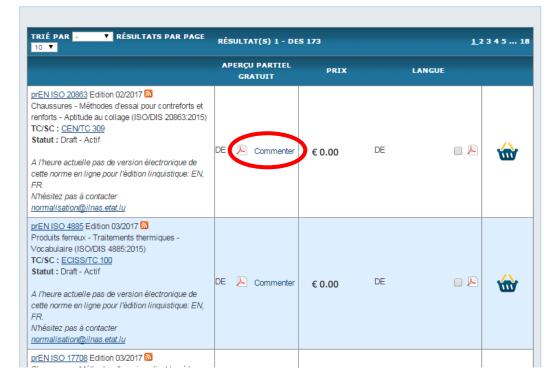








#### RÉSULTATS DE LA RECHERCHE







#### 5.2 National delegate in standardization

- Who can participate?
  - Every socio-economic actor with a certain expertise
- > Cost of participation?
  - Free participation in Luxembourg
- National experts register (September 2017)
  - 246 persons registered
  - 720 registrations in technical committees

	Nombre d'inscriptions aux comités techn	Nombre d'inscriptions aux comités techniques :		
	ILNAS/OLN	23		
	CEN	214		
	CENELEC	16		
	CEN/CENELEC	2		
	CEN/CENELEC/ETSI	2		
	ECISS	23		
	ISO/IEC	179		
	ISO	254		
	IEC	6		
	Total	720		
Nombre de personnes inscrites : 246				
ILNAS				



### 6. Products and services

ILNAS, in collaboration with G.I.E. ANEC, offers the following products and services to the national market:

- Diffusion of normative information
- Training and awareness sessions
- Standards watch
- Standards analysis (ICT)

These products and services are provided for free on simple demand.









## For more information

## **Portail qualité** www.portail-qualite.lu



## ILNAS e-shop ilnas.services-publics.lu







Southlane Tower I · 1, avenue du Swing · L-4367 Belvaux

Tel.: (+352) 24 77 43 - 01 · Fax: (+352) 24 79 43 - 10

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www.portail-qualite.lu



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# ISO/IEC JTC 1/SC 38: Cloud Computing and Distributed Platforms

**DEBRIEFING 16th PLENARY MEETING** 

05.10.2017





## OUTLINE

- Context
- Debriefing Plenary Meeting Major Resolutions
  - New Work Items and Study Groups
  - Status of the current projects
  - Liaisons with relevant technical committees
  - SC 38 Future Meeting Schedule
- **III** National Mirror Committee (NMC)
- V Other Relevant Issues



### **OUTLINE**

- Context
- **II** Debriefing Plenary Meeting Major Resolutions
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#### Context



### ISO/IEC JTC 1/SC 38 Cloud Computing & Distributed Platforms – Before Plenary

## **CLOUD COMPUTING**



- Created: 2009
- Scope:
  - Standardization in the area of Cloud Computing and Distributed Platforms including but not limited to:
    - Service Oriented Architecture (SOA)
    - Service Level Agreement
    - Interoperability and Portability
    - Data and their Flow Across Devices and Cloud Services

#### Structure:

- ISO/IEC JTC 1/SC 38/WG 3 Cloud Computing Service Level Agreements (CCSLA)
- ISO/IEC JTC 1/SC 38/WG 4 Cloud Computing Interoperability and Portability (CCIP)
- ISO/IEC JTC 1/SC 38/WG 5 Cloud Computing Data and its Flow (CCDF)
- Published Standards: 11 International Standards and 1 Technical Report
- Projects under development: 5 standards and/or projects
- <u>Chairperson:</u> Dr. Donald Deutsch (United States) Vice-President Chief Standards Officer, Oracle
- Members: 40 countries 30 P-Members (Luxembourg), 10 O-Members



#### Context



### 16<sup>th</sup> Plenary Meeting ISO/IEC JTC 1/SC 38

## **CLOUD COMPUTING**



#### Global context:

The meeting was organized at IBM San Jose, CA from 11-15 September, 2017

#### Purpose of the meeting:

- To set international standards and set priorities, goals, and strategic direction for international standards development and information exchange
- To advance work on specific standards development initiatives related to Cloud Computing Service Level Agreement, Interoperability and Portability, Data and its Flow, Metrics Definition, etc.
- Nationally nominated experts gathering to advance these issues through face-to-face meetings

