

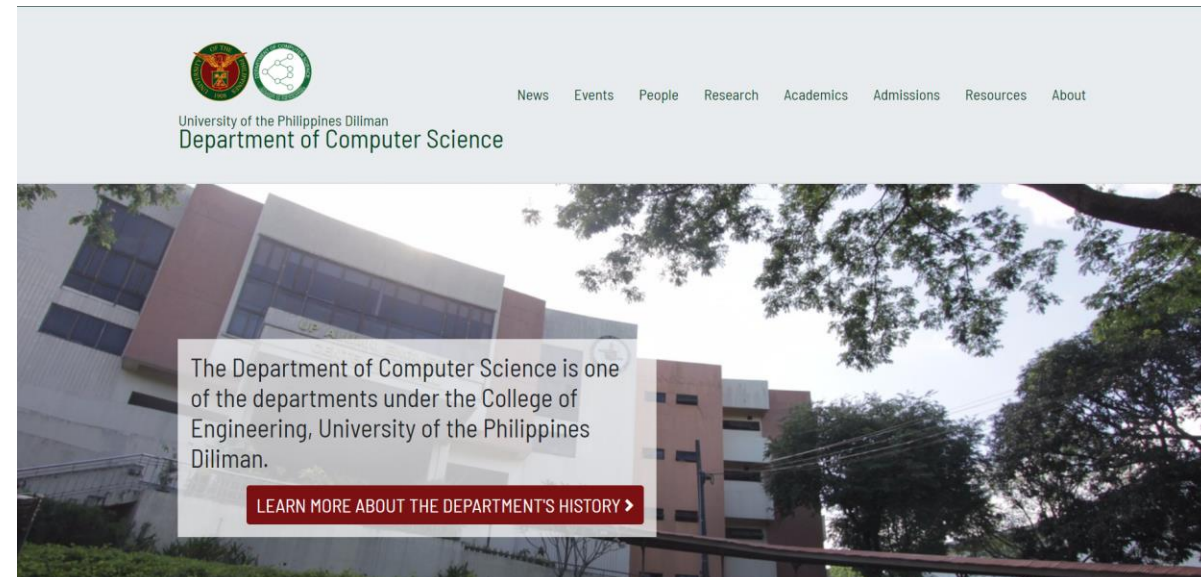
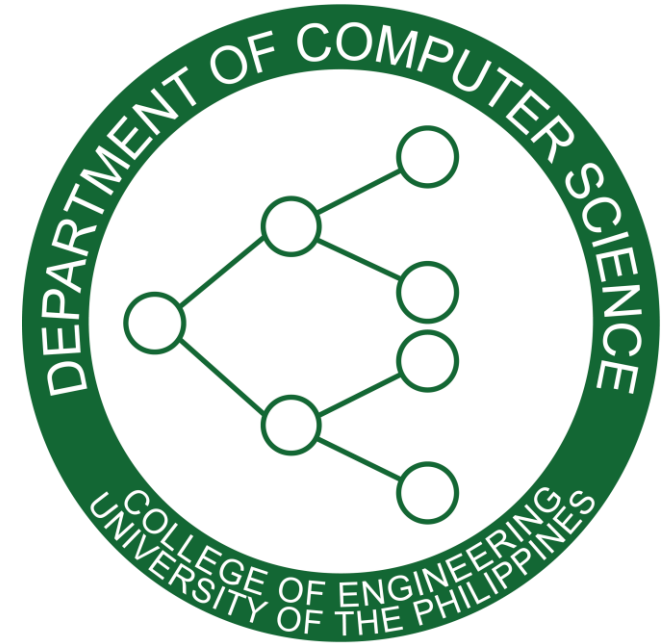
University of the Philippines –
Diliman
Networks and Distributed
Systems Group

