

February 7, 2017
XYMAX Corporation
Optex Co., Ltd.

IoT in Building Maintenance Services – Joint Field Experiment Started

Project 1: Remote Monitoring of Building Signs and Preventive Maintenance with Sensing Technology

XYMAX Corporation ("XYMAX") and Optex Co., Ltd. ("Optex") collaborate in projects to develop new building maintenance services with Internet of Things ("IoT") technologies. As their first project, they started a field experiment, in which they use sensing technology to monitor the condition of building signs, and consider what kind of maintenance services are possible with this technology.

Maintenance services have a long checklist to inspect the condition of building, its facilities, workplace environment and other areas; those services are provided to keep the building safe, and such checklist is compulsory under the law. There is, however, no specific way to check the condition of signs on the exterior wall of buildings (except for the visual check). Old signs fell in many places across Japan and many local governments are trying to change their rules on outdoor advertising signs because accidents like this are expected to happen more often. One of the problems is that it is hard to inspect the condition of building signs because they are on the upper part of a building. The daily visual check alone is not enough to notice deteriorated areas and bad conditions since signs are used in a harsh environment (winds, rains, sunshine, etc.).

XYMAX and Optex are focusing on the monitoring of building signs and prevention of accidents: these areas have been neglected but are actually very important for the safety of buildings. Aiming to start services of remote monitoring and preventive maintenance of building signs, the two companies examine the effectiveness of the technology and potential services and identify possible problems.

XYMAX is a management and operation service provider for many properties and has the know-how in safety inspection, repair and maintenance. Optex has the sensing technology which can recognize human, vehicle, thing or condition; it works accurately even in a harsh environment. The two companies aim to provide new IoT services by combining their experiences.

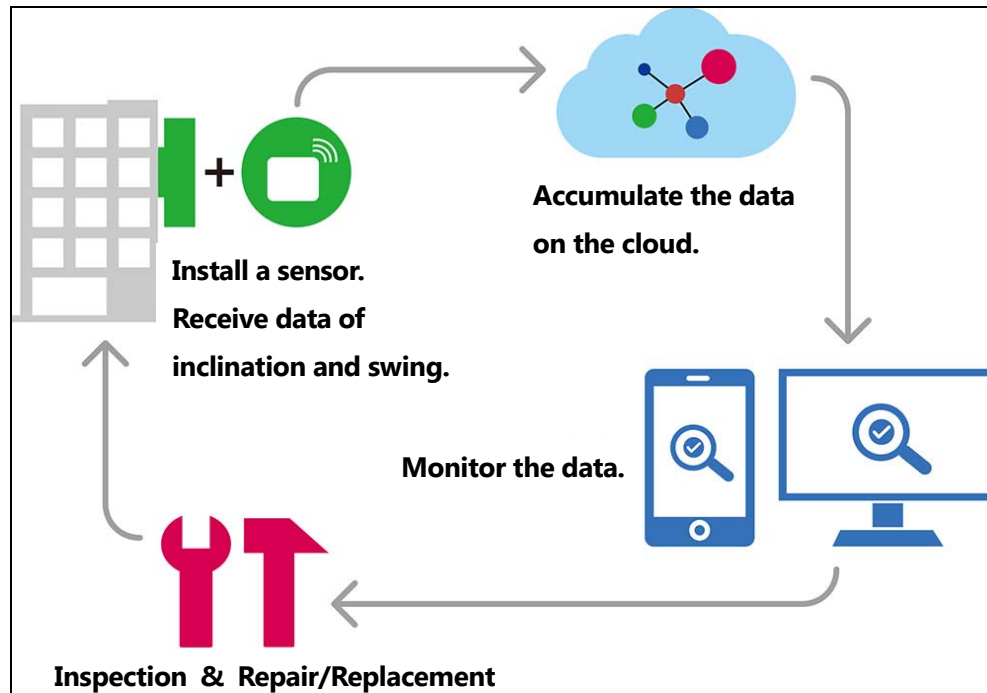
Field Experiment

We installed a sensor terminal on the building signs to measure the angle of inclination and swing, and we are accumulating such data. We have started the field test with 20 sensor terminals (11 in Tokyo, 6 in Aichi and 3 in Osaka). The installation and the durability of the sensor terminals are examined and data are gathered. The purposes of this field test are to check how useful the data is, perform technical test and establish the method of providing services.

Potential Services

We will accumulate the data of inclination and swing in cloud environment. The accumulated data indicates the changes over time. We will use this data and develop a life-time support service of building signs including daily remote monitoring, preventive maintenance planning, inspection and repairs.

System of Potential Services



Comments from Clients who agreed to install the Sensor for Our Experiment

Home appliance store

We check the building signs visually and by touch, but there is no guideline and it is difficult to judge with confidence whether the signs are alright. And, such check can only tell the condition at that point in time; it cannot predict what happens next. We are hoping that measuring and monitoring of the building signs with the sensor will be useful in making right decision to perform preventive maintenance and repairs.

Restaurant chain

We inspected the building signs on a periodic basis. Although we are willing to continue the appropriate maintenance, it is not easy because inspections need the aerial work platform truck as well as the permission to occupy the road. That is why only visual inspection is possible in a daily check. Even if we remove the exterior of the building signs and touch inside, such inspection is based on personal experience of the maintenance worker, which cannot be expressed in number, and there is no specific guideline. We are hoping that this experiment will be able to show the inclination and swing in actual number so that we can judge the condition more appropriately.

With the outcome of this field experiment and by solving problems, we will make further progress to achieve the practical use of the remote monitoring services and preventive maintenance services of building signs. We believe it is important to provide not only the analysis of the data but also value-added services because using the IoT (sensing technology, etc.) and advanced technology (IT infrastructure such as communications, cloud and AI) in the field of building maintenance can give a great impact on the workflow of the services. XYMAX and Optex will work together to design effective services with the use of IoT and contribute to the safety of buildings. We will build a reliable technology and system for providing the services as soon as possible.

Corporate Profile of XYMAX

Name : XYMAX Corporation
Head Office : 1-1-1 Akasaka, Minato-ku, Tokyo
Incorporation : March 1, 1990 (Spin-out from Recruit Co., Ltd.)
Capital : JPY 2,612,865,000
Head of Company : Masafumi Shimada, Representative Director
Business : Comprehensive real estate management services
Corporate Website : <https://www.xymax.co.jp/>

XYMAX holds the vision: "We will represent the real estate division of all the companies in Japan". The company aims to provide new real estate management services always from customers' view.

Corporate Profile of Optex

Name : Optex Co., Ltd. (Its holding company, Optex Group Co., Ltd., is listed on the first section of the Tokyo Stock Exchange)
Head Office : 5-8-12 Ogoto, Otsu city, Shiga prefecture
Incorporation : May 1979
Capital : JPY 350,000,000
Head of Company : Toru Kamimura, President & CEO
Business : Plan, develop, manufacture and sell various sensors and systems
Corporate Website : <http://www.optex.co.jp/>

Optex is a sensor manufacturer, developing products and applications using different kinds of sensing technologies for a wide variety of sectors including security, automatic doors, lighting and more. The company is one of the top suppliers of intrusion detection sensors and automatic door sensors in both global and domestic markets. With its high technology and product development strength, the company provides niche products and services globally. In recent years, the company is focusing on providing new solutions, which is to introduce IoT in business with the use of sensors and systems.

For further information, please contact the Overseas Business Department of XYMAX Corporation (Phone +81-3-5544-6840).