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E-Labeling and the ICT Sector - An Overview

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E-Labeling and the ICT Sector
An Overview

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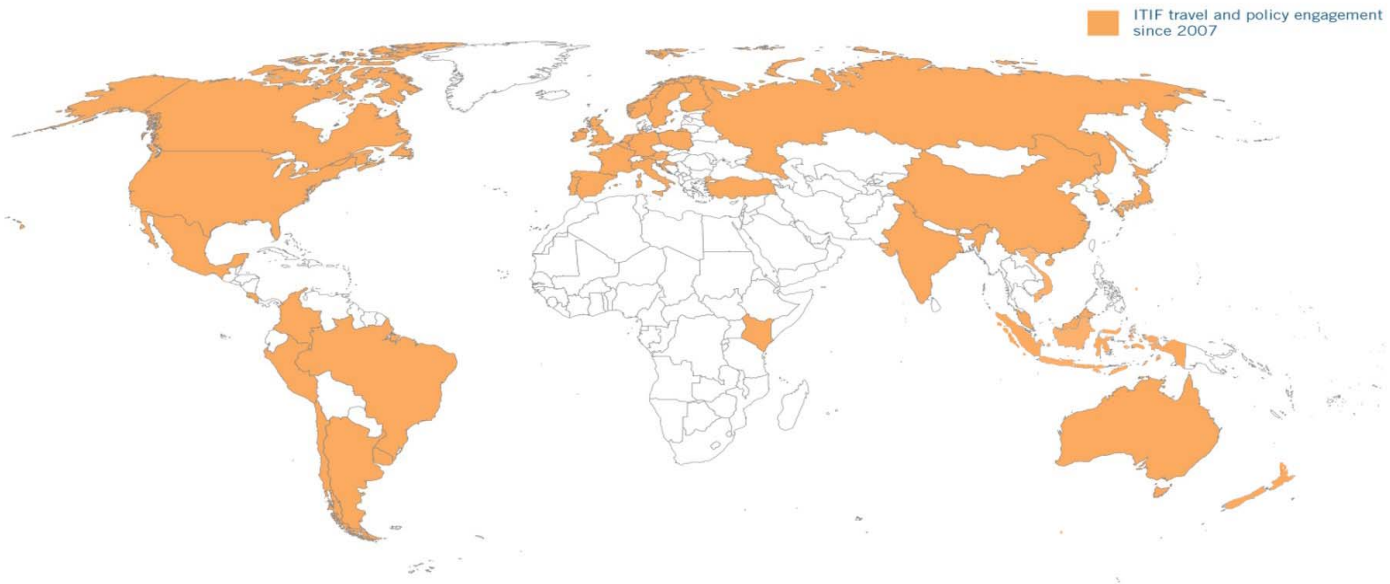
- Independent, nonpartisan research and education institute focusing on intersection of technological innovation and public policy, including:
  - Innovation and competitiveness
  - IT and data
  - Telecommunications
  - Trade and globalization
  - Life sciences, agricultural biotech, and energy
- Mission to formulate and promote policy solutions that accelerate innovation and boost productivity
- Ranked by University of Pennsylvania as top science and technology think tank in United States and number two in world

ITIF Global Engagement



Presentation Structure

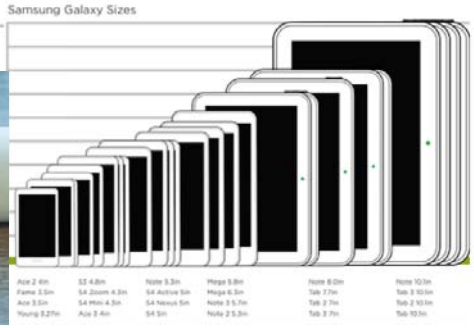
- Overview of E-labeling
- Types of E-labels
- What We Want, and Don't Want, in Enacting E-Labeling Systems
- The Benefits of E-Labeling
- Issues and Challenges in Allowing E-labeling
- Some E-labeling Best Practices
- Conclusion

Overview – E-Labeling

- ICT equipment—made for markets around the world—need to fit multiple small marks—in the form of labels—to show that their products conform to the regulations of a particular economy.

