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work for you

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THE NEW BANDWAGON.

Meet the Department of Science and Technology's Hybrid Electric Road Train – a 40-meter-long train-like bus composed of four interconnected coaches that can accommodate up to 60 passengers and run up to 50 kph. It is set to hit the roads of Clark Airbase in Angeles City, Pampanga for initial testing this September.



DOST's road train rolls off to vehicle test

By RYAN KESTER MANSION
S&T Media Service, *DOST-STII*

The Department of Science and Technology's (DOST) Hybrid Electric Road Train will hit the road at the Clark Airbase in Angeles City, Pampanga this September for road worthiness tests before rolling out in Metro Manila's major highways.

Designed by Filipino engineers and made with locally available parts, the 40-meter long train-like bus is an alternative means of transportation and one of DOST's answer to the mass transportation dilemma in metro roads.

The road train is composed of four interconnected fully air-conditioned coaches that can accommodate 60 passengers per coach for a total of 240 commuters per ride.

DOST Secretary Mario G. Montejo estimates that the road train can serve 650,000 commuters when fully implemented. "This will happen after its testing phase which will take two to three years," he said.

Launched last August 22, 2014 the road train can run with a maximum speed of 50kph. It is mainly powered by hybrid diesel fuel and electric-powered battery. Moreover,

the train is designed to be energy-efficient, which means it does not need electricity and suspended cables to operate. This newest Filipino innovation also produces less smoke emission compared with existing mass transport vehicles, making it an eco-friendly mode of transport.



STRESS-FREE RIDE. The DOST Hybrid Electric Road Train is composed of four interconnected fully air-conditioned coaches. Each coach can accommodate 60 passengers, serving 240 commuters per trip.

