

“Dr. M” Project – KAIST Smart Mobile Healthcare Innovations

Y. C. Chung, Ph.D
KAIST Institute
KAIST, Daejeon, Korea

Abstract: Smart mobile technology, together with cloud computing, big data analysis, and social networking, will transform the healthcare industry drastically in the near future. Such a transformation appears to be inevitable considering the rapidly aging global population and ever-increasing healthcare spending. In fact, it has been forecasted that the mobile/wireless healthcare market will be increased to >\$159B by 2020 [1]. However, there has been no prevalent mobile healthcare service reported yet, despite the fact that nearly 50 million units of smart bands and smart watches are sold in 2015 only [2]. We believe that this is mainly because many of the relevant technologies are still immature for providing valuable services to the users. Thus, to expedite the development of all the necessary technologies relevant to the smart mobile healthcare services ranging from mobile sensors to networking, software, and design, we have recently implemented “Dr. M” testbed at KAIST. The platform of this testbed is implemented by using the GS1 standard [3] and is capable of collecting various health-related data such as heart rate, step count, sleep quality, SpO2, body temperature, and GPS, etc. from practically unlimited number of users. In the coming March, we plan to distribute ~400 commercial sensors to our students and staffs, and start to collect the data by using this testbed. This data will be used to develop valuable healthcare services through big data analysis as well as to identify the essential health monitoring parameters and their needed accuracies. In this presentation, we will report on the current status and future directions of this “Dr. M” testbed.

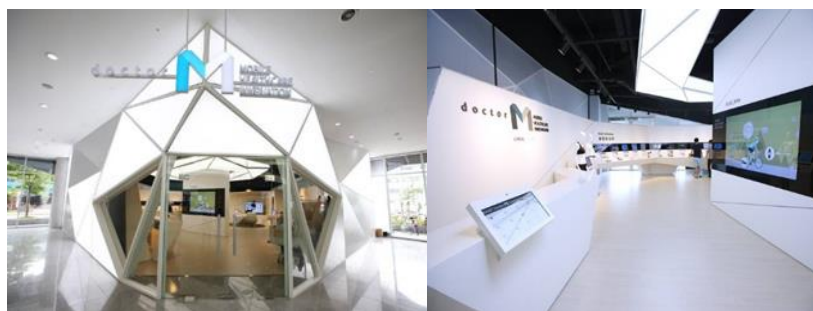


Fig. 1. Photographs of “Dr. M” testbed site

References:

- [1] N. Bohlin, T. Kaltenbach, V. Kharbanda, and S. Herzig, “Succeeding with digital health”, Arthur D. Little, 2014
- [2] “IDC: Wearables grew 197.6% in Q3 2015, Fitbit beats Apple again while Samsung drops out of top 5”, IDC, Dec. 3, 2015
- [3] <http://www.gs1.org/standards>, <http://www.gs1.org/healthcare/standards>