ICE CUBES – MEDIASET

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ICE Cubes service - MediaSet

Scope of the MediaSet activities :

- Educational & outreach

- Media coverage

- Pre-prepared lectures given by astronauts

- Q&A sessions with ground

- Demonstration of experiments

- Communication with Mission Control Center for reporting about the activities

Live events:

- interactive or not

- crew communicates with audience on ground

- Audio/Video of the camera is distributed real time to grou...

- Audio from ground is transmitted to Media Set in Columbu...

Recorded Events:

- Audio/Video of the Media Set is recorded

- Then checked and postprocessed on ground for future utilization/distribution

ICE Cubes service - MediaSet

MediaSet

- GoPro HERO9 camera (without battery/SD card) – internal microphone
- USB speaker

Functional Mode: Webcam

- Resolution: 720p live interactive events
  - 1080p sessions pre-recorded on board

- Bandwith for live events: about 3 Mbps with a resolution of 720p

ICE Cubes service - MediaSet

The camera of the Media Set is provided with a front screen that offers the possibility, for the crew, to see, in real time, what is the actual field of view of the camera and how he/she appears in the video.

ICE Cubes service – MediaSet example

- Was used for > 40 events during Axiom-1, the first fully private mission to ISS

- Eytan Meir Stibbe, an astronaut interacted with the president of Israel in a public event with video and audio communication.
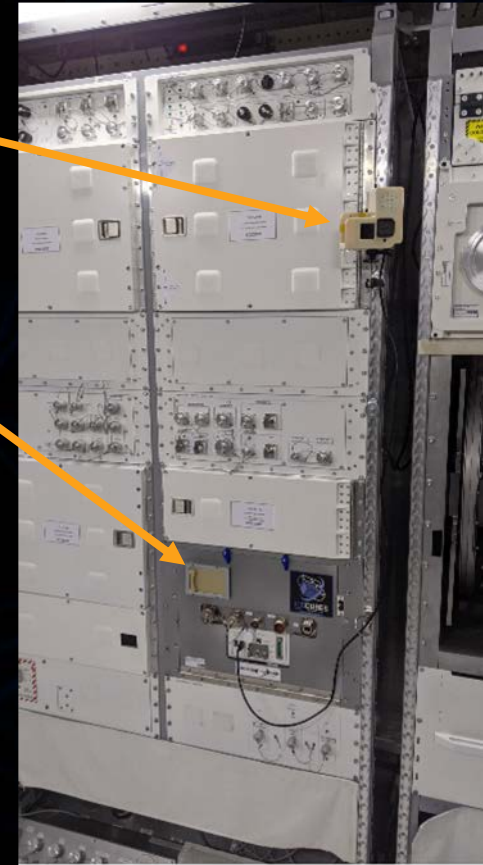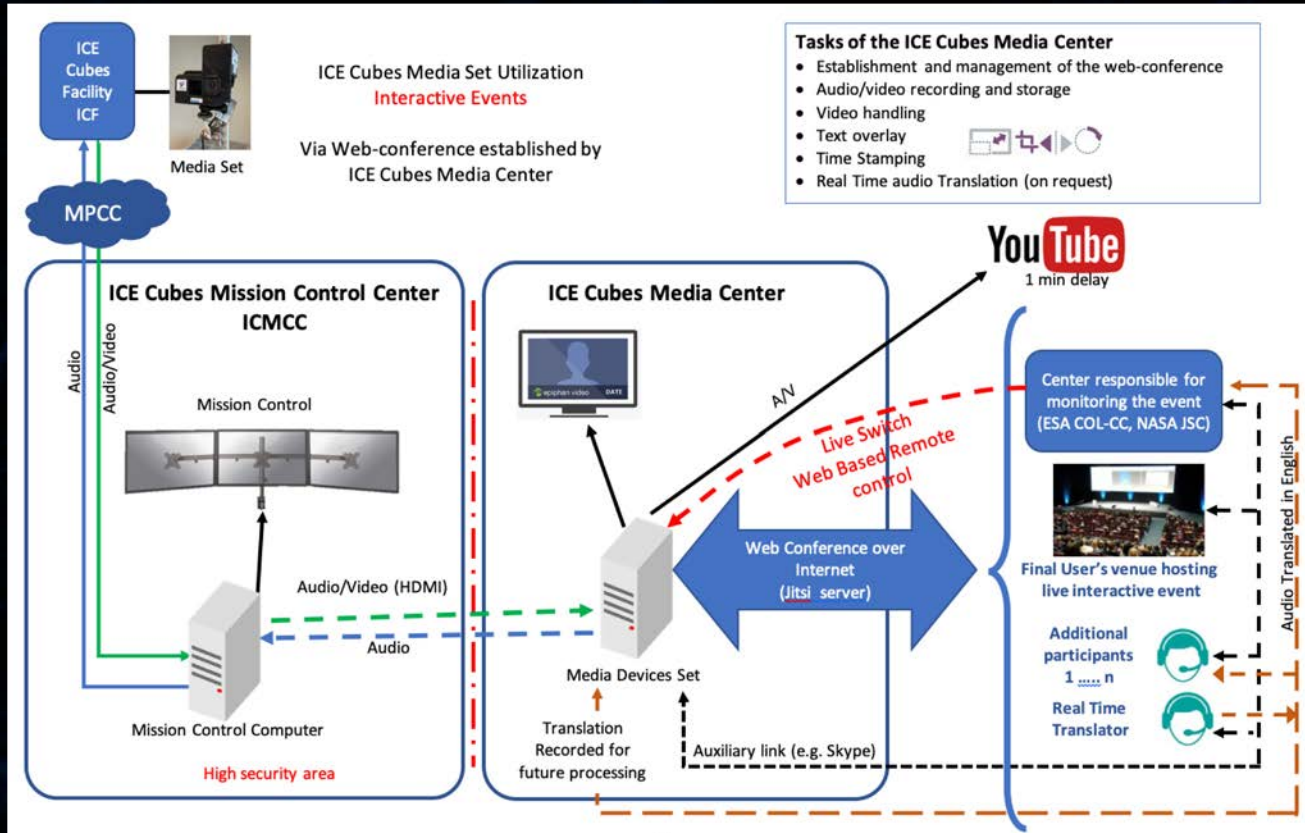
ICE Cubes service - MediaSet