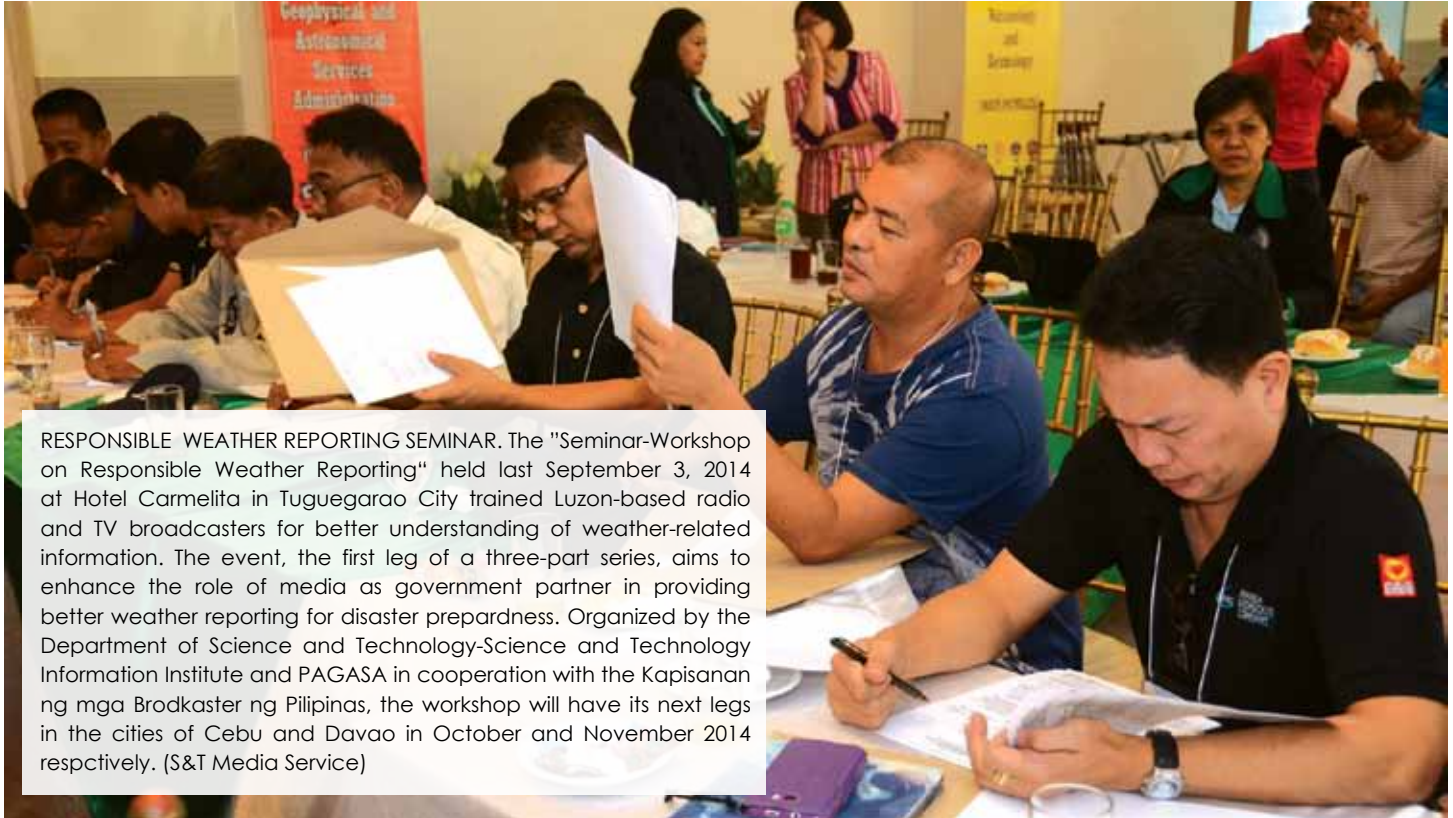


PINOY-MADE, ENVIRONMENT-FRIENDLY.

Using local materials, the Department of Science and Technology develops a solution to Metro Manila commuters' daily ordeal – the Hybrid Electric Road Train. Designed by Filipino engineers, the road train is powered by hybrid diesel fuel and electric-powered battery.

Broadcasters train up for responsible weather reporting

By JOY M. LAZCANO & ALLAN MAURO V. MARFAL
S&T Media Service, DOST-STII



RESPONSIBLE WEATHER REPORTING SEMINAR. The "Seminar-Workshop on Responsible Weather Reporting" held last September 3, 2014 at Hotel Carmelita in Tuguegarao City trained Luzon-based radio and TV broadcasters for better understanding of weather-related information. The event, the first leg of a three-part series, aims to enhance the role of media as government partner in providing better weather reporting for disaster preparedness. Organized by the Department of Science and Technology-Science and Technology Information Institute and PAGASA in cooperation with the Kapisanan ng mga Brodkaster ng Pilipinas, the workshop will have its next legs in the cities of Cebu and Davao in October and November 2014 respectively. (S&T Media Service)

Tuguegarao City- Broadcasters went on a crash course to better understand weather terminologies and codes, and properly disseminate weather news via easy to understand, non-technical, non-scientific, and detailed mode of reporting. Dubbed "Responsible Weather Reporting" said event held in this city was the Luzon leg of the three-part nationwide seminar-workshop spearheaded by the Department of Science and Technology's information arm, the Science and Technology Information Institute (STII), in partnership with DOST-Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA) and in cooperation with the Kapisanan ng mga Brodkaster ng Pilipinas (KBP).

During the seminar-workshop, DOST-PAGASA gave a timely lecture on prevailing weather disturbances as the country is already in the so-called "wet season" which is experienced from the month of May to October. This season brings in heavy rainfall with an average of 5,000 millimeters (196.9 inches).

"There is no such thing as 'summer' in the Philippines," stated Sharon Arruejo, Sr. Weather Specialist of DOST-PAGASA, which surprised most workshop participants.

"We have only two seasons, the dry and wet seasons which happen in January to March, and April to December, respectively," she explained.

Arruejo briefed broadcasters on various weather conditions and terminologies used in weather reporting such as inter-tropical convergence zone, monsoon rains, hale storm, microburst, tropical cyclone, and thunderstorm, among others. Such knowledge gained by participants is expected to help them effectively prepare and deliver weather news that is easily understood by the public.

DOST-STII Chief Science Research Specialist Aristotle Carandang explained the need for broadcasters to understand very well the complex weather conditions so as not to become alarmist during inclement weather. He added that the media are the partners of the government and disaster response units in raising public awareness on the different

types of hazards and their potential impact on communities. Thus they should know the facts and deliver the right information since lives depend on what they say on air, he said.

"The media has the responsibility to ensure that the dialogue it builds with the public can lead to a better understanding of the dangers and impact of the hazards so the public can be equipped with the proper information and can prepare accordingly," he added.

He noted that the issue was more than translating news from English to Pilipino, in order to enable the public to make important decisions.

"Laymanizing does not mean translating from English to the vernacular. For example, the term 'storm surge' may be explained as is without translating it to 'daluyong'." What people expect is information that will empower them in making decisions in times of disasters," Carandang explained.

The next leg of the seminar-workshop is in Cebu during the Visayas Cluster Fair in October and in Davao City in November.

DOST-PSHS system now use education apps in its campuses

By ALLAN MAURO V. MARFAL
S&T Media Service, DOST-STII



Students of the Department of Science and Technology's Philippine Science High School System (DOST-PSHS) now have more ways to enhance their learning experience and make learning easier and more enjoyable via Google apps for education. The apps, a suite of free tools for faster and easier collaboration and communication, were recently deployed

by the system to all 13 PSHS campuses nationwide.

"The successful deployment of Google apps for the whole DOST-PSHS not only ensures a collaborative environment, but also brings in new learning horizons to students by enabling them to reach out to new knowledge beyond classroom settings," said Dr. Allan Rod De Lara, deputy executive director and officer-in-charge of DOST-PSHS. "This is a clear step to aid the learning experience of our students and to achieve PSHS's goal of being in rank with top science schools in Southeast Asia."