Virtual lab tour



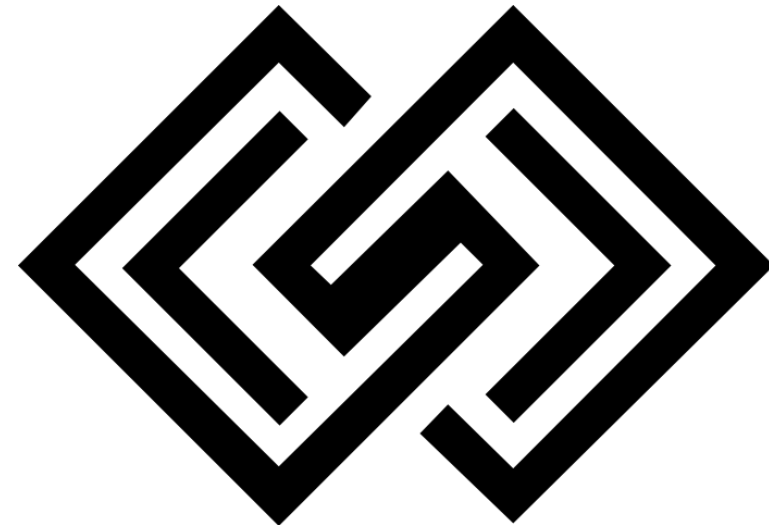
DCS

- The Department of Computer Science is one of the 8 departments under the College of Engineering of UP Diliman
- Course offerings
 - Bachelor of Science in Computer Science
 - Master of Science in Computer Science
 - Ph.D. in Computer Science
 - Master of Science in Bioinformatics



NDSG

- Founded in 2003, one of the eight research labs or groups of the DCS
- Research interests cover
 - Networks – community networks, software-defined networks, embedded networked systems
 - Edge computing, IoT
 - ML applied to networking
 - And also -
 - Transportation technologies, analytics
 - Education-related technologies
 - Language preservation



Who – us?

Faculty



Cedric M. Festin, Ph.D.
Labhead



Wilson M. Tan, Ph.D.



Mario T. Carreon, M.Sc.

NDSG collaborators and funders



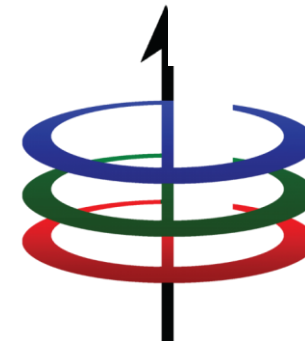
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More recent topics of interest

- Internet coverage assessment for development
- Vehicular analytics

Sample work



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Recommended articles (6)



ELSEVIER

Journal of Network and Computer
Applications



Volume 132, 15 April 2019, Pages 49-74



An SDN-based framework for improving the performance of underprovisioned IP Video Surveillance networks

Sharleen Joy Y. Go , Cedric Angelo M. Festin , Wilson M. Tan  

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<https://doi.org/10.1016/j.jnca.2019.01.026>

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Abstract

In the coming years, the dominance of video in global Internet traffic is expected to intensify.

Sample work



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Computer Communications



Volume 154, 15 March 2020, Pages 410-432



Opportunistic LoRa-based gateways for delay-tolerant sensor data collection in urban settings

Nikki John B. Florita, Alyssa Nicole M. Senatin, Angela Margaret A. Zabala, Wilson M. Tan  

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<https://doi.org/10.1016/j.comcom.2020.02.066>

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Abstract

There are several ways that sensor nodes in a smart city setting can get data to a base station for processing. Sensor nodes that need not report their data to the base station in real time can opt for a delay-tolerant networking or data muling setup. If the data

FEEDBACK 

Sample work

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Tangible Sharing, Invisible Mechanisms: The Design and Implementation of the BayanihaNets Access Sharing Network

Authors: Isabel Montes, Michelangelo Cruz, Augusto Remillano, Monica Villanoy, Lope Beltran, Roel Ocampo, Cedric Festin
[Authors Info & Claims](#)

GAIA '16: Proceedings of the 2016 workshop on Global Access to the Internet for All • August 2016 • Pages 19–24
• <https://doi.org/10.1145/2940157.2940161>

Published: 22 August 2016 [Publication History](#)



4 287



GAIA '16: Proceedings of the 2016 workshop

ABSTRACT



Major projects

PCARI-VBTS

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Commission on Higher Education- Philippine-California Advanced Research
Institutes

