

# CHALLENGER OF RECORD & DEFENDER

## AMERICA'S CUP 36

### Interpretation 067

of

### AC75 Class Rule Version 1.16 issued 30<sup>th</sup> September 2020

#### Rule References:

- 23.1 Electric or electronic components or circuits are permitted only as:
- (a) part of an **ECC, ILS, or CIS**;
  - (b) standalone **crew indication devices**, such as wristwatches, that are incapable of measuring or receiving any part of the **yacht state**;
  - (c) standalone **hardwired** cameras and screens mounted on the **yacht** to aid visibility of different parts of the **yacht**, providing no information other than raw audio and video from the **yacht** is transmitted, played or displayed;
- 23.5 A **crew indication device**:
- (b) must be incapable of measuring any part of the **yacht state**
- 26.2 The **CIS**:
- (a) shall be incapable of measuring any part of the **yacht state**;
- 26.3 As an exception to Rule 23.5 (b), **crew indication devices** in the **CIS** containing sensors such as accelerometers or solid-state gyroscopes may be considered incapable of measuring any part of the **yacht state** by  
[...]
- 35.10 **CIS**  
Crew information system: an electronic system connected to the **Media System** to display the raw or processed **Competitor** data output from the **Media System** to the crew, and to provide voice communication between the crew.
- 35.20 **Crew indication device**  
Any device that:
- (a) contains an electronic system, or is connected directly or indirectly to an electronic system;
  - (b) displays or plays audibly information that it has received or generated internally;
  - (c) is worn or installed on the **yacht**;
  - (d) can be seen or heard by the crew, directly or indirectly; and
  - (e) may process data internally,  
such as a display, LED or speaker.
- 35.109 **Yacht state**  
The specific condition of the **yacht**, comprising all of the following:
- (a) the position and orientation of the **yacht** in space;
  - (b) the position and orientation of any **control surface**;
  - (c) the position and orientation of a **foil**;
  - (i) the water or wave height or velocity relative to the yacht;
  - (l) all quantities from which the above can be derived or approximated.

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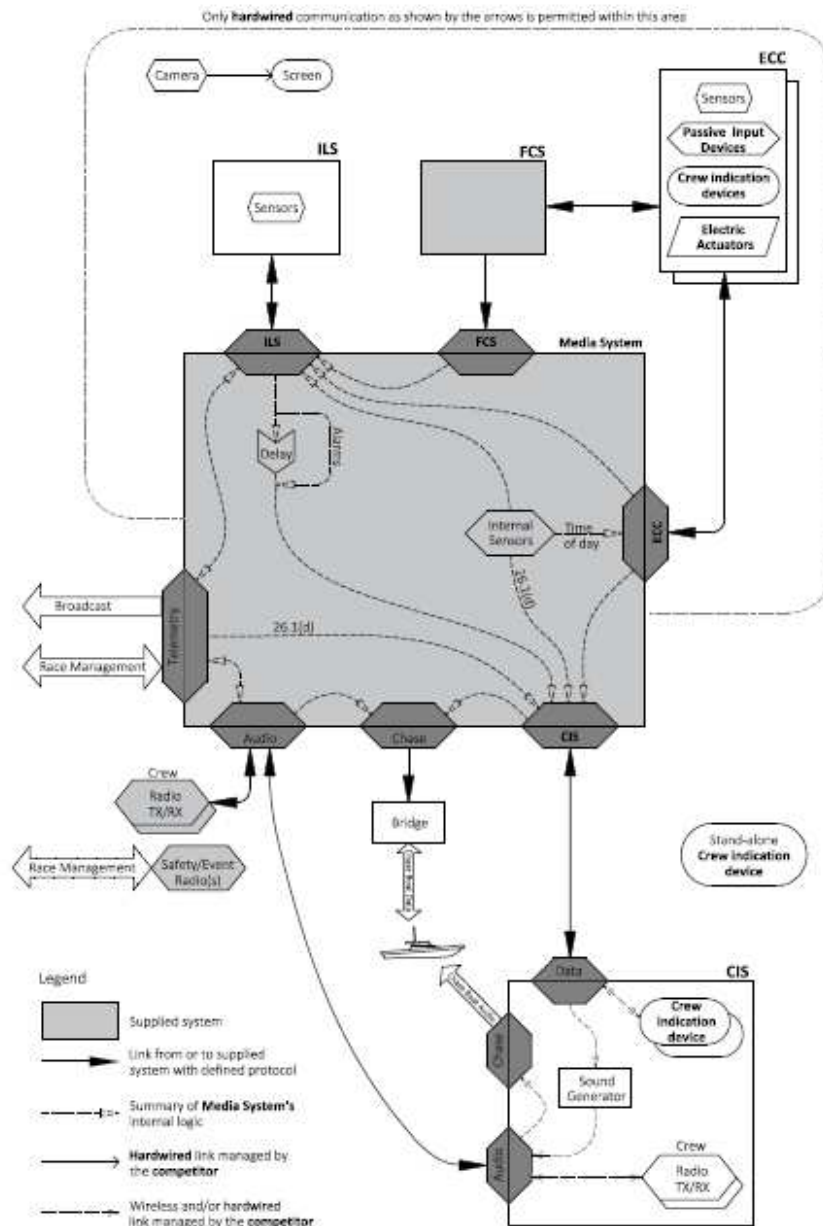