#### Participation:

- 20 countries were represented
- Some countries: USA, Canada, UK, France, Ireland, Luxembourg, China, Japan, Republic of Korea, Spain, Poland, Brazil, Finland, Pakistan, Australia, Germany

#### Experts:

- industry, research, standardization officers from NSBs, other standardization organisms and consortia
- Amazon, Google, IBM, Microsoft



#### Context



### ISO/IEC JTC 1/SC 38 Cloud Computing & Distributed Platforms – After Plenary

## **CLOUD COMPUTING**



- Created: 2009
- Change to SC 38 Scope:
  - Standardization in the areas of Cloud Computing and Distributed Platforms including:
    - Foundational concepts and technologies
    - Operational issues, and
    - Interactions among Cloud Computing Systems and with other distributed systems
- **Structure:** 
  - ISO/IEC JTC 1/SC 38/WG 3 Cloud Computing Service Level Agreements (CCSLA)
  - ISO/IEC JTC 1/SC 38/WG 4 Cloud Computing Interoperability and Portability (CCIP) Disbanded (after the imminent publication of 19941)
  - ISO/IEC JTC 1/SC 38/WG 5 Data in cloud computing and related technologies
- Published Standards: 11 International Standards and 1 Technical Report
- **Projects under development:** 5 standards and/or projects
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New Work Items, Study Groups, Technical Reports and Specifications

## CLOUD COMPUTING



- Technical Report (TR) on Framework of Trust for Processing of Multi-Sourced Data
  - Scope: The TR will describe a framework of trust for the processing of Multi-Sourced Data that includes Data Use Obligations and Controls, Data Provenance, Chain of Custody, Security and Immutable Proof of Compliance as elements of the framework
  - WG: The project has been assigned to WG 5
  - Editor: John Calhoon (US), Director of Standards Engagements, Microsoft Corporate Standards Group

### Project Timeline







New Work Items, Study Groups, Technical Reports and Specifications

## **CLOUD COMPUTING**



### Technical Report (TR) on Framework of Trust for Processing of Multi-Sourced Data

## E-Meeting schedule for TR

Date	Time
September 26, 2017	1300 UTC
October 24, 2017	1300 UTC
November 28, 2017	2100 UTC
January 23, 2018	1300 UTC
February 27, 2018	2100 UTC
March 27, 2018	1300 UTC





New Work Items, Study Groups, Technical Reports and Specifications

## CLOUD COMPUTING



- Technical Report (TR) on Interacting with Cloud Service Partners (CSNs)
  - Scope: The TR will provide an overview and discussion of interactions between Cloud Service Partners (CSNs), specifically cloud service brokers, cloud service developers and cloud service auditors. This TR includes in the context of CSN interactions:
    - Terms and concepts
    - Overview and description of types and interactions between CSNs and CSCs, CSPs, and CSNs
    - Additional CSN sub-roles, responsibilities and activities
    - Elements of cloud services agreements and cloud service level agreements to provide clarity relating to CSN interactions (both with CSPs and CSCs)
  - WG: The project has been assigned to WG 3
  - Editor: Call for Editor. After that the project will be register into the SC 38 work program





New Work Items, Study Groups, Technical Reports and Specifications

## CLOUD COMPUTING



### Technical Report (TR) on Cloud Computing – Edge Computing Landscape

- Scope: Report on the concept of Edge Computing, its relationship to Cloud Computing and IoT, and the technologies that are key to the implementation of Edge Computing. The TR will explore the following topics:
  - Concept of Edge Computing Systems
  - Architectural Foundation of Edge Computing
  - Supporting technologies such as Containers, Serverless, Microservices
  - Networking for edge systems, including virtual networks
  - Data Data flow, data storage, data processing in edge computing
  - Security and Privacy
  - Real Time
  - Virtual placement of software and data, and metadata
- WG: The project has been assigned to WG 3
- Editor: Dr. Mike Edwards, Cloud Computing Standards expert and Bluemix PaaS evangelist at IBM





New Work Items, Study Groups, Technical Reports and Specifications

## CLOUD COMPUTING



- NWIP: Technical Specification (TS) on Cloud Computing Common Technologies and Techniques
  - **Scope:** This document describes a series of technologies and techniques to commonly used to build applications and systems using cloud computing. These include:
    - Virtual Machines (VMs) and Hypervisors
    - Containers and Container Management systems
    - "Serverless" computing
    - Serverless, Microservices
    - Microservices architecture, the "12 factor" application pattern, agile techniques and automation
    - Platform as a Service systems and their architecture
    - Storage services
    - Security, Scalability and Networking as applied to the above cloud computing technologies
  - WG: The project has been assigned to WG 3
  - Editor: Dr. Mike Edwards,
  - Co-Editor: Dr. Chandramouli Ramaswawy, Computer Sientist NIST
  - Timeline: 18 months after acceptation