- Installed in the Columbus Module (EPM A3 rack position)

- MediaSet Configurations
    - Attached to a Seat Track
    - Hand-held mode

- Crew operations
    - MediaSet installation/removal
    - Bracket adjustment
    - GoPro ON/OFF (button)
    - Speaker set ON/OFF (switch)
    - Speaker set volume (knob)

Media Set

ICE Cubes
Facility
(ICF)

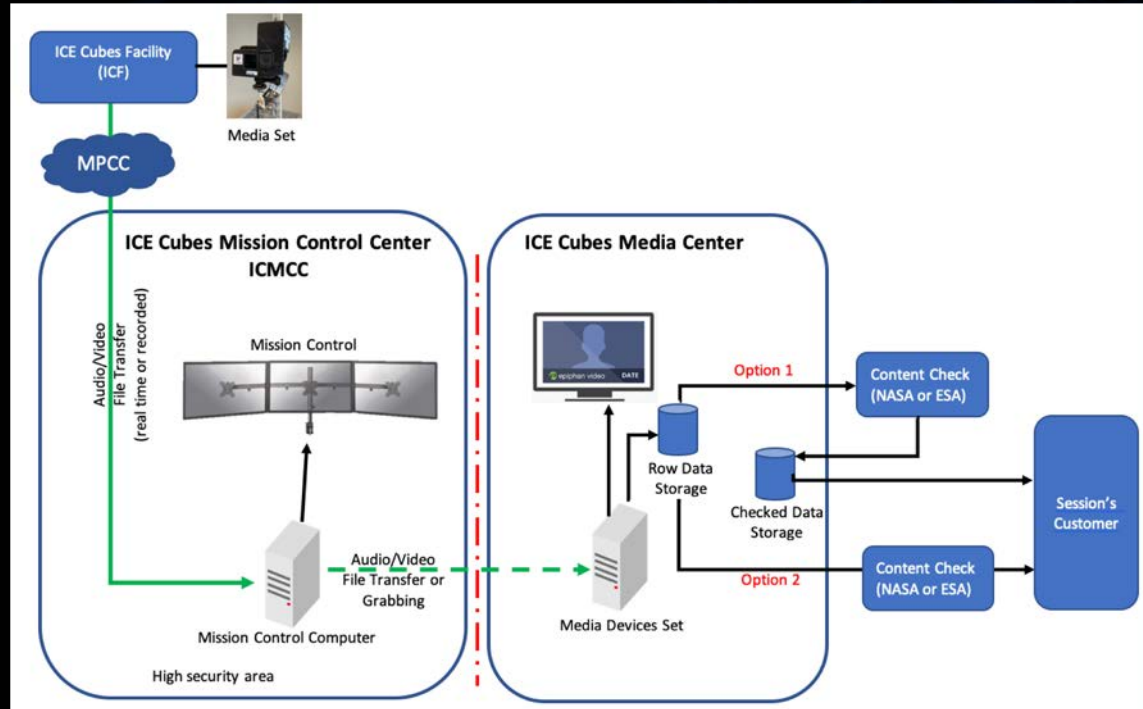# ICE Cubes service – MediaSet interactive sessions

ICE Cubes service – MediaSet recorded sessions

- Rough data are stored in the server of ICE Cube Media Center and then passed to the organization responsible for content checking

- If the original language is different from English, a **translation** can be provided by the ICE Cubes Service in support of content check

ICE Cubes service – MediaSet request

- Request for usage of the Media Set to be done ~10weeks before event

- Request should (ideally) include:
    - Live or recorded, and in case of live whether it includes Broadcasting or not
    - Language of the event
    - Timing constraints (in terms of days/timing)
    - Media Set in 'handheld mode' of fixed
    - Preferred FoV (if any) in terms of direction with respect to Columbus and wide vs narrow
    - Crew member
    - Duration
    - Other specific details (e.g. attributes that would need to be shown like a flag)

ICE Cubes service – MediaSet use / with AI

Standalone as webcam (PAO and Outreach) :

- Astronaut direct interaction & assistance
- Broadcasting sessions
- Educational activities
- Tech demo & validation (direct observation)

In combination with the AI-Box:

- Machine Vision applications
- Dev. of smart devices & robotic assistance
- AI medical care
- Onboard processing and in-situ analysis
- AI-powered visual inspection and support to crew monitoring/health care
- Support in decision-making and simplification of ground operations
- And many more…

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