The apps include Google Hang-out, Gmail, Google Drive, and Calendar which were all demonstrated live during the PSHS-hosted "Gone Google Program for K-12 schools."

Using the apps provides mobility as users are able to collaborate from anywhere, inside or outside the campuses, on any computer and mobile device with an internet connection.

The apps are also free and thus reduces expenses and eliminates time spent in buying, maintaining, and patching software and servers.

Moreover, using the apps also promotes teacher innovation as they constantly develop and share new innovative ways of enhancing learning.

"By allowing more schools to gain tools that will provide them with an efficient instruction of learning, we secure an education environment where knowledge is readily available to many," said Samuel Cheung, regional manager of Google for Education.

Google Philippines also donated 180 tablet devices to selected PSHS campuses, enabling students, teachers and administration personnel to interact with one another more conveniently no matter where they are or what kind of mobile gadget they are using. The app will also enable them to streamline their academic tasks.

Several education institutes such as Department of Education, Commission on Higher Education, and Technical Education and Skills Development Authority have also migrated to Google apps for education.

Aside from DOST-PSHS, Ateneo De Manila University-High School, Xavier University- High School, Peref Woodrose, Xavier School, Berkeley School, Immaculate Conception Cathedral School, St. Joseph Catholic School, Sto. Niño Parochial School, Our Lady of Hope Parochial School, and Holy Family Parochial School are also set to use the Google apps for education in their education management system.

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DOST launches food innovation hub in Tuguegarao

By JOY M. LAZCANO
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The Department of Science and Technology (DOST) Regional Office II launched the Food Innovation Center (FIC) during the opening day of the Northern Luzon Cluster Fair at the Cagayan State University - Carig Campus, Tuguegarao City, Cagayan. The Center is envisioned to help transform the agriculture-based Cagayan Valley into a food processing haven. A one-stop-shop food research and development center, it aims to improve the region's local food products to reach a sizeable share of the local and national markets.

Housed at the Center are locally developed food technology equipment designed to fit the needs of the local industry. Among such equipment are the vertical fill form seal for the packaging of solid food products; vacuum packaging for meat and dried fruit products; freeze dryer for dehydrating heat-sensitive food products; vacuum fryer.

Water retort for sterilizing glass and PET or polyethylene Terephthalate bottles; spray dryer for making powdered products; pulverizer/grinder for grinding corn, nuts, rice, and other grains; deep fryer for frying chips, crackers, and fries; dough mixer, noodle maker; noodle cutter; and single-screw extruder that is used in filling snacks and breakfast cereals.

According to DOST II Regional Director Urduja Tejada, Cagayan Valley may still be relying heavily on its agricultural products but it is now time to add more value to crops through processing and product development. On the competition in the processed food



(L-R): TAPI Director Edgar I. Garcia, CSU President Romeo A. Quilang and Tuguegarao Vice Mayor Engelbert C. Caronan try the great-tasting but healthy vacuum fried okra and potatoes processed in the locally-developed vacuum fryer. The fryer and other DOST-developed food processing equipment are the main facilities in the Food Innovation Center recently launched at the Cagayan State University-Carig campus. The Center, the second of its kind in the country, is expected to spur the growth of the food industry in Luzon. (S&T

sector in the local market, Dir. Tejada is positive that with the Center, more local small entrepreneurs in the region will be able to create new products and expand through the equipment and services offered by the Center.

Aside from the food technology equipment, other services offered by the Center include the use of the research and testing laboratory, technology information system, trainings, consultancies, and packaging and labeling.

Mentioning the ubiquitous banana chips as an example, Dir. Tejada says that through the Center, the product packaging and label, usually plastic and photocopied paper respectively, can now be made more durable, attractive and competitive in the market.

"The product can also undergo shelf-life testing, nutritional labeling, food quality and safety testing," she says.

Meanwhile, CSU Chief Executive Officer Archimedes Articulo says that the Center can be a venue for the University to perform its various functions, such as instruction, research, extension and production, benefitting the students, faculty, community, enterprises, and cooperatives.

The Food Innovation Center at the CSU is the first in Luzon and second in the country, with the pioneering Center launched in Davao City last May. Another Center is expected to be established soon in the Visayas Region. (S&T Media Service, DOST-STII)

INFOCUS



University patent agents. The Department of Science and Technology-Technology Application and Promotion Institute (DOST-TAPI) Director Edgar Garcia (2nd from right) and Adamson University (ADU) Vice President for Administration Venusmar Quevedo (3rd from right) formalize their agreement that will facilitate the patent experts and patent claim writers from ADU to evaluate the DOST technologies patent applications. TAPI assists in the patent application of inventors and students from universities and colleges by providing a package of assistance-- from patent writing to filing. Also in photo are ADU intellectual property officer Anna Ramos (leftmost) and ADU Director for Institutional Planning and Policy Development Office Noe Enriquez (rightmost). (S&T Media Service, DOST-STII)