



Visit to Dexcom Malaysia

By Ir. Ts. Dr Tan Kim Seah and Ir. Dr Mui Kai Yin

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The IEM Electronic Engineering Technical Division (eETD) has hosted a technical visit to Dexcom Malaysia Sdn. Bhd. in Batu Kawan, Penang on 22nd March 2023. The visit was led by Ir. Dr. Mui Kai Yin (eETD Chairman Session 2023/2024), and was attended by a total of 17 delegates from IEM.

The visit began with a warm welcome from Mr. Columba McGarvey, Vice President of Operations, and Ts. Ooi Su Yang, Director of Engineering. Mr. McGarvey and Ts. Ooi are the pioneering leaders at Dexcom Malaysia, responsible for establishing a new manufacturing facility on 28 acres of land at Batu Kawan Industrial Park, Penang, back in 2020. This startup represents an investment of more than US\$500 million and is expected to create over 2,500 new jobs in the coming years.

The visit continued with a technical presentation by Ts. Ooi Su Yang on Dexcom's vision and mission, followed by an introduction to their products and manufacturing capabilities. Dexcom was founded in 1999, headquartered in San Diego, California, with employed approximately 8,000 people worldwide. The company is a pioneer in developing and marketing Continuous Glucose Monitoring (CGM) systems for ambulatory use by people with diabetes and healthcare providers. Dexcom is a leader in transforming diabetes care and management by providing CGM technology to help patients and healthcare professionals better manage the condition. Since its inception, Dexcom has focused on delivering solutions that are best in class—aiming for better outcomes for patients, caregivers, and clinicians and empowering the community to take control of diabetes.

During the technical presentation, Ts. Ooi explained how CGM systems track glucose levels throughout the day and night, alerting patients if their glucose levels become too low or too high. CGM measures glucose levels at regular intervals, as frequently as every five minutes, translating the readings into easy-to-understand data and insights accessible through smart device apps. This advanced medical technology has transformed the way doctors and patients engage in diabetes treatment and management, reducing the risk of diabetes-related complications, improving overall health, and reducing healthcare costs.

The presentation provided new insights for IEM members about diabetes treatment that traditionally reliant on daily painful finger-sticking for glucose monitoring. With Dexcom CGM, doctors and patients can make better decisions regarding diet and insulin injections, simplifying diabetes management. Although the IEM members were excited about this emerging healthcare technology, the unfortunate news is that CGM is still uncommon in the Malaysian healthcare system. The technology will require time for approval from healthcare authorities, but it is hoped that Malaysians will benefit from this technology soon.

After the informative presentation and discussion, IEM members were given the opportunity to tour various manufacturing facilities within the plant, including Dexcom's new facility, the manufacturing of sensors, the assembly process of the CGM device, and warehouse operations. The technical visit concluded with a group photograph and the presentation of a token of appreciation to the host.



Figure 1. The group photograph of IEM members and the host from Dexcom Malaysia.



Figure 2. IEM Representatives present token of appreciation to the host, Ts. Ooi Su Yang.