Product Synopsis:

Realgam’s “REALGAM GAUNTLET” is a wrist wearable controller that offers force-feedback. User’s wrist is moved similarly as in reality. This controller will be a differentiator to consumers, when it comes to live sensation as users feel drag-force, recoil, and the force of repulsion.

Q.1 Realgam’s core technology is a self-developed small clutch mechanism. User’s wrist is controlled when motor is powered and clutch is connected. The device is free-wheeled when power is cut and clutch is disconnected. The technology is suited for stand-alone typed wearable devices as it’s in small volume than electronic clutch but shows the same performance, faster in response speed than tooth clutch, and in absence of power button to maintain a state. This enabled to control the wrist through small volume and create world’s first stand-alone type wrist force-feedback product.

Q2. VR controllers allow users to interact with the virtual world. Our product added force-feedback features that can be used simply by connecting it with current VR controllers. This eliminates the burden to replace current VR controller with our self-developed device. Users can connect REALGAM GAUNTLET with any VR controllers to be able to feel force-feedback that is limited to contents with plug-in for devices. In accordance to the concept of the product offering users with strong force-feedback, we also focused on its design to make it stand out as a high-end gaming gear product.

Q3. Our technology has its root in the field called powered exoskeleton of robotics. We kept working on to figure out how high-tech robotics technology used mainly in the medical and industrial be applied to a technology which common user can easily use. Our device serves as an example to create an invention through adopting and utilizing a technology from a different field. We Realgam showed what innovation is. Thereby, we are more than confident that our product is the most suit to receive “innovation award” that insights both engineers and consumers and that gave inspiration to us in the past.

5. Technical Specifications (Product Technical Specifications)

[ Device Wear-ability]

: Easy to wear through magnetic buckles

: Easy to connect to VR controllers (checked with Samsung Odyssey, VR/Oculus CV1Controller/HTC VIVE Controller/ Gear VR Controller)

: Strong force-feedback transfer possible through BOA Mechanism (Dial method applied)

[ Power Supply ]

: Lasts 2 to 3 hours depending on contents

: Two changeable 18650batteries (3.7V 3500mAh) / charging time of 1 hour for proprietary chargers

[ Force-feedback ]

: Motor of 15kgf.cm Torque equipped at top and bottom, and two sides

: 120 stages of force-feedback control

: 0.016 degree of encoder resolution

[ Safety ]

: Up-and-down 77 degree rotation, Left-and-right 108 degree rotation (guarantee over 90% of hand motion freedom)

: Include command of return to original state when exceeded safety degree

: Physical degree limited mechanically (mechanical breakdown if moved in force)

: Angle control possible for users through adjustment in user setting (SW)

[ Contents Connection ]

: Wireless connection between Realgam Gauntlet and contents (Bluetooth 4.2)/ Provide Bluetooth dongle for PCs

: Provide Unity 3D/ Plug-in for unreal engine

: Realgam Gauntlet compatible with complete VR contents through a developer’s in-person work service taking up to 3 days (Licensing issue needs further discussion);