



NCIO

F.L.I.P.

Family Library Interchange Program

建築信息模型族庫交換計劃

Presented by
David Fung
Managing Director, A.C.I.D.

1.0 Background

1.1 F.L.I.P. – Family Library Interchange Program 建築族群交換計劃

A co-operative project between Autodesk Far East Limited and Advanced Consultation Development(ACID) to promote BIM application



Supported by:



1.0 Background

1.2 Why do we need a suitable component?



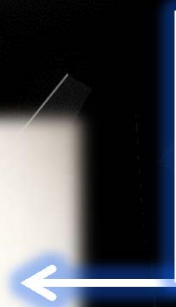
Component A



Component B



Target



1.0 Background

1.3 Existing problems:



- US Safety Standard
- Left-hand Driving
- Imperial Measurements (mph, lb, hp)

Default Library (US Platform)



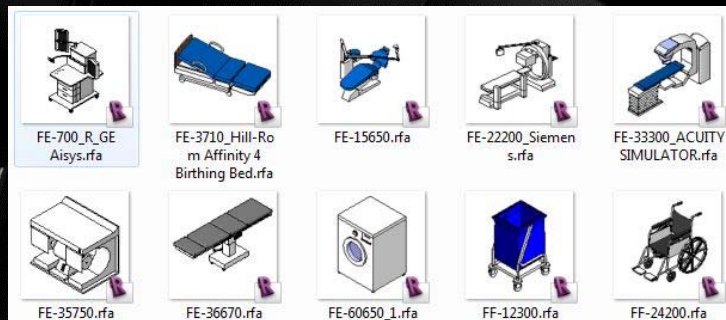
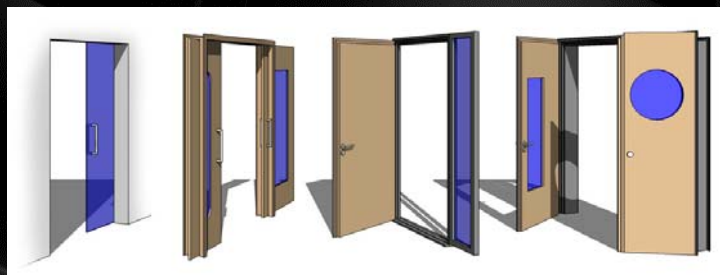
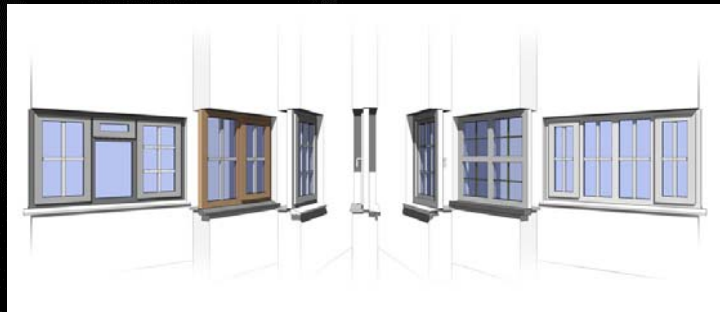
- Local Safety Standard
- Right-hand Driving
- Metric Measurements (km/h, kg, kg-m)

