

## 5.2 New contributions

### (3) Multimedia health supporting systems and equipment

- Requirements for TC 100 standardization for multimedia health supporting systems and equipment

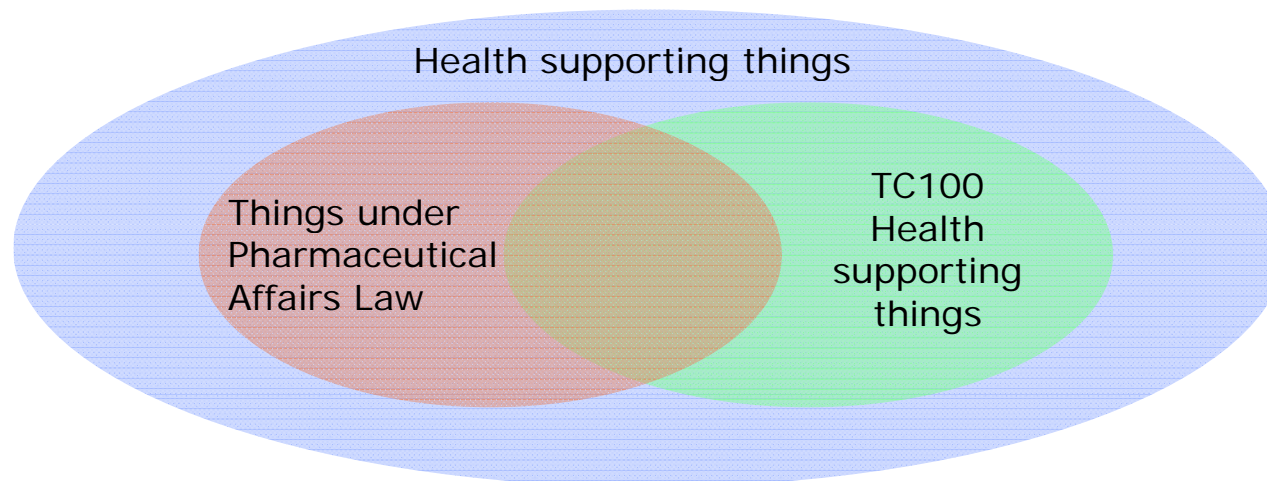
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## What is it?

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- Systems and equipment of TC100 AV&IT multimedia which concern health supporting aspects of human and living things.
  - Some of these things may have relation with wearable device and AAL.
- Health supporting things mostly are under the Pharmaceutical Affairs Law, some things are not.



# Cases

Hearing support



Omni monitor with Smartphone



Sensor fabric



From 'TORAY'

Seeing support, Eye monitoring



From 'JINS'

Dedicated monitor



There will be more new things. Utilizing... Blood current sensor Fingerprint sensor

## Hearing support

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- Issues
  - There are two cases of hearing, one is "hearing aid" under the Pharmaceutical Affairs Law, another one is not.
  - TC100's hearing support is not under the law, it aims to support to hear and enjoy audio and music.
- TC100's hearing support cases
  - "Audio gathering device" not "Hearing aid".



- Equalizing system to support hearing ability.

## Hearing support (cont.)

- Remote hearing system.



- Sound field system.
  - IEC 62777 (TA11), quality evaluation of sound field  
One application is loudspeaker array



From ETRI

## Hearing support (cont.)

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- Standardization
  - There is no international standard such as measurement method from the point of view of TC100 except IEC 62777.
  - Existent standard regarding hearing aid under the law is,
    - IEC 60118-0~15. Hearing Aids (TC/SC29)
    - ANSI S3.22-2003 (Revision of ANSI S3.22-1996), Specification of Hearing Aid Characteristics
    - EHIMA (European Hearing Instrument Manufacturers Association) has technical committee
  - TC100 Standards which may be needed for hearing support are,
    - In-out characteristics measurement method
      - Frequency response, Audio feedback characteristics, voice enhancement characteristics, and etc.
    - Quality evaluation method

## Seeing support and eye monitor

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- Items

- "Glass"



- Issues

- Under developing now. It will be used for seeing support including additional information, and eye monitoring for health purpose.
  - Some of these will be under the Pharmaceutical Affairs Law.

- Standardization

- Start to study.

## Monitoring devices

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- Items

- Dedicated monitor

- Pulse
    - Temperature
    - Blood current etc.



- Omni monitor

- Same as above
    - With smartphone



- Sensors

- Pulse
    - Electrocardiogram





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- Issues
    - If it is under the Pharmaceutical Affairs Law, what ability it has is unclear.
    - Data Communication
      - Communication method is OK, using BT, WiFi etc.
      - Data format is up to manufactures, there is no international standard.
  - Standardization
    - Measurement method
    - Data, file format

## Health supporting things situation

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- Under the Pharmaceutical Affairs Law
  - Some of them are under the law, but the aspect of the TC100 scope should be studied separately.
- Safety
  - Some of them are under other standard of safety.
- Other specification
  - Some alliance specifications and International standards exist.
- TC100 aspect
  - These AV&IT equipment and systems are under TC100, TC100 should study them and their standardization.
  - These are related to AAL and wearable device.

## Proposal

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- At first, make the study group in AGS for making standard of health supporting things under TC100 scope.
  - This study has a relation with AAL and wearable device.
  - Then, if its standard making can be involved in the existent TA, that TA manages it.  
If it is not a issue of existent TAs, the new TA should be considered.