The Village Base Station (VBTS) Project



Major projects

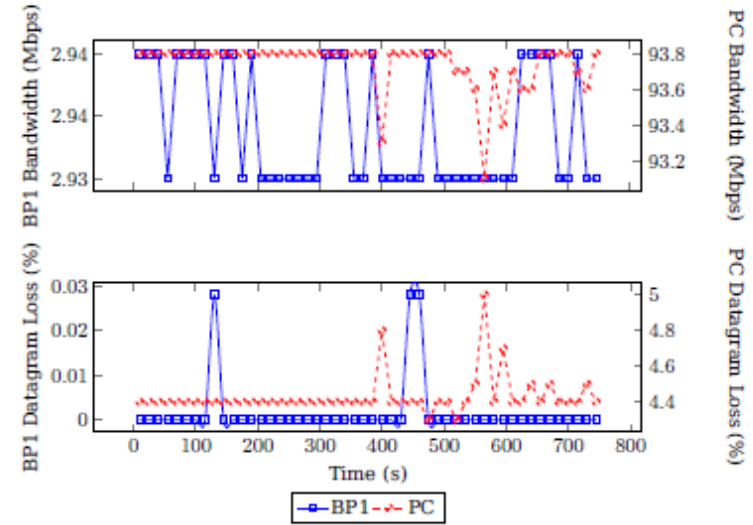
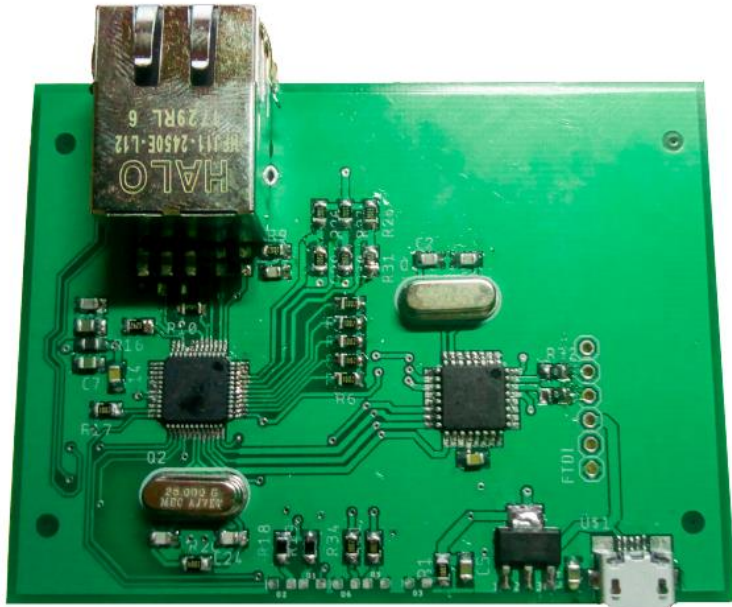


Figure 10: UDP Bandwidth Measurement Comparison Between the Basic Probe I and PC (left y-axis: BP1, right y-axis: PC)

