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SERIES F: NON-TELEPHONE TELECOMMUNICATION
SERVICES

Audiovisual services

Intelligent question answering service framework

Recommendation ITU-T F.746.3



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Recommendation ITU-T F.746.3

Intelligent question answering service framework

Summary

Recommendation ITU-T F.746.3 defines the intelligent question answering service (IQAS) framework as well as the features, requirements and the functionality to support the intelligent question answering (QA) service. The intelligent QA system is an advanced function to generate answers to a user's questions in a natural language. More and more systems in the future are expected to be equipped with QA functions for an advanced user experience.

History

Edition	Recommendation	Approval	Study Group	Unique ID*
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Intelligent system, natural language processing, QA, question answering.

* To access the Recommendation, type the URL <http://handle.itu.int/> in the address field of your web browser, followed by the Recommendation's unique ID. For example, <http://handle.itu.int/11.1002/1000/11830-en>.

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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Intelligent question answering service framework

1 Scope

This Recommendation provides an overview of the intelligent question answering service (IQAS) framework and describes the features, general requirements and functionality which form a framework to support the intelligent question answering (QA) service. The scope of this Recommendation focuses on QA architecture, devices, servers, interfaces and communication protocols among QA servers and clients in a high-level approach.

2 References

None.

3 Definitions

3.1 Terms defined elsewhere

This Recommendation uses the following terms defined elsewhere:

3.1.1 application [b-ITU-T Y.101]: A structured set of capabilities, which provide value-added functionality supported by one or more services.

3.1.2 content [b-ITU-T H.780]: A combination of audio, still image, graphic, video, or data.

NOTE – Variety of formats is classified as the "data" (e.g., text, encoded values, multimedia description language introduced by [b-ITU-T H.760]).

3.2 Terms defined in this Recommendation

This Recommendation defines the following terms:

3.2.1 co-reference resolution: A function that detects the preceding referents of the pronouns which replace the noun phrases of the input sentences.

3.2.2 CV_occupation: A named entity tag that belongs to the civilization (CV) category that indicates a person's occupation (e.g., scientist).

3.2.3 CV_prize: A named entity tag that belongs to the civilization (CV) category that indicates a prize (e.g., the Nobel prize).

3.2.4 IsA relation: A hierarchical relation between two words in such a way that the meaning of one word includes that of the other word.

3.2.5 knowledge base: A collection of knowledge resources that consist of structured and unstructured data. The knowledge base is used to provide information to the various applications that are related to information provision such as the QA system and search system.

3.2.6 named entity recognition: A function that recognizes named entities such as PLO entities which are people, locations and organizations from the sentences. The PLO can be decomposed into more specific named entities depending on the applications.

3.2.7 natural language processing: A method that analyses text in natural languages through several processes such as part-of-speech recognition, syntactic analysis and semantic analysis.

3.2.8 part-of-speech recognition: A function that recognizes parts of speech (POS) in the sentences and assigns relevant POS tags considering contextual meaning of the target sentences.