The document **IS 13672:2018**, which is identical to **ISO/IEC 9545:1994**, provides the structure for the **Application Layer** within the Open Systems Interconnection (OSI) model.

The standard defines the **structure of the Application Layer** in the OSI model. This layer is responsible for **direct interaction** between application processes and OSI communication systems.

It specifies the **internal structure** of the Application Layer to enable effective communication between systems. It is critical for ensuring that systems following OSI protocols can work together seamlessly.

The Application Layer is the **seventh layer** in the OSI reference model. It provides services directly to user applications and allows processes to exchange information.

**Application Layer Entities**: Describes components like Application Service Elements (ASEs) and their roles in providing OSI services.

**Service Definitions**: Outlines the functionalities offered to end-user applications.

**Interaction Mechanisms**: Specifies how entities interact within the Application Layer and communicate across systems.

**Layered Architecture**: Ensures modularity and flexibility, allowing software components to work independently.

**Interoperability**: By adhering to this structure, **different systems and applications** can communicate effectively, regardless of their internal implementations. It supports **standardization** for communication services in open systems.

Ensures **interoperability** of systems and applications in a networked environment. Provides a **framework** for building application services that can communicate seamlessly across platforms. Facilitates the **development of open systems** where applications from different vendors can work together.

This standard is foundational for ensuring **structured communication** within the OSI model, enabling diverse systems to exchange data reliably and efficiently.

This standard to be revised in line with latest ISO/IEC and IEE standards because the **IS 13672**  which defines the **Application Layer Structure** in the Open Systems Interconnection (OSI) model, is required for several critical reasons:

**1. Ensuring Interoperability Across Systems**

* **Open Systems Interconnection (OSI)** is a foundational model that allows systems and applications from **different vendors** and platforms to communicate.
* The **Application Layer** is the topmost layer, responsible for directly interacting with end-user processes.
* This standard provides a **common structure** for the Application Layer, ensuring that systems can interact seamlessly, regardless of their internal design or origin.

**2. Standardized Framework for Communication**

* By defining the **structure** and **services** of the Application Layer, the standard creates a **uniform approach** for communication between applications.
* This ensures consistency in implementing services like file transfers, email, and directory services.

**3. Enabling Modularity and Flexibility**

* The standard promotes a **layered architecture**, where the Application Layer is broken down into components such as **Application Service Elements (ASEs)**.
* This modularity:
	+ Allows independent development and testing of services.
	+ Simplifies system design and maintenance.
	+ Encourages reusability of components.

**4. Supporting Complex Applications**

* Modern networked environments often rely on **distributed applications** that require consistent and reliable communication.
* The standard supports the development of applications for:
	+ **Data exchange** (e.g., file transfer protocols).
	+ **Remote database access**.
	+ **End-user services** like messaging and network management.

**5. Promoting Compatibility with Other OSI Layers**

* The Application Layer relies on the lower OSI layers (e.g., transport and session layers) for communication.
* By adhering to this standard, application services remain compatible with the **entire OSI model** framework, facilitating end-to-end communication.

**6. Facilitating Integration in Heterogeneous Environments**

* In a world where systems use various technologies and protocols, this standard helps:
	+ Integrate **legacy systems** with new applications.
	+ Enable smooth **cross-platform communication**.
	+ Ensure **vendor-neutral solutions**, avoiding reliance on proprietary architectures.

**7. Alignment with Global Best Practices**

* The standard aligns with internationally accepted norms, particularly **ISO/IEC 9545:1994**.
* Adopting this standard ensures Indian systems are compatible with global networks, promoting **global interoperability**.

**8. Foundation for Networked Systems**

* The Application Layer is crucial for **user-to-user communication** over networks.
* Standardizing its structure ensures that end-users can reliably access services like:
	+ File sharing (e.g., FTP).
	+ Email (e.g., SMTP).
	+ Remote access to systems and directories.

The **IS 13672:2018 / ISO/IEC 9545:1994** standard is required to **standardize and simplify communication** at the Application Layer of the OSI model. It ensures systems from diverse platforms and vendors can **interoperate**, promotes modularity in software design, and supports the development of **robust, scalable, and globally compatible applications**.

In view of the above, standard may be revised.