Components with Local Practice

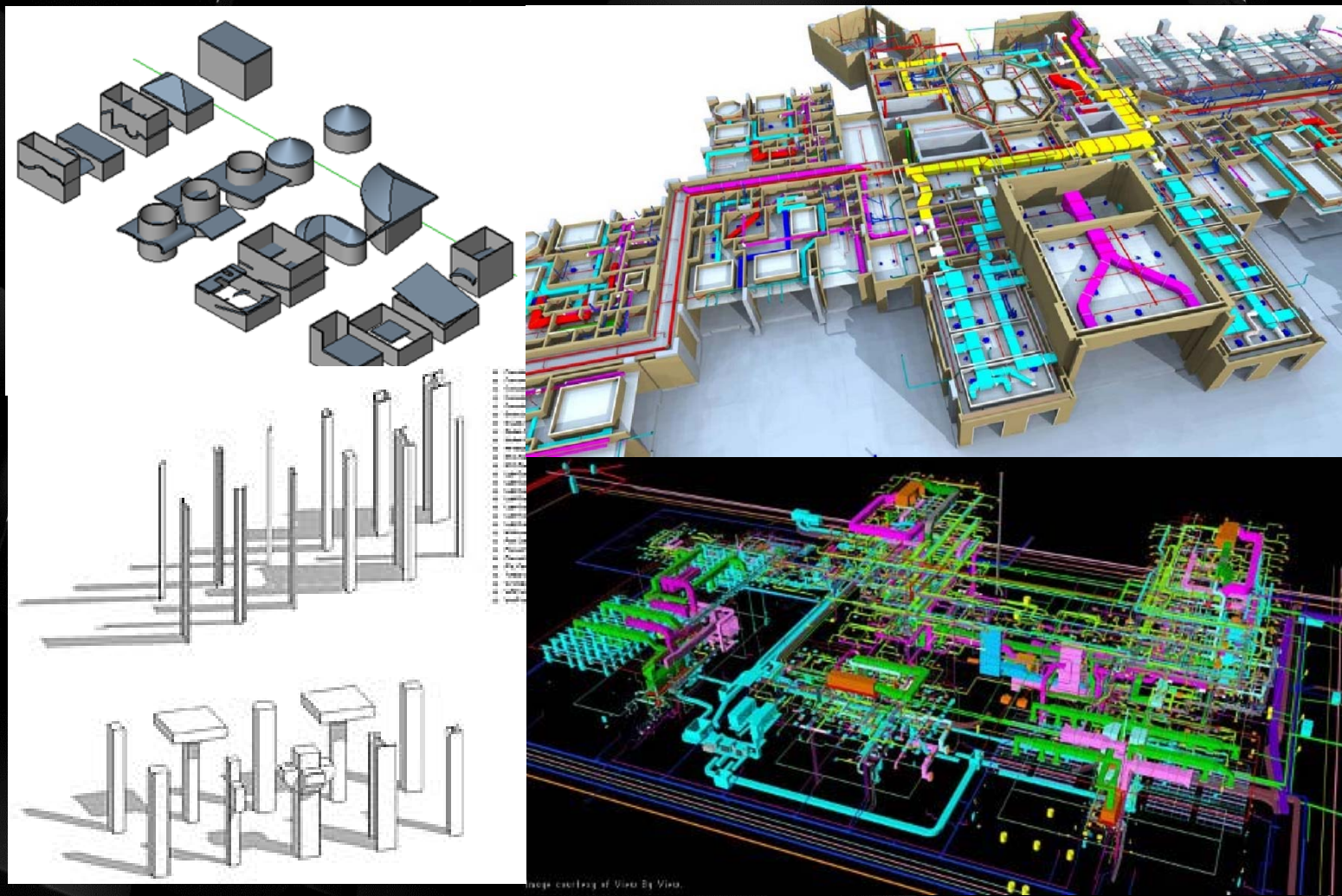


Project in HK

1.0 Family – 建築信息族群

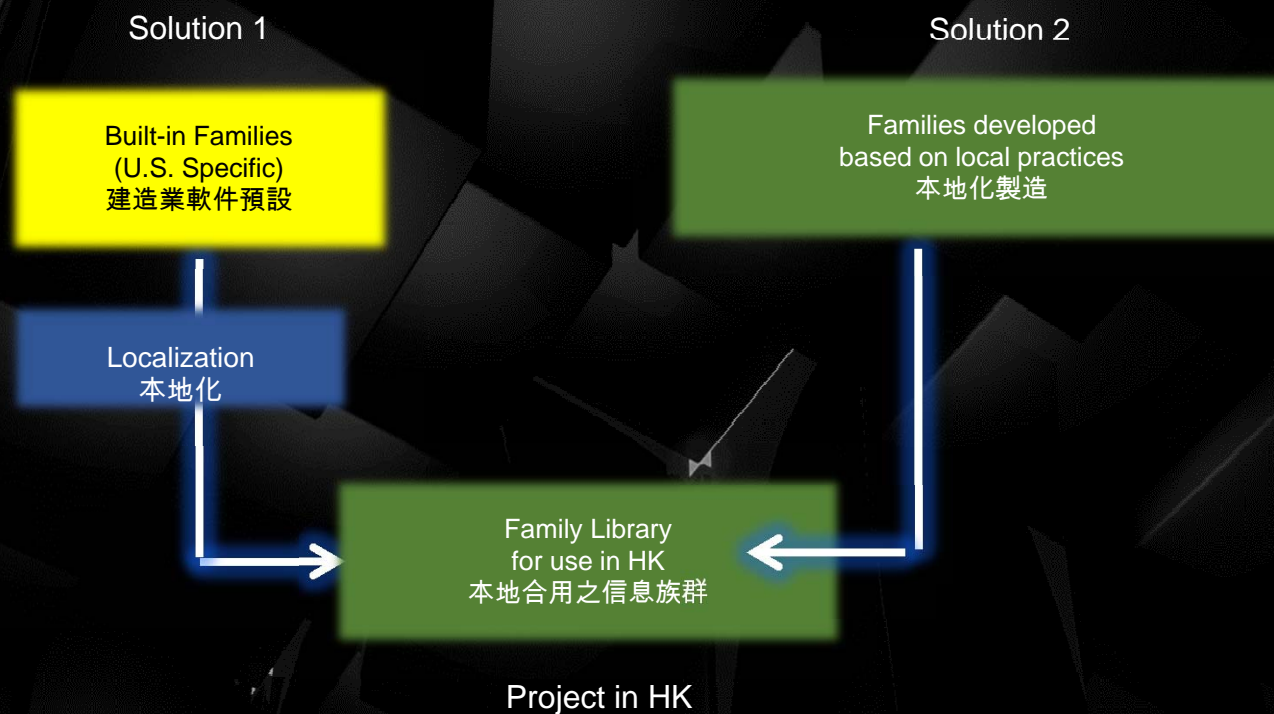


