
Activity Report of ACECC TC28

Application of Monitoring Technology for Infrastructure Maintenance

Date 2023.7.26
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

One of the important purposes of TC28 is to make a monitoring guideline that can be employed in Asian countries. JSCE has a monitoring guideline for road and bridge infrastructures in Japan, and it could be an effective option to make TC28 version of guideline based on JSCE guideline.

The monitoring guideline of JSCE was translated to English and provided to TC28 members on 18th of July. We shared it with a questionnaire which contains 1) Questions regarding the state of maintenance and monitoring in each country, 2) Differences among countries regarding Chapter 1 General Provisions, 3) Questions regarding current state, challenges, and objectives of monitoring in each country, 4) Table of contents of the guideline, 5) Expectations of this TC, and 6) Others. We will make discussion based on the answers from TC members in the next TC meeting in September.

[illegible]

We had the 2nd meeting of national commission with Japanese National Commission members on 16th of June. The agenda is as follows; 1) Sharing past activities of TC28 (activity report on last year's TC28 meeting and CECAR), 2) Sharing the current progress on translation of JSCE monitoring guidelines, 3) Sharing the schedule of future TC activities, 4) Checking if there are any monitoring cases that can be introduced at TC28 in the future by the Japanese National Committee member, and 5) Gathering other opinions (topics for TC meetings, policy for ACECC guideline development).



3. Activity Plans

2nd TC meeting will be held in September. We will continue to make the ACECC version of monitoring guidelines. We will also have a session in the ECM next year (March or April @Phillipine).