
Activity Report of ACECC TC28

Application of Monitoring Technology for Infrastructure Maintenance

Date 2023.3.01
Japan Society of Civil Engineers

1. Outline of TC

1.1 Objectives

Infrastructure is critical for economic prosperity, economic growth, and sustainable development. While many countries invest heavily in infrastructure construction, much less attention has been paid to maintenance work, which could generate a serious bottleneck to economic growth and public services in the long run. Utilizing new technologies for systematic infrastructure management is essential for both preventing accident and minimizing life-cycle-cost.

Civil Infrastructures have been constructed across the Asian region and maintenance has already become a big issue to be addressed. Although many monitoring technologies and products are developed, the administrators are struggling to choose technologies as the practical specifications are not sufficiently standardized. The objective of TC28 is to prepare the guidelines on the scheme for maintenance of infrastructures by demonstrating good use of monitoring technology for making maintenance works more sophisticated and efficient.

1.2. Terms of Reference

TC28 provides the guidelines and recommendations for utilization of monitoring technologies, which cover wide range of fields: namely, concrete decks, concrete beams, steel beams, salt environment, bridge piers and foundations, embankment and cutting slopes, and handling of monitoring data.

TC28 holds periodical meetings to share and discuss the maintenance and monitoring issues with members from various disciplines and sectors. Integration of knowledge and opinions leads to enhancement for quality of the guideline and practical applications of monitoring technologies in Asian countries.

1.3. Expected Outcomes

- ACECC guidelines for application of monitoring technology for infrastructure maintenance
- Reports on status and issues of maintenance and monitoring in the member countries
- Reports on introduction to latest technologies of monitoring and application examples
- Suggestions to promote practical applications of monitoring in Asia for the next generations

1.4. Period of Activity

October 2021 - September 2024 (3 years)

1.5. Members

Organization	Name	Affiliation
ASCE	Lian Duan	California Department of Transportation
ASCE	Chungwook Sim	University of Nebraska at Lincoln
CICHE	Tzu-Kang Lin	University of Yanming-Chiaotung
EA	Shane Scriven	Engineers Australia's Asset Management Council
IEB	A.F.M.Saiful Amin	Bangladesh University of Engineering and Technology
IEP	Shamsoon Fareed	University of Engineering & Technology
IEP	Wajahat Nassar	Inventories/Warehousing
KSCE	Chang-Su Shim	Chung-Ang University
KSCE	Robin Eunju Kim	Hanyang University
PICE	Benito M. Pacheco	University of the Philippines Diliman
VFCEA	Pham Hoang Kien	University of Transport and Communication
VFCEA	Le Thanh Binh	Anglia Ruskin University, UK Ho Chi Minh city University of Transport, Vietnam
JSCE (Chair)	Eiki Yamaguchi	Kyushu Institute of Technology
JSCE	Masaaki Nakano	Nippon Koei
JSCE	Tetsuro Goda	Nippon Koei

1.6. Financial Background

NA

2. Recent Activities and Outcomes

We had the session of TC28 in CECAR9. The agenda including speakers and time-schedule is shown in the table below. We had fruitful discussion on each topic with speakers and participants.

Time	Contents	Organization	Presenter
14:00 – 14:05	Opening	JSCE	Prof. Eiki Yamaguchi (on-site)
14:05 – 14:15	Introduction of TC28, Overview of Monitoring Guideline	JSCE	Dr. Masaaki Nakano (online)
14:15 – 14:30		KSCE	Prof. Robin Eunju Kim (online)
14:30 – 14:45	Current State of Infrastructure Maintenance and Monitoring in each association/society	CICHE	Prof. Tzu-Kang Lin (on-site)
14:45 – 15:00		IEB	Prof. A.F.M. Saiful Amin (online)
15:00 – 15:15		JSCE	Dr. Masaki Miyamura (online)
15:15 – 15:25	Discussion and Summarization	ALL	Prof. Eiki Yamaguchi (Moderator)
15:25 – 15:30	Closing	JSCE	Prof. Eiki Yamaguchi

3. Activity Plans

We will prepare the translated maintenance guideline of JSCE and distribute it to TC28 members. We will have discussions for adjusting the guideline to make it applicable in ACECC countries.