Sponsor

Continental Engineering Corporation
Tel : (02)3701-1000
Mail : jjy@mail.cec.com.tw
Website : www.cec.com.tw

Taiwan Hitachi Company Limited
Tel : (02)25083311
Mail : sales@taiwan-hitachi.com.tw
Website : www.taiwan-hitachi.com.tw

Formosun Solar Corporation
Tel : (03)696-0089
Mail : sales@formosun.com
Website : www.formosun.com

Japan Advanced Technology Operations
Tel : (02)2325-6932
Mail : sales@jato-it.com
Website : www.jato-it.com

Suikoh Topline Company Limited
Tel : 0988-692-800
Mail : ccyang@suikohtl.com
Website : www.suikohtl.com

Ho Loung Ceramic Company
Tel : (03)569-2516~8
Mail : ericwu@holoung.com.tw
Website : www.holoung.com.tw

Yushi Industrial Company Limited
Tel : (02)2535-4857
Mail : yushi.glass@msa.hinet.net
Website : www.yushi.com.tw

Yung Chi Paint & Varnish Mfg. Company
Tel : (07)8713181
Mail : www@mail.rainbowpaint.com.tw
Website : www.rainbowpaint.com.tw

Jin Hua Chen Metal Engineering Company Limited
Tel : (06)279-4100
Mail : jhcjhc@ms23.hinet.net
Website : www.jhcsolar.com.tw

Asian Populace Marketing Company Limited
Tel : (02)7711-6622
Mail : apmled@hotmail.com
Website : apmwww.com

Chinamay Aluminium Company Limited
Tel : (02)2264-8800
Mail : chinamei@ms6.hinet.net
Website : www.chinamay.com.tw
www.miwha.com.tw

Automatic Saving Energy Navigator System
Tel : (02)2218-7079
Mail : LLT0109@gmail.com
Website : www.A-SENs.com.tw

Jing Gang Development Company Limited
Tel : (03)378-8888
Mail : jing.gang01@msa.hinet.net
Website : www.swan.tw

Suntech Solar Technology Company Limited
Tel : (04)2681-9279
Mail : service@suntek.com.tw
Website : www.suntek.com.tw

Consumer Technology Industrial Company Limited
Tel : (02)26953043
Mail : danny@ctitw.com.tw
Website : www.ctitw.com.tw

I-Tser Trade Company Limited
Tel : (02)2298-1000
Mail : liu@mail.i-tser.com.tw
Website : www.i-tser.com.tw

Drinfo Tech Company Limited
Tel : (03)3567819
Mail : service@drinfohouse.com.tw
Website : www.drinfohouse.com.tw

Nichiha Corporation
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Mail : kaigai@nichiha.co.jp
Website : www.nichiha.co.jp

Hocheng Corporation
Tel : (03)362-3105#3382
Mail : kkct@hcgnet.com.tw
Website : www.hcg.com.tw

Charles Tu Structure Engineers Association
Tel : (02)2298-1000
Mail : tu.chanher@msa.hinet.net

General Industrial Company Limited
Tel : (02)2562-2338#22
Mail : gn8.general@msa.hinet.net
Website : www.gicl.com.tw

Stanley Glass Company Limited
Tel : (02)2432-1288
Mail : service@stanleyglass.com.tw
Website : www.stanleyglass.com.tw

Living Water In Spring International Company Limited
Tel : (06)299-5500/(02)2201-9500
Mail : living-water@umail.hinet.net
Website : www.archi.net.tw/vipweb/5934

Giant Lion Know-How Company Limited
Tel : (02)2731-1608
Mail : giantleo@ms24.hinet.net
Website : www.giantleo.com.tw

EAG HOUSE

EAG House

EAG HOUSE

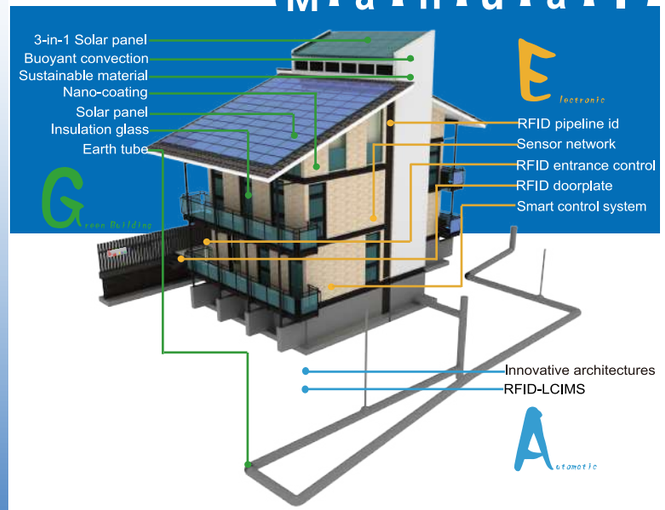
Architecture and Building Research Institute, Ministry of the Interior

National Taiwan University of Science and Technology

Website : http://www.eag.tw/

EAG HOUSE

Manual



EAG HOUSE

Architecture and Building Research Institute,Ministry of the Interior

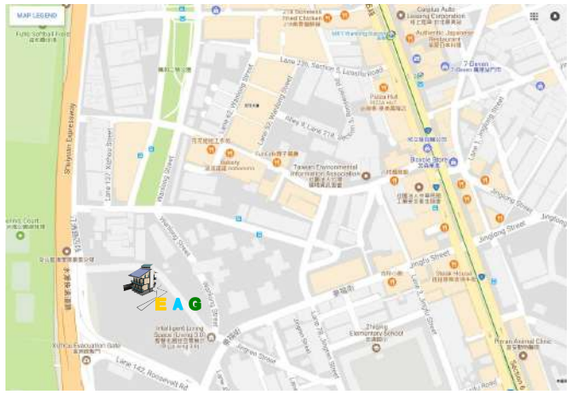
National Taiwan University of Science and Technology

Advertisement of Architecture and Building Research Institute, Ministry of the Interior.