Figure 23.1: Permitted communication between electronic systems

## Questions:

1. A camera is attached to the **yacht** and is filming a **control surface** or a **foil** of the **yacht** such that the position of that **control surface** or a **foil** relative to the **yacht** is estimable from the camera feed or signal. An example would be the cameras of a sail vision system.
  - a. Is the camera considered to be capable of measuring **yacht state** information?
  - b. Can the camera be part of a **CIS**?
2. A camera is attached to the **yacht** and is filming the horizon or the sea surface such that the position of the **yacht** relative to the horizon or the sea surface is estimable from the camera feed or signal.

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- a. Is the camera considered to be capable of measuring **yacht state** information?
- b. Can the camera be part of a **CIS**?
3. Can a **yacht** contain more than one **CIS**?
4. Is it correct to assume that a **CIS** must be connected to the **Media System**? If not can the **RC** explain its understanding of 35.10?
5. If the answers to the question 3 and 4 is yes, how many connections will the **Media System** provide?
6. Can a camera and screen allowed under 23.1(c), be part of a **CIS** if that **CIS** also contains other devices? If so can the **RC** explain its understanding of the word “standalone” in the context of 23.1(c)?
7. Is it correct to consider that a screen allowed under 23.1(c) is a **crew indication device**? If not which of the requirements of 35.20 does it not meet?
8. If the answer to question 7 is yes. If such a screen is not part of a **CIS** and contains sensors capable of measuring **yacht state**, can 26.3 be invoked for such a screen? If so can the **RC** explain its understanding of “in the **CIS**” in 26.3?

### Interpretation:

There can only be one CIS. Rule 26.2 states “The CIS:” which is singular.

OED definition for “to measure”:

*2. c. transitive. To ascertain or determine (a magnitude or quantity). Also with clause as object. Also figurative.*

If the camera itself does not do image processing then the camera itself is not ascertaining or determining a magnitude or quantity, i.e. the camera itself is not “measuring”. However, the camera is capable of “measuring” if used in a manner in which measurements are made from the camera output.

### Answers:

1.
  - a. If the camera includes processing capable of image recognition, or if the camera is used in a manner in which measurements are made from the camera output, then yes.
  - b. No.
2.
  - a. If the camera includes processing capable of image recognition, or if the camera is used in a manner in which measurements are made from the camera output, then yes.
  - b. No.
3. No.
4. Yes.
5. Not applicable.
6. No.
7. Yes.
8. No.

END