

SDN-based heterogeneous network architecture with Multi-Controller

Junhyuk Park*, Wonyong Yoon *

* Department of Electronics Engineering, Dong-A University, South Korea
88youiju@gmail.com, wyyoon@dau.ac.kr

Abstract— This paper presents a proof-of-concept Software-defined networking (SDN) based on Multi-controller for heterogeneous wireless networks, which can be helpful for researchers. The existing controller structure has a structural limitation to manage the control message caused by a much-increased UE(User Equipment). The proposed structure has more flexible and scalable through the hierarchical structure of Multi-controller and the loosely-coupled heterogeneous networks. This paper describes procedures for handover scenarios with the proposed structure.

Keyword— SDN, Multi-controller, Heterogeneous network, Loosely-coupled, Handover procedure



Junhyuk Park received the B.S., M.S., and Ph.D. degree in Electronics Engineering from Dong-A University, Korea, in 2013, 2015, and 2019, respectively. His research interest includes SDN and mobile network.

Wonyong Yoon received his B.S. and M.S. degrees in computer engineering from Seoul National University, South Korea, in 1996 and 1998, respectively, and his Ph.D. degree in computer engineering from Information and Communications University, South Korea, in 2002. From 2008 to 2011, he was a chief research engineer and part leader at LG Electronics, Mobile Communications Research, South Korea. Since 2011, he has been an associate professor at the Department of Electronic Engineering, Dong-A University, South Korea. His research interest includes SDN and wireless network.