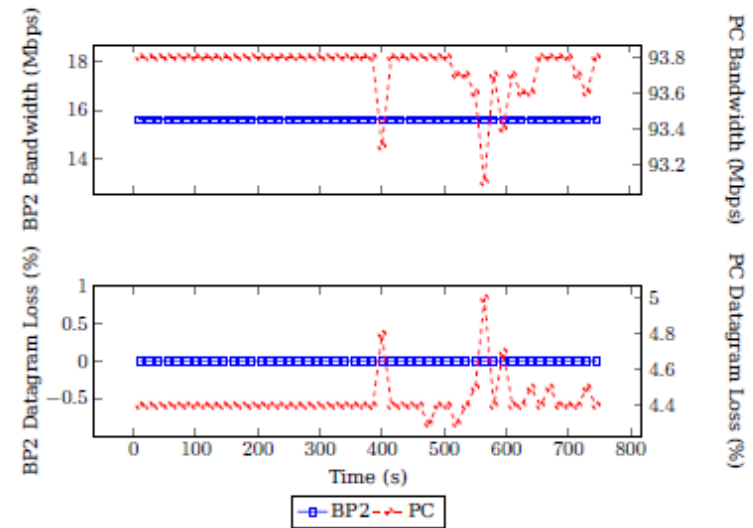
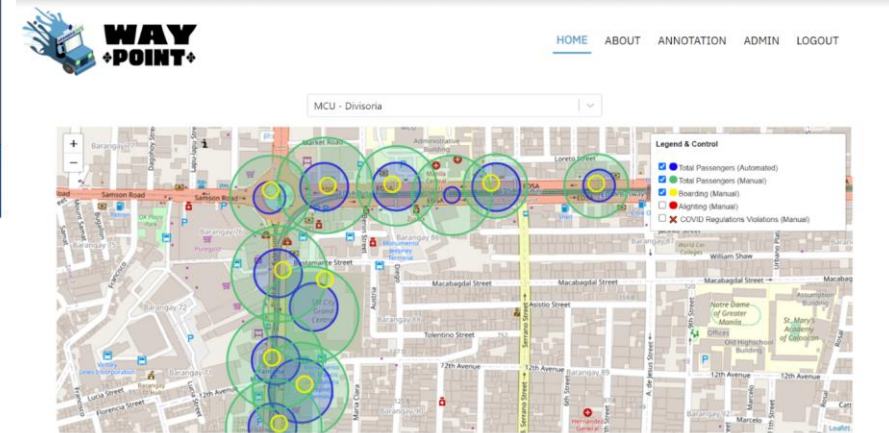
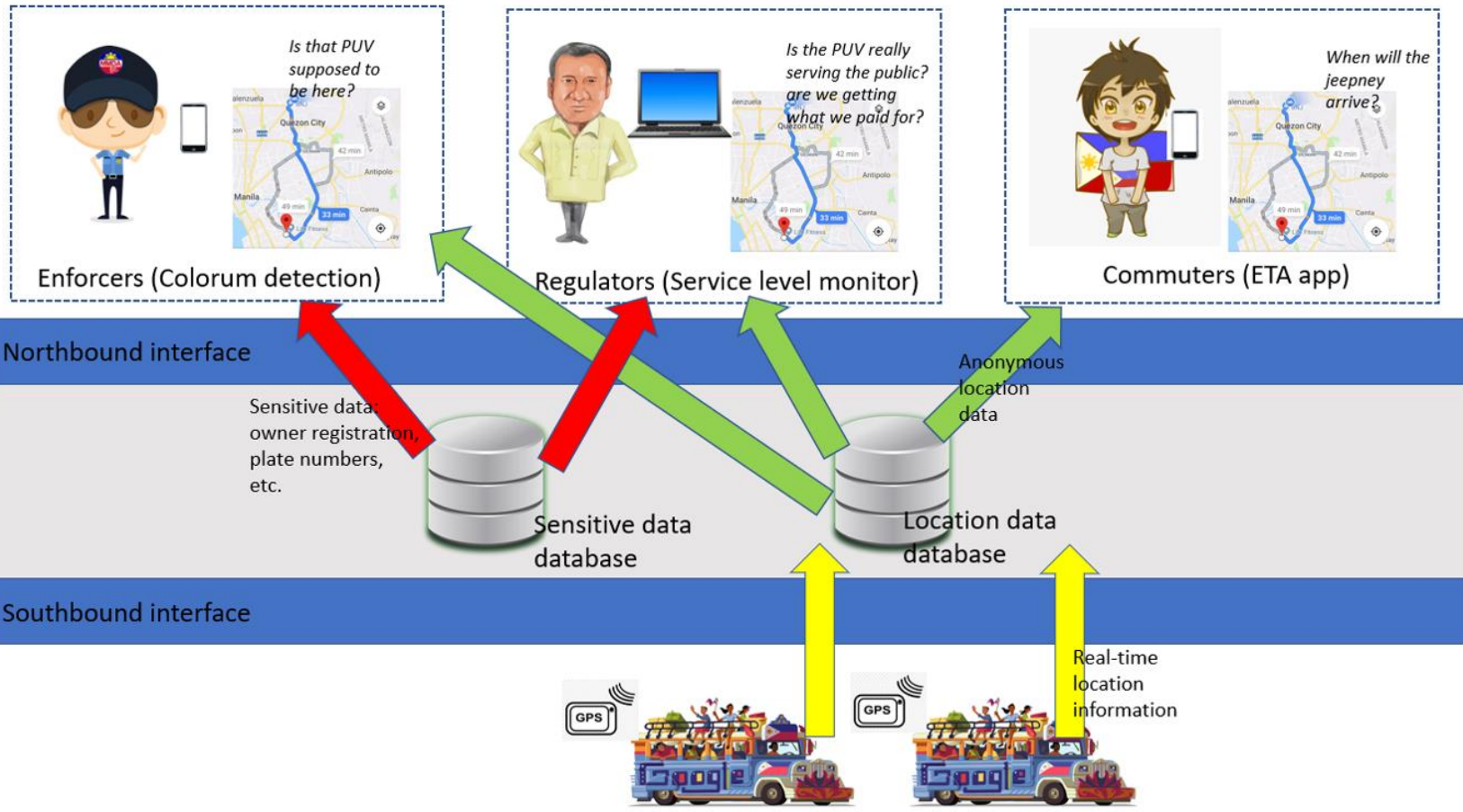


