1. Which are two main areas in the field of gesture recognition depending on the input hardware?

□ microphone,

**x** **touch devices (such as tablets, touchpads or smartphones),**

**x** **2D/3D camera.**

1. What are the basics categories of gestures in terms of user experience?

**x** **innate gestures,**

□ static gestures,

**x** **learned gestures,**

□ dynamic gestures.

1. Assign for each type of gesture the corresponding definition.

|  |  |  |
| --- | --- | --- |
| Static gesture |  | Prolonged tracking of movement where no specific pose is recognized. |
|  |  |  |
| Continual gesture |  | Pose or gesture which does not depend on movement. |
|  |  |  |
| Dynamic gesture |  | Movement that allows users to directly manipulate an object or control application. |

1. What parameters of RGB images are not affected by changing the illumination conditions of the scene?

□ Brightness of image,

**x** **Image resolution/size,**

□ contrast of image.

1. On what principle is based most depth sensors?

□ emission and detection of ultraviolet light,

**x** **emission and detection of infra-red light,**

□ emission and detection of white light (visible light spectrum).

1. Which statement about the depth image is correct??

□ The depth image is a 2D image containing information about the absolute distance between the individual objects in the scene expressed in mm.

**x** **The depth image is a 2D image containing information about the absolute distance between the sensor and each pixel of the image expressed in mm.**

□ The depth image is a 2D image containing information on the relative distance between the individual objects in the scene and center of the image expressed in mm.

1. Between the basic requirements for the gestures design does not belong:

□ gesture naturalness,

□ user’s comfort,

□ gesture should be easy to remember,

**x** **user uniqueness gestures**.

1. Assign the significant characteristics of the individual gesture recognition methods.

|  |  |
| --- | --- |
| **Data glove** | **Camera** |
| **A** | **C** |
| **B** | **D** |
| **F** | **E** |

**A** – precise results,

**B** – low user comfort,

**C** – high user comfort,

**D** – algorithmic complexity,

**E** – relatively low price of the sensory part,

**F** – high price for sensory part.

1. Convexity defect algorithm returns as output of static gesture recognition:

□ the coordinates of the hand and image background,

□ the coordinates of the hand contour,

**x** **the coordinates of three points, the start point, deepest point and end point,**

□ the coordinates of four points, the start point, central point, deepest point and end point.