New Work Items, Study Groups, Technical Reports and Specifications

## CLOUD COMPUTING



## SG: Reconstitution of the Study Group on Metering and Billing

- ToR:
  - Research market requirements for cloud service metering and billing
  - Determine gaps between market requirements and current industry practices
  - Identify next steps for metering and billing
- Convener: Zhipeng Wang, Software & IT Service Center, China Electron, Stand, Inst. China
- Timeline: A report will be provided by 16 March 2018 for consideration at the next plenary meeting in Warsaw





### **Status of Current Projects**

## **CLOUD COMPUTING**



- ISO/IEC AWI 22624 Information Technology Cloud Computing – Taxonomy based data handling for cloud services
  - Scope: Describes a framework for the structured expression of data-related policies and practices in the cloud computing environment, based on the data taxonomy in ISO/IEC 19944
  - Covers expression of data-related policies and practices including, but not limited to:
    - Data geolocation: location of data in various jurisdictions
    - Cross border control of data: control of data that reside in different jurisdictions
    - Data portability: portability requirements of data in the cloud computing environment
    - Data classification: policies and practices
    - Data processing: processing of data either by the CSP
    - Data governance
  - Describes how the framework can be used in code(s) of conduct for practices regarding data at rest and in transit, including cross border transfer of data, as well as remote access to data





### **Status of Current Projects**

## CLOUD COMPUTING



- ISO/IEC AWI 22624 Information Technology Cloud Computing – Taxonomy based data handling for cloud services
  - WG: The project has been assigned to WG 5 (Stage 20.00)
  - Editor: Peter Deussen, Senior Researcher and project manager, Fraunhofer Institute for Open Communication Syst.

### Project Timeline







## ANEC Status of Current Projects

## **CLOUD COMPUTING**



- ISO/IEC AWI 22624 Information Technology Cloud **Computing – Taxonomy based data handling for** cloud services
  - E-Meeting schedule for ISO/IEC 22624

Date	Time
September 27, 2017	2100 UTC
October 25, 2017	1300 UTC
November 22, 2017	2100 UTC
January 24, 2018	1300 UTC
February 28, 2018	2100 UTC
March 28, 2018	1300 UTC





### **Status of Current Projects**

## **CLOUD COMPUTING**



### Work Program:

NP: New proposal

AWI: Approved new Work Item DIS: Draft International Standard

FDIS: Final Draft International Standard

TR: Technical Report

ISO/IEC NP TR 22678, Information technology – Cloud Computing – Guidance for Policy Development

ISO/IEC AWI 22123, Information technology - Cloud Computing - Concepts and Terminology

ISO/IECAWI 22624, Information technology – Cloud Computing – Taxonomy based data handling for cloud services

ISO/IEC DIS 19086-2, Information technology — Cloud Computing -- Service level agreement (SLA) framework -- Part 2: Metric Model

ISO/IEC FDIS 19941, Information technology -- Cloud computing -- Interoperability and portability

0 month		12 m.	24 m.	30 m.	
	WD	CD	DIS	FDIS	,
		PDTR	TR		





Status of the current projects

## CLOUD COMPUTING



# ISO/IEC 19086, Information technology - Cloud computing - Service level agreement (SLA) framework - Example

#### Structure:

- Part 1: Overview and concepts (published in 2014)
  - Provides an overview, foundational concepts, and definitions for the cloud SLA framework
  - Establishes a common framework for helping organizations to understand the purpose of all the parts of ISO/IEC 19086 and the relationships between those parts
- Part 2: Metric Model
  - Provides the metrics model to be used for creating metrics used in SLOs and SQOs
- Part 3: Core conformance requirements (Published 07/2017)
  - Provides the core conformance requirements derived from the SLOs and SQOs defined in this document
- Part 4: Security and privacy has been assigned to JTC 1/SC 27 "IT security techniques"
  - Describes specific components and the conformance requirements for SLOs and SQOs in the area of Security and Privacy
- <u>Limit dates for the publication</u>: September 2018