Figure 11: UDP Bandwidth Measurement Comparison Between the Basic Probe II and PC (left y-axis: BP2, right y-axis: PC)

Major projects



Ongoing project

- Help address the inefficiencies in the Philippines' Free WiFi program through efficient, timely gap or coverage identification

Home > DICT's P10B free public wifi project shoddy, says COA

DICT's P10B free public wifi project shoddy, says COA

By Peter Tabingo - July 21, 2022

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THE government spent P10.339 billion for the Free Wi-Fi for All Program of the Department of Information and Communications Technology (DICT) but got too little return for its money, with only 2,890 sites still operational as of April 13, 2022 out of 34,442 that the agency was supposed to put up.

From an initial funding of only P172.56 million in 2015, the DICT received over P10 billion more between 2016 to 2021, the Commission on Audit said.

It noted, however, that despite ample funding, at no time did the agency hit its target number of Wi-Fi sites in those six years.

Records showed the project had P1.325 billion in 2016, P3.317 billion in 2017, P1.66 billion in 2018, P1.445 billion in 2019, P1.371 billion in 2020, and P1.049 billion in 2021.

However, performance tabulation showed the DICT only put up 233 out of 1,313 target sites in 2016 (17.75 percent); 805 of 5,746 in 2017 (14.01 percent); 1,125 of 5,308 in 2018 (21.19 percent); 1,088 of

Facebook	13,889 Fans	LIKE
Instagram	540 Followers	FOLLOW
Twitter	2,451 Followers	FOLLOW
YouTube	0 Subscribers	SUBSCRIBE



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INTERNET IN THE PHILIPPINES

Only 882 of 6,000 sites covered so far under public Wi-Fi project

MAY 25, 2021 4:56 PM PHT

RAMBO TALABONG



LAST MILE CONNECTIVITY

ADDRESSING THE AFFORDABILITY FRONTIER

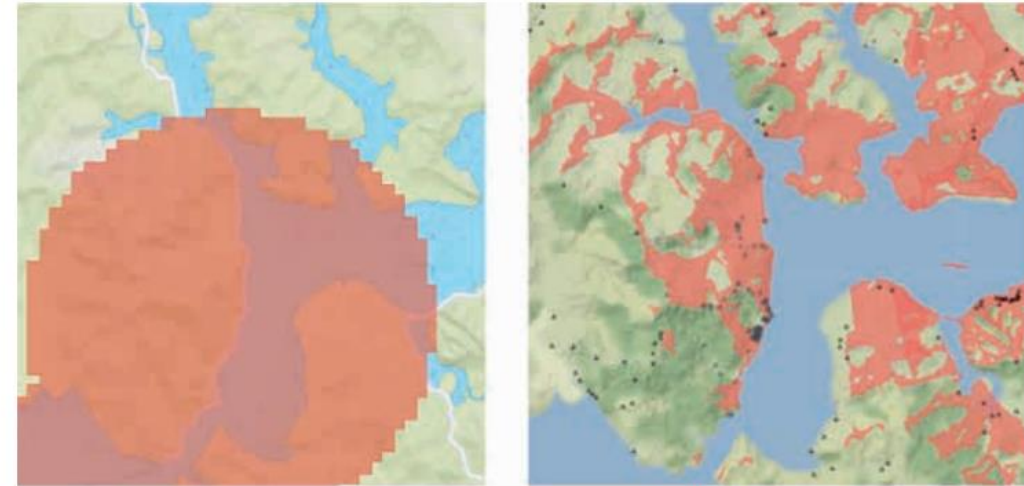
Jonathan Brewer, Yoonee Jeong, and Arndt Husar

NO. 83

December 2022

ADB SUSTAINABLE DEVELOPMENT WORKING PAPER SERIES

Figure 10: Carrier Supplied and Government Generated 4G Coverage Map



Low Resolution Coverage Model

High Resolution Coverage Model

Source: GSMA—Network Coverage Maps. Accessed 9 February 2022 at <https://www.gsma.com/coverage/#565> Author. Northland Broadband Map. Northland New Zealand Digital Enablement Group, 3 October 2021.

Physical space virtual tour

Thank you!