Show Room Map

EAG HOUSE

2F., No.102, Jingfu St., Wunshan District,
Taipei 116, Taiwan (R.O.C.)
Tel:02-2930-0575 Fax:02-2930-0528



Traffic Information

Personal Vehicle to EAG House :

- **Drive Car**
  Shuiyuan Expway. (to Xindian) --> (turn left)
  Ln. 142, Sec. 6, Roosevelt Rd. --> (turn left) Jingfu St.

- **MRT**
  Wanlong MRT station. Exit No.1 --> Walk along Sec. 6, Roosevelt Rd. around 5 minutes --> (turn right) to the end of Jingfu St.

- **Bus line**
  Take buses as follows and get off at Wanlong MRT station, then walk to the EAG House.
  No. 251, 252, 253, 278, 290, 290 (vice-line).
  No. 505, 642, 643, 644, 648, 648 (green-line), 650, 660, BR 6, G 13

EAG House

A. Abstract

In the 21st century, the use of information technology has exploded. RFID has been recognized as one of the top 10 technologies most worth watching. RFID is a kind of wireless radio frequency signal that automatically identifies the target object so that every object is just like a person with its own clear and complete ID and history. Currently, advanced countries around the world have already begun using RFID technology in industries such as inventory management, medical treatment, baggage management and entrance control management, etc.

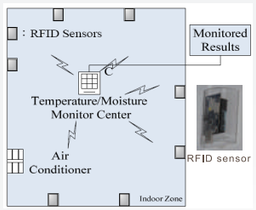
In Taiwan, The Architecture and Building Research Institute, Ministry of the Interior cooperated with National Taiwan University of Science and Technology on a project called “Application of RFID System in The Construction Life Cycle.” In this project, an Open Building, EAG House, was built. EAG house was planned as a three-floor building. It uses a panel structure system for its structural model and the standard modular components that are prefabricated in the factory and then transported to a designated site for installation.

B. The meanings of EAG

What is the EAG House? And what ideas and concepts does the EAG House represent? We can look at E, A and G three letters.

E Electronic-E

E-electronic management have five main issues. First, develop an RFID entrance control management system to effectively control the entrance and exit of personnel. Second, integrate the preceding achievements to develop RFID-controlled air-conditioning sensors that reduce energy consumption. Third, construct RFID door plates for building management and land administration work. Fourth, use RFID to locate existing pipelines and avoid damaging pipelines during remodeling and renovation projects. Fifth, establish an RFID counterfeit prevention mechanism for steel sampling tests that prevents steel bars from being secretly switched before construction.

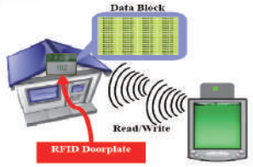


▲ RFID-controlled air-conditioning sensors

▲ RFID entrance control system

▲ Pipelines with RFID tag

▼ RFID door plates

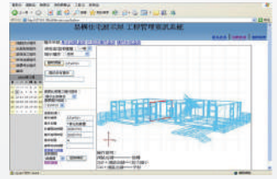


▲ Smart control system

A Automatic-A

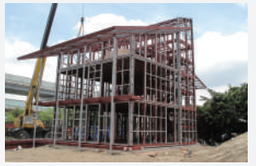
A is for automatic. The first half of the building’ s life cycle include planning, design, manufacturing, and construction phases, integration RFID technology and 4D animation is used to manage materials and construction. The second half of the building’ s life cycle are the phases of maintenance, recycling, and reuse. RFID tags are used to record and manage the building’ s history. This information is used for building recycling and reuse.

▲ EAG House 1:30 model



▲ Real-time construction monitoring system

▲ RFID real time monitor



▲ Spending 3.5 days on the construction installation

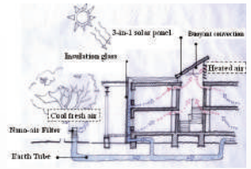
G Green Building-G

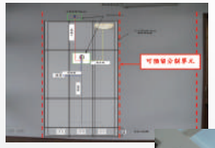
Last, G is for green building. This refers to use green building materials. The building uses Nano-coating self-cleaning materials that reduce the maintenance costs for cleaning the exterior wall. To meet reconstruction, extension, and relocation needs, the building panels can be disassembled and reassembled achieving an ideal of sustainable reuse and recycling.

Besides, green building uses solar energy to reduce electricity consumption. By using insulated glass, the building can be protected from fluctuations by the outside temperature. By using a buoyant convection combined with earth tubes, lower temperature air from the earth can be brought in from the earth tube and hot air can be expelled from the chimney to keep the building cool in the summer and warm in the winter.

▼ Exterior -wall use Nano-coating

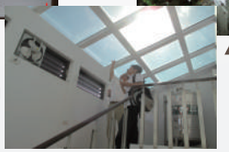
▼ Air circulation mechanism





▲ The building panels can be disassembled and reassembled

▲ Entrance of the earth tube



▲ 3-in-1 solar panel