ANEC Liaisons with relevant technical committees

## **CLOUD COMPUTING**



Group	Assigned Liaison from SC 38	Assigned Liaison to SC 38
JTC 1/WG 9	Toshihiro Suzuki	Ray Walshe
JTC 1/WG 11	Steve Holbrook	Jacqui Taylor
JTC 1/SC 27	Geoff Ckarke Babak Jahromi (on SC 38/WG 5 to SC 27/ on WG 5 issue)	Laura Lindsay (SC 27/WG 5)
JTC 1/SC 32	Baba Piprani	Baba Piprani
JTC 1/SC 37	Mike Edwards	Peter Waggett
JTC 1/SC 39	John Calhoon	Terry Landers
JTC 1/SC 40	Peter Brown	TBD
JTC 1/SC 41	TBD	Mike Edwards
ISO/TC 307	Heather Kreger	Toshihiro Suzuki and Brian Shepherd



#### Ш **Debriefing Plenary Meeting – Major Resolutions**



ANEC Liaisons with relevant consortia

# **CLOUD COMPUTING**



Group	Assigned Liaison from SC 38	Assigned Liaison to SC 38
Cloud Security Alliance (CSA)	Eric Hibbard	Eric Hibbard
IEEE Computer Society	Eric Hibbard	Eric Hibbard
ITU-T Study Group 13	Kangchan Lee	Babak Jahromi
OASIS	Martin Chapman	James Bryce Clark
The Open Group	Heather Kreger	Heather Kreger
SNIA	Mark Carlson	TBD
Cloud Standards Customer Council	Mike Edwards	Mike Edwards
Open Grid Forum	TBD	Jens Jensen/Wolfgang Ziegler



#### **Debriefing Plenary Meeting – Major Resolutions** Ш



ANEC SC 38 Future Meeting Schedule

# **CLOUD COMPUTING**



23-27 April 2018 27-31 August 2018 Warsaw, Poland Montreal, Quebec, Canada

Plenary & WGs Plenary & WGs



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# **III** National Mirror Committee (NMC)



## Members – National Delegates

# CLOUD COMPUTING



#### Luxembourg's involvement (13 until now...):

- Mr. Cyril CASSAGNES (KPMG)
- Mrs. Myriam DJEROUNI (Banque de Luxembourg)
- Mrs. Shenglan HU (POST)
- Mr. Jean-Michel REMICHE (POST)
- Mr. Andreas KREMER (ITTM)
- Ms. Digambal NAYAGUM (AS Avocats)
- Mr. Joost PISTERS (Luxcloud)
- Mr. Jean RAPP (Actimage)
- Ms. Ana-Maria SIMIONOVICI (UL)
- Mr. Abdallah IBRAHIM (UL)
- Mr. Qiang TANG (LIST)
- Mr. Shyam WAGLE (ANEC GIE)
- Mr. Johnatan PECERO (President)





# **III** National Mirror Committee (Organization example)



### Organization and follow-up of projects

# CLOUD COMPUTING



#### Proposition

- A monthly report of open votes and related documents will be sent to ensure the information of all the national delegates of the SC 38
- To remind: a delegate can focus on one or more project
- The members of the committee will directly communicate their position/comments to all the other national members to simplify the working process
- The members will be informed in case a new member would join the NMC

#### Timeline for the follow-up of the votes

Time before the end of the vote	Action	
Vote start date	Mail to advise national members of the opening of a new vote on the start day if possible (secretary)	
3 days at the latest	Circulation of the comments	
2 days	ConfCall, or meeting if necessary, to discuss the comments and agree on the position of vote	





# **III** National Mirror Committee (Organization example)



**Open Ballots** 

# **CLOUD COMPUTING**



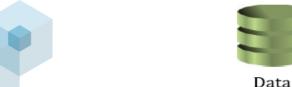
Туре	Reference	End ▼
DIS	ISO/IEC DIS 19086-2	2017-10-08
FDIS	ISO/IEC FDIS 19941	2017-10-20

ISO/IEC DIS 19086-2 Information technology — Cloud computing — Service Level Agreement (SLA) framework — Part 2: Metric Model

**ISO/IEC FDIS 19941** Information technology – Cloud computing – Interoperability and portability

High-level view of cloud interoperability







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## Normalisation des SMART ICT









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# ILNAS CANEC

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- Intelligence numérique



## Journée Mondiale de la normalisation

Journée Mondiale de la Normalisation "Standards make cities smarter"





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