1.0 Family – 結構/機電信息族群



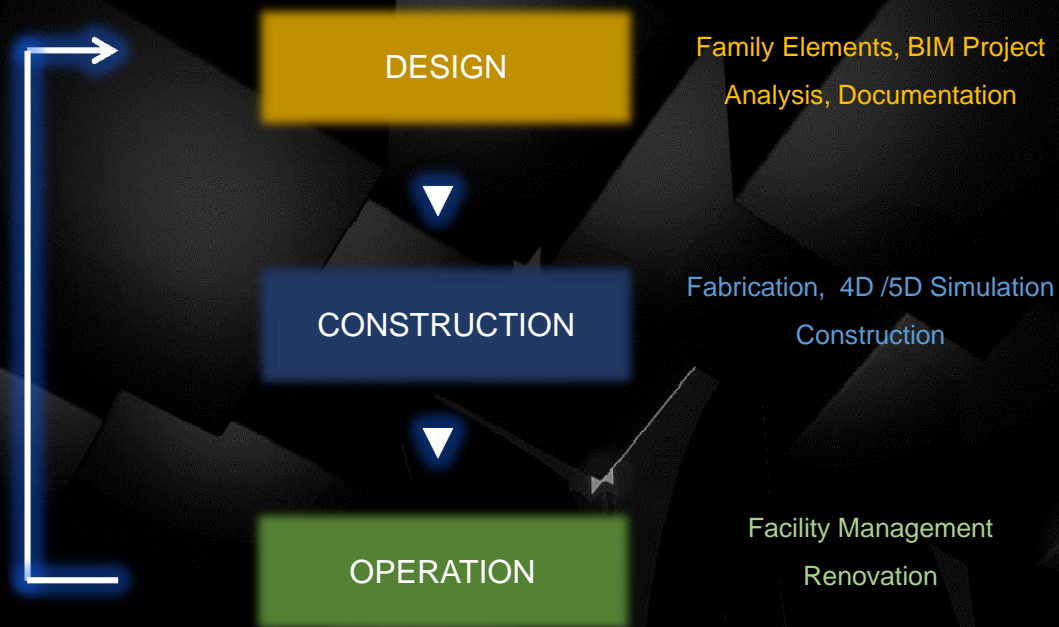
2.0 Developing the Family Library 模型族庫

2.1 Development and localization of Family 本地化過程



