**Touchpad app protocol:**  
Information about the actions made by the touchpad is divided to small sets of data. Each set describes one action. Each of the sets has the values for the length of the set of data and for the Type of Action. After this part of the set, come arguments that describe the details of the action and each one of the arguments is one byte long.

The structure the sets of data:  
[Length]|[Action Code]|[Arguments]

* Length - the first byte of the data set contains amount of the following bytes in the set (e.g. if there are 4 byte including the “length” byte in the set, the value should be set to 3).
* Action code - the action code that represents the type action described in this set.
* Arguments - the arguments that describe the details of the action.

The following chart describes the actions and their arguments:

|  |  |  |
| --- | --- | --- |
| Action Code | Action Type | Arguments |
| 0 | Mouse movement | dx, dy - Relative coordinates(these are signed values, for right/down and negative for left/up) |
| 1 | Left button | Up/down - 0 for down, 1 for up, 2 for click (when the touchpad is just tapped we can’t describe it with button down/up, it’s a click ) |
| 2 | Right button | Up/down: 0 for down, 1 for up |
| 3 | Scroll | Data - represents the scale of the scroll (signed) |
| 4 | Zoom | Data - represents the sale of the scroll (signed) |

An example for a valid set of data that describe a mouse movement with the relative coordinates dx = 50 and dy = -35:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Decimal (with sign) | 3 | 0 | 50 | -35(221) |
| Hex code | 0x03 | 0x00 | 0x32 | 0xDD |