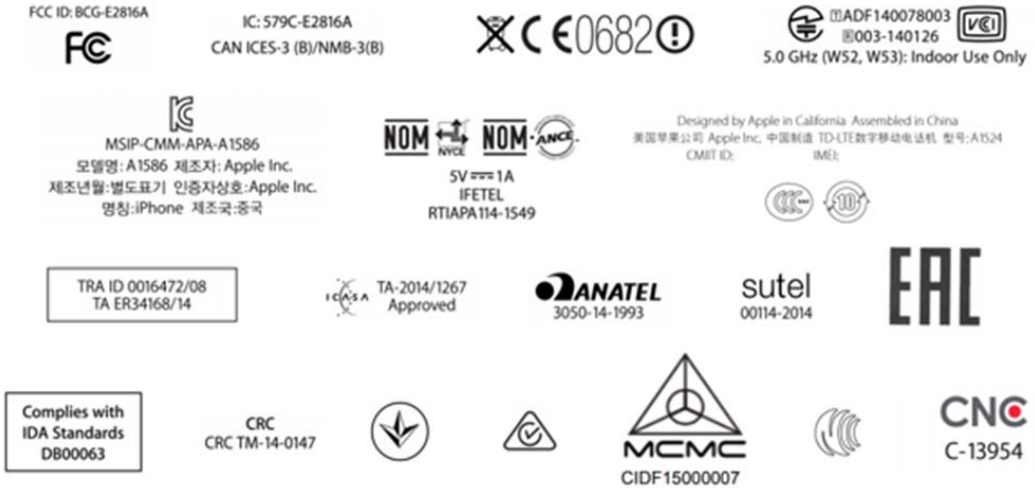
- ICT devices are increasingly small. Many ICTs have the ability to display info on their own screens. Other ICTs can use other common technology to convey information electronically.

- Increasing adoption and deployment of ICT devices in our daily lives and jobs means that our ICT trade will continue to change, thereby leading the debates around how compliance can/should change with it.



Physical E-labeling: Showing Compliance

- Manufacturers use physical labels to convey compliance in order to access markets.
  - E.g. safety, electromagnetic interference, energy, materials, and/or recycling requirements



Many Markets = Many Labels

- Leading tech companies sell the same product in many markets in order to achieve critical economies of scale.
- Small individual label can add up to a large compliance panel.
- Can result in:
  - a jumbled collection of barely legible labels on products that is difficult for the consumer to interpret.
  - Creative placement of labels to find space to fit them.

Figure 1. Compliance labeling on a computer power supply may be provided in different ways.

A (Relatively) New Approach: E-Labeling

- A sensible solution: Allowing the display of this regulatory information and other product information via electronic means.

E-Labeling: A Potential Win-Win-Win

- Regulator's legitimate concerns:
  - e-labeling is in no way an attempt to undermine each economy's right to regulate and certify ICT products for public health, safety, and other reasons.
  - It is simply a way to convey information to consumers and regulators more effectively and efficiently than physical labels.
- E-labeling has the potential to benefit the regulator, the consumer, and the manufacturer alike.

E-labeling Around the World: New, But Growing

- Still relatively new, but growing number of economies.
- International standard setting
  - Process is underway – will learn about this is detail later today.
- More Economies Are Allowing E-labeling

- Australia – 2015
- Canada – 2014
- China – 2015
- South Africa - 2012
- Ghana – 2015
- Japan – 2010
- Malaysia – 2015
- New Zealand - 2013
- South Korea – 2015
- USA – 2014

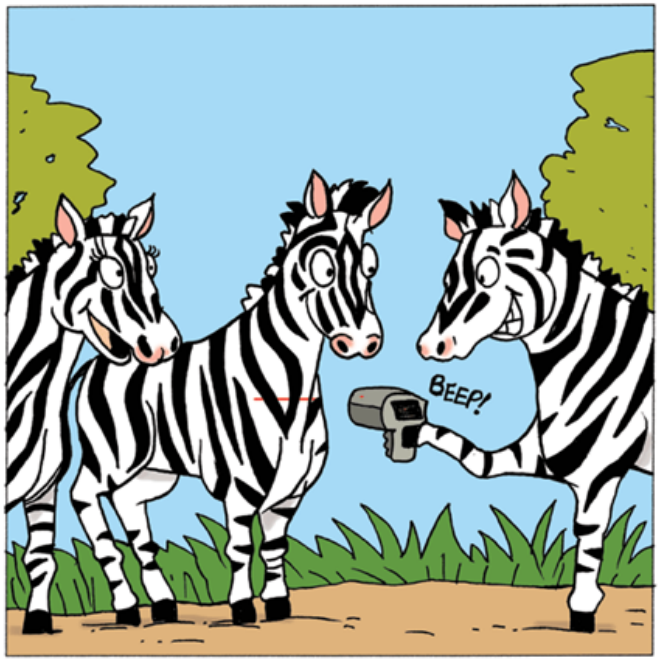
Types of E-Labels

- A device with an integrated screen—such as a smart phone.
- Example: as on an Apple iphone
- A website address that a user can go to access labels, statements, and other relevant product information.

Types of E-labels

- A machine-readable code (e.g. bar code or quick respon (QR) code) that allows a scanning device or smartphone to retrieve the labels, statements, and other relevant product information.

Zebra 2.0



FOR ZEBRAS IT'S NOT A PARTY UNTIL SOMEONE BRINGS THE BAR-CODE SCANNER.

E-Labels – Differing By Device

- ICT devices with an in-built (non-removable) screen, such as smart phones, tablets, printers, and GPS units.
- ICT devices with a tethered screen, such as a set-top box for a television or wireless headphones.
- Modular ICT devices that are embedded in other products.
- ICT devices without a screen and/or the ability to connect and transmit to a screen, such as power adaptors for computers.

What We Want to Avoid: Barriers to Innovation

- Technological innovation and connectivity continues - through the Internet of Things, autonomous vehicles, robotics, and use of ICT devices in more parts of our daily lives and jobs.
- Regulators need to be able to access and enforce compliance, but in such a way that requirements do not inhibit a firm's ability to innovate.
  - I.e. the design of a product is changed simply to fulfil physical labeling requirements.

What We Want to Avoid: A New Barrier to Trade

- Potential problem: as more economies allow e-labeling, they make it more complicated, overly prescriptive, and substantially different.
- Fragmentation has been a constant concern for the global trade in ICT products.
  - economy-to-economy differences in technical regulation and standards and conformity assessment procedures raise compliance costs.
- Difficult to estimate the precise costs involved, but the need to comply with such differential approaches involves direct and indirect costs for producers and exporters.
- Other future scenario: critical mass of economies develop and use international standard, but some individual economies refuse to do so and set their own standard = barrier to trade.
- Want to avoid barriers to interoperability and the development of a technical barrier to trade.

The Objective

- What would be ideal:
  - More economies to allow e-labeling.
  - For economies to generally "align" core principles and processes; and
  - In the long term, for economies to engage in the development of an international standard on e-labeling that they then use/accept.

Benefits of E-labeling

- **More Information and Utility**
  - E-labels are a more accessible and understandable mechanism.
- **Easier Enforcement**
  - A master list of compliance information on the Internet or on the device, kept up to date by manufacturers, offers real-time compliance information.
- **A Reduced Environmental Impact**
  - Reduce the material used in labels and the replacement of labels

Benefits of E-labeling

- **Eliminate/Reduce Impact on Product Innovation**
  - Device innovation doesn't face a physical limit due to compliance display.
- **A Live and Interactive Label + Easy Updates**
  - Physical labels are static; e-labels can act as interactive sites for product information that can be updated remotely
- **Cost Savings**
  - etching or applying physical labels requires design time and expensive equipment.

E-Labeling: Some of the Challenges

- Regulatory Reluctance to Change
  - Trouble shifting from the familiarity that comes from the status quo.
  - It takes time and effort to develop, discuss, and implement a new system.
- Need for Possible Legal Changes
  - New legislation or just administrative changes?
- Devices With a Screen
  - Broken or lost power = peel-away screen label on device or box?

E-Labeling: Some of the Challenges

- Who Hosts and Controls the Reference Material
  - E-labeling involves the hosting of relevant regulatory labels and information on a website or database.
  - Govt-run website or database raises issues
  - Options: an industry association or consortium
- Lack of Equipment and Technical Capabilities
  - e-labeling can require the use of a handheld device to connect to a network to display relevant labels.
  - Customs officials may be working in shipping containers or on ports that have poor cell phone or wireless Internet reception.

Some Practices/Principles/Processes To Consider

- Run a Transparent and Participatory Rule Making Process
  - Engage stakeholders. Focus debate on technical/functional aspects.
  - Provide opportunities and time for review and feedback.
- Focus on Streamlining and Simplicity
  - Set minimum requirements, but be flexible, not prescriptive or onerous.
  - A prescriptive approach is unlikely to fit all types of devices, but may create issues for all types of devices.
  - Technology continues to change.

Some Practices/Principles/Processes To Consider

- Specify Which Devices Can Use E-Labeling and How
  - Allowed for which types of devices (e.g. integrated screen).
  - Perhaps start with devices with a screen and build from there:

    Manufacturers should make it clear where this information is contained in the user manual or other documentation that accompanies the product, as well as putting this information on a product's website.

    The e-label may be displayed on the screen during the power up sequence and/or in the product's menu or help function.

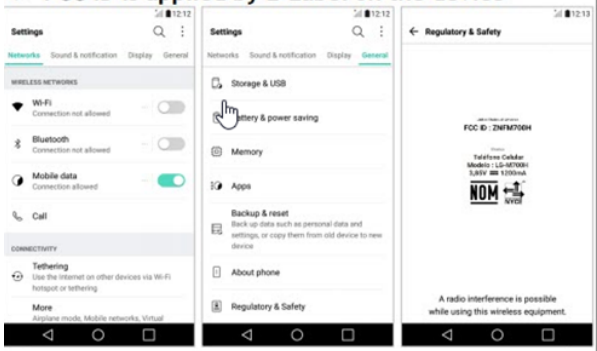
Some Practices/Principles/Processes To Consider

- Manufacturers make access to compliance information in a reasonable number of steps (whether this is 3, 4, 5 or more steps) and be relatively straightforward (i.e. settings – general menu – regulatory).

- For example: description of an e-label on a new model LG phone.

Description of E-Label on the ZNFM700H

❖ **FCC ID is applied by E-Label on the device**



Setting Menu	
	Settings
Step 1	General
Step 2	Regulatory & Safety

❖ **Instruction of E-Label on the user manual**

Regulatory information

For regulatory details, go to **Settings** > **General** > **Regulatory and safety** on your phone.

❖ **FCC ID is applied on packaging Label**

Model No : LG-M700H
FCC ID : ZNFM700H
S/N : XXXX
Made in XXXX
IMEI : XXXXXXXXXX

Above contents are printed on packaging.

Note!

We, LG Electronics MobileComm USA, state that at the time of purchase, the FCC ID is readily and physically visible to the purchaser on the packaging Label per 2.925(d).
So, The FCC ID will be able to survive normal shipping and handling so it is visible for inspection at the time of import.
We have programmed the e-label and it is not able to be modified by any third party.
Also, SIM Card in is not required to access the FCC ID number.

Some Practices/Principles/Processes To Consider

- **Make E-Labels Voluntary, Not Mandatory**
- **Security, Accessibility, and Storage**
  - Manufacturers responsible for ensuring that there is a working link between the e-label and the service hosting the compliance information
  - Manufacturer should also have the relevant e-label information programmed in such a way that it cannot be easily modified or removed by a third-party.

Some Practices/Principles/Processes To Consider

- Specify placement on the product and/or the packaging.
- Specify Details on Accompanying Instructions
- Use of QR codes for E-Labels
  - Raises need for possible directions on QR code appearance, functionality, and placement on product/packaging and that apps to decode QR codes are available for free on major platforms.

Conclusion

- E-labeling is new, but old enough for economies that haven't adopted it to learn some lessons.
  - Similarly, there's an opportunity for all economies to engage in the process of developing an international standard to ensure it reflects their views.
- Done well, e-labeling can help consumers, manufacturers, and regulators alike.
- E-labeling can play its part in supporting the global trade in ICTs.

Thank You!

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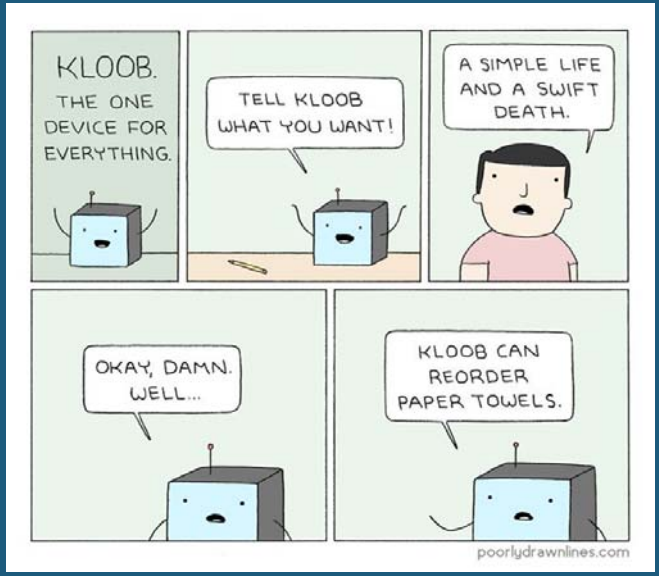

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