



Interoperability in the Digital Ecosystem

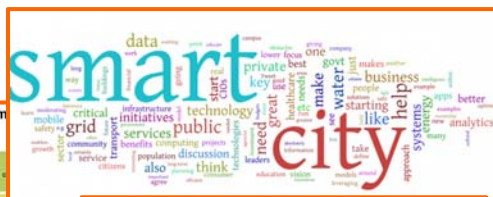
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The views expressed in this presentation are those of the author and do not necessarily reflect the opinions of the ITU or its Membership.

Introduction

Continuum Level	Individual Agency Interoperability	Internal Coordination Between Agencies	Key Multi-Organization Staff Collaboration on a Single Issue
Standard Operating Procedures	Individual Agency SOPs for Planned Events	Joint SOPs for Planned Events	Joint SOPs for Emergencies
Technology	Basic Files, Forms, Routines	Customized Applications, Gateway	Common Interchange, Shared Channels, Proprietary Internal Systems
Service	Specialized Equipment and Applications	Single Agency Software Solutions for Key Field and Support Staff	Multi-Agency Software Solutions for Key Field and Support Staff
			Multi-Agency Software Solutions for Key Field and Support Staff
			Regional Set of Communications Systems
			National System Management Systems
			National System Management Systems
			National System Management Systems



CONNECTED Learning
EQUITABLE, SOCIAL, and FUTURE-READY Learning

Connected learning is a model of learning that looks for the possibility of leveraging the resources of education in the information age. It flows on the power of today's technology to have many people's interests, passions, and academic achievement through experiences and not through or production-based systems and gatekeeping.

PROBLEM SOLVING
Students learn to solve problems by applying their knowledge and skills to real-world situations. They learn to identify the problem, gather information, and develop a solution. This process involves critical thinking, collaboration, and communication.

INTERESTS
Students learn to explore their interests and passions. They learn to identify their own interests and those of others. They learn to pursue their interests and passions through various activities and experiences.

SHARED PURPOSE
Students learn to work together towards a common goal. They learn to identify a shared purpose and to work together to achieve it. This process involves collaboration, communication, and problem-solving.

PEER COLLEGE
Students learn to work together in a peer-to-peer learning environment. They learn to share their knowledge and skills with others and to learn from others. This process involves collaboration, communication, and problem-solving.

GENRE NETWORK
Students learn to work together in a networked learning environment. They learn to connect with others and to learn from others. This process involves collaboration, communication, and problem-solving.

ACADEMIC
Students learn to work together in an academic learning environment. They learn to explore their interests and passions through various activities and experiences. This process involves collaboration, communication, and problem-solving.

ACTIVE RELEVANT REAL-WORLD EFFECTIVE HANDS-ON NETWORKED INNOVATIVE PERSONAL TRANSFORMATIVE



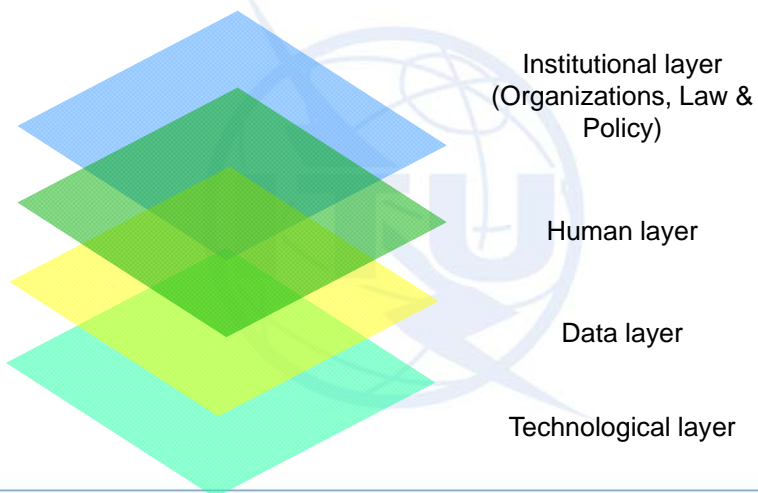
Definition

The ability to transfer and render useful data and other information across systems (including organizations), applications, or components.

“Art and science of working together”

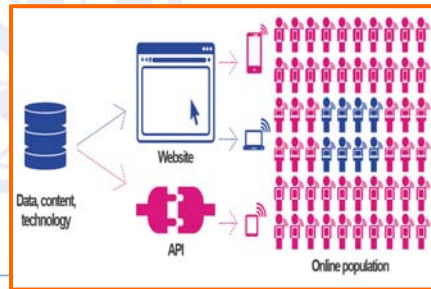
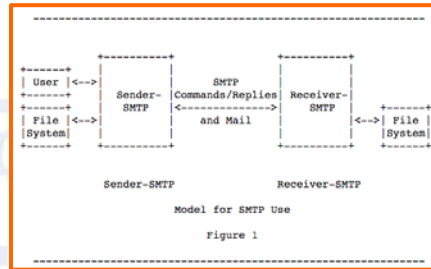


Interop Layers

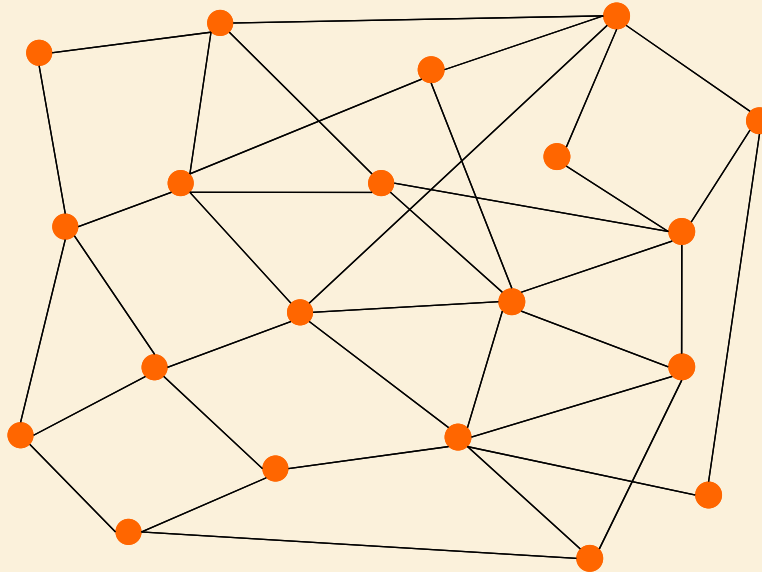


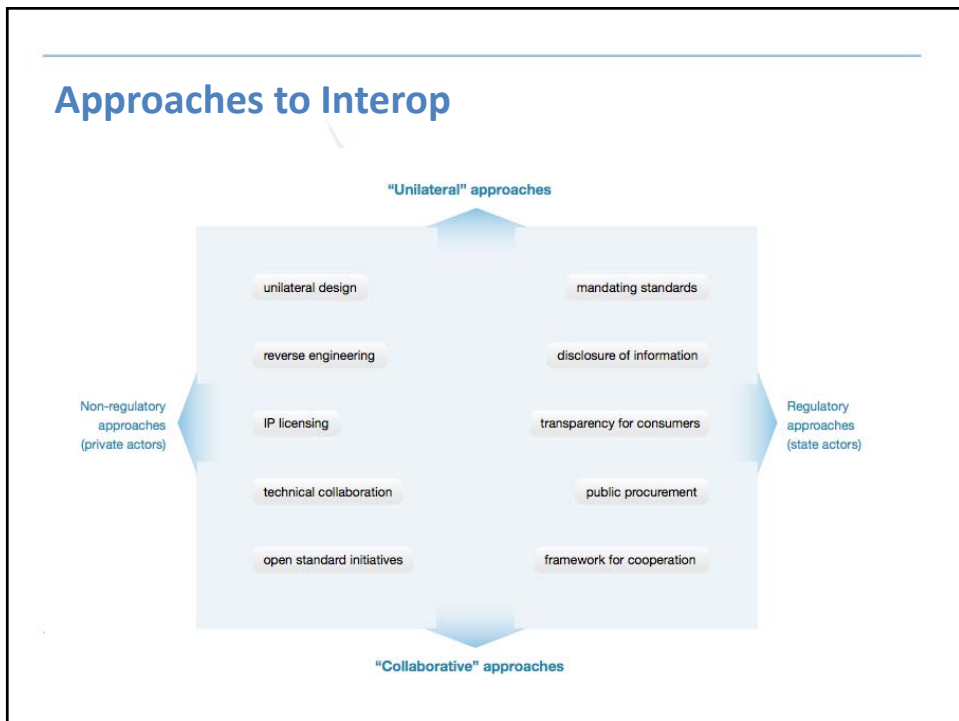
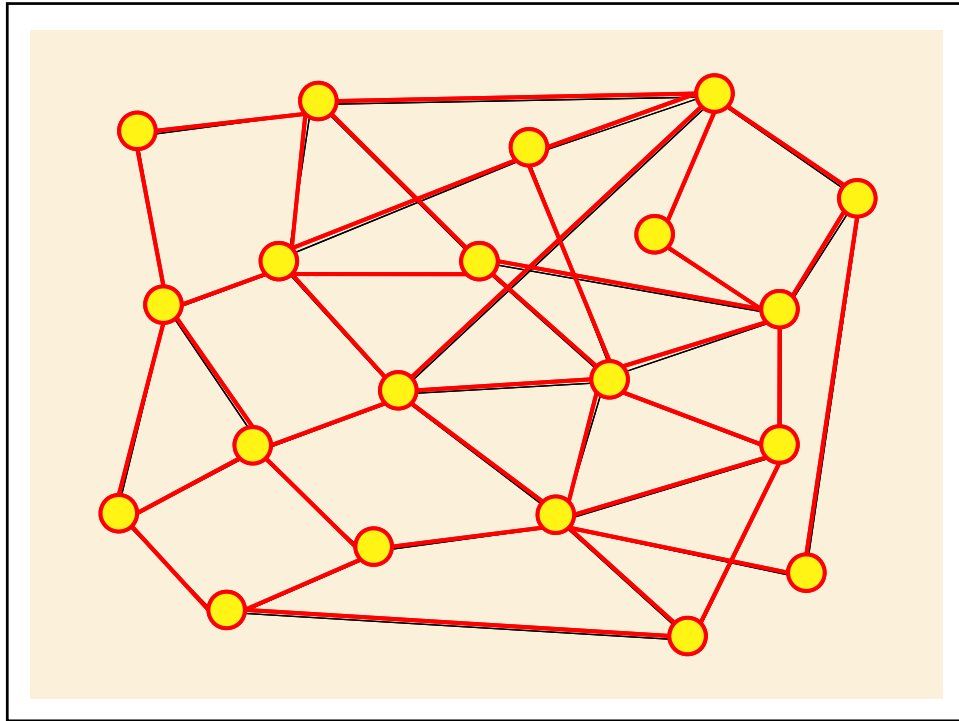
Benefits

- Interop – competition – innovation cycle
- Theories of innovation
 - Generativity
 - User-driven innovation
 - Small-step innovation
- Caveat: Competition for the market; anti-competitive behavior (e.g. standards)
- Diffusion of innovation
- Consumer choice



Downsides: Privacy and Security



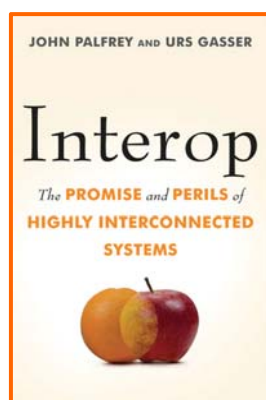


Conclusions

- Interop as a helpful lens to understand and shape the digital ecosystem
- Interop strategy has become a key success factor (even more so than IP strategy), both in public policy making and from a corporate perspective
- To get interoperability right, look beyond tech and data layers, consider human and institutional layers as well
- Strive for optimum, not maximum interoperability
- Consider full range of approaches to increase interop
- Governments to play a key role when aiming for optimum levels of interconnectedness



Resources



<https://cyber.law.harvard.edu/research/interopability>

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