



Standards for Sleep Management Services

Dr Yoo Done-Sik

PhD in Medical Physics
Electronics & Telecommunications Research Institute
Korea

ETRI

한국전자통신연구원
Electronics and Telecommunications Research Institute

Types of Sleep Disorders



Insomnia

A condition when you aren't sleeping enough, you aren't sleeping well or you're having trouble falling or staying asleep.

Sleep Apnea

A condition that causes you to stop breathing while you're sleeping.

Restless Legs Syndrome

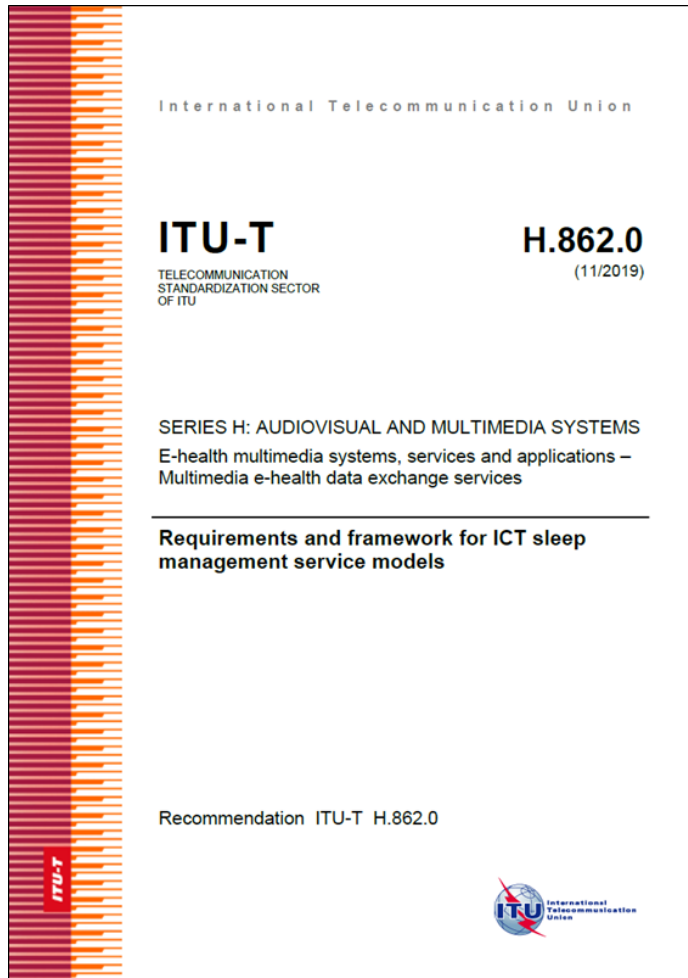
A sleep disorder that causes a strong urge to move.

Narcolepsy

A disorder that causes an urge to fall asleep suddenly during the daytime that's almost impossible to resist.

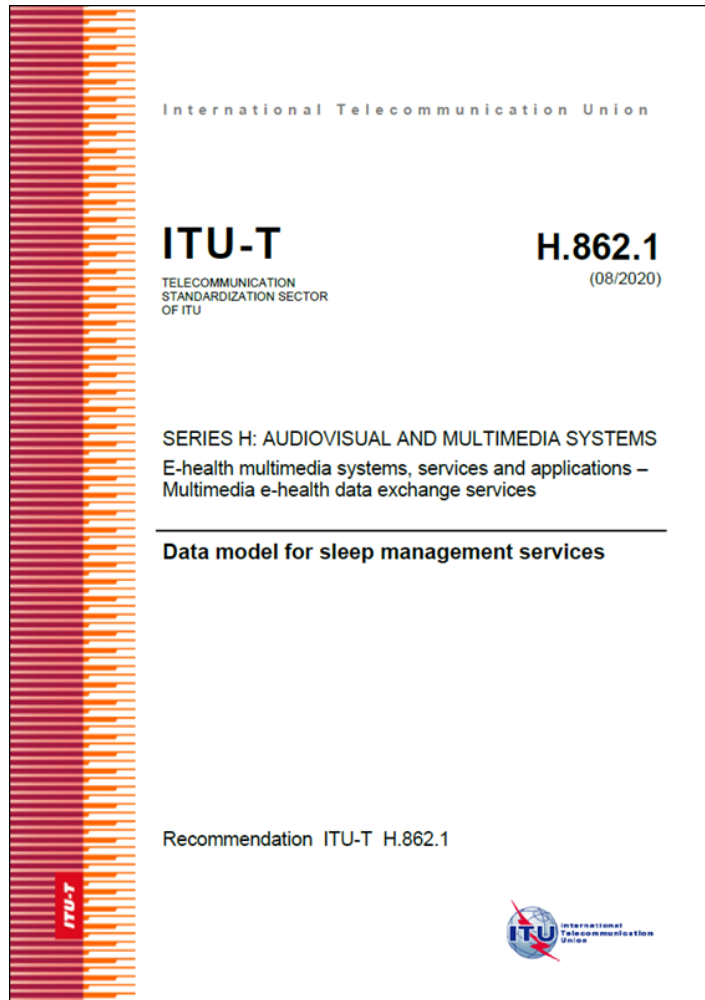


ITU-T H.862.0 “Requirements and framework for ICT sleep management service models”



- Recommendation ITU-T H.862.0 specifies requirements and a framework for information and communication technology (ICT) sleep management services
- This Recommendation specifies the architecture, functional entities and interfaces for information and communication technology sleep management services.
- Sleep management services is the field of using sleep management devices to collect data on sleep status or induce sleep.
- It includes the field of recording and monitoring sleep and the field of providing sleep services through the data collected by the device.


ITU-T H.862.1 “Data model for sleep management service”




- Recommendation ITU-T H.862.1 describes the data model for the sleep management services.
- This Recommendation focuses on the structured model of data to represent data collected from sensors as information such as sleep time, sleep stage and sleep goal, to be applied to sleep management services.
- In many e-health applications, sleep data can be obtained through a variety of sensors, including electroencephalogram (EEG), electrocardiogram (ECG), pulse, motion, and sound.
- A general sleep management service that can handle multiple devices independently of the raw data should be able to represent the quantity and quality of sleep. This can be the sleep stage and its time.




- TTA.KO-10.1075-Part 1 “Sleep Management Service Framework – Part 1: Definition”
- TTA.KO-10.1075-Part 2 “Sleep Management Service Framework – Part 2: Service Reference Model”


TTA Standard	정보통신단체표준(국문표준) TTA.KO-10.1075-Part1 제정일: 2018년 12월 19일
	수면 관리 서비스 프레임워크 - 제1부: 정의
	Sleep Management Service Framework - Part 1: Definition
 한국정보통신기술협회 Telecommunications Technology Association	

TTA Standard	정보통신단체표준(국문표준) TTA.KO-10.1075-Part2 제정일: 2018년 12월 19일
	수면 관리 서비스 프레임워크 - 제2부: 서비스 참조 모델
	Sleep Management Service Framework - Part 2: Service Reference Model
 한국정보통신기술협회 Telecommunications Technology Association	




- TTA.KO-10.1075-Part 3 “Sleep Management Service Framework – Part 3: Data Model”
- TTA.KO-10.1075-Part 4 “Sleep Management Service Framework – Part 4: Content Model”

TTA Standard	정보통신단체표준(국문표준) TTAK.KO-10.1075-part3 제정일: 2019년 12월 11일
	수면 관리 서비스 프레임워크 - 제3부: 데이터 모델
	Sleep Management Service Framework - Part 3: Data Model
	 한국정보통신기술협회 Telecommunications Technology Association

TTA Standard	정보통신단체표준(국문표준) TTAK.KO-10.1075-part4 제정일: 2019년 12월 11일
	수면 관리 서비스 프레임워크 - 제4부: 콘텐츠 모델
	Sleep Management Service Framework - Part 4: Contents Model
	 한국정보통신기술협회 Telecommunications Technology Association



- TTA.KO-10.1075-Part 7 “Sleep Management Service Framework – Part 5: Sleep Data Representation”

TTA Standard	정보통신단체표준(국문표준) TTAK.KO-10.1075-Part7 제정일: 2020년 12월 9일
	수면 관리 서비스 프레임워크 - 제7부: 서비스 개발 가이드라인 ----- Sleep Management Service Framework - Part 7: Guideline of Service Development
	 한국정보통신기술협회 Telecommunications Technology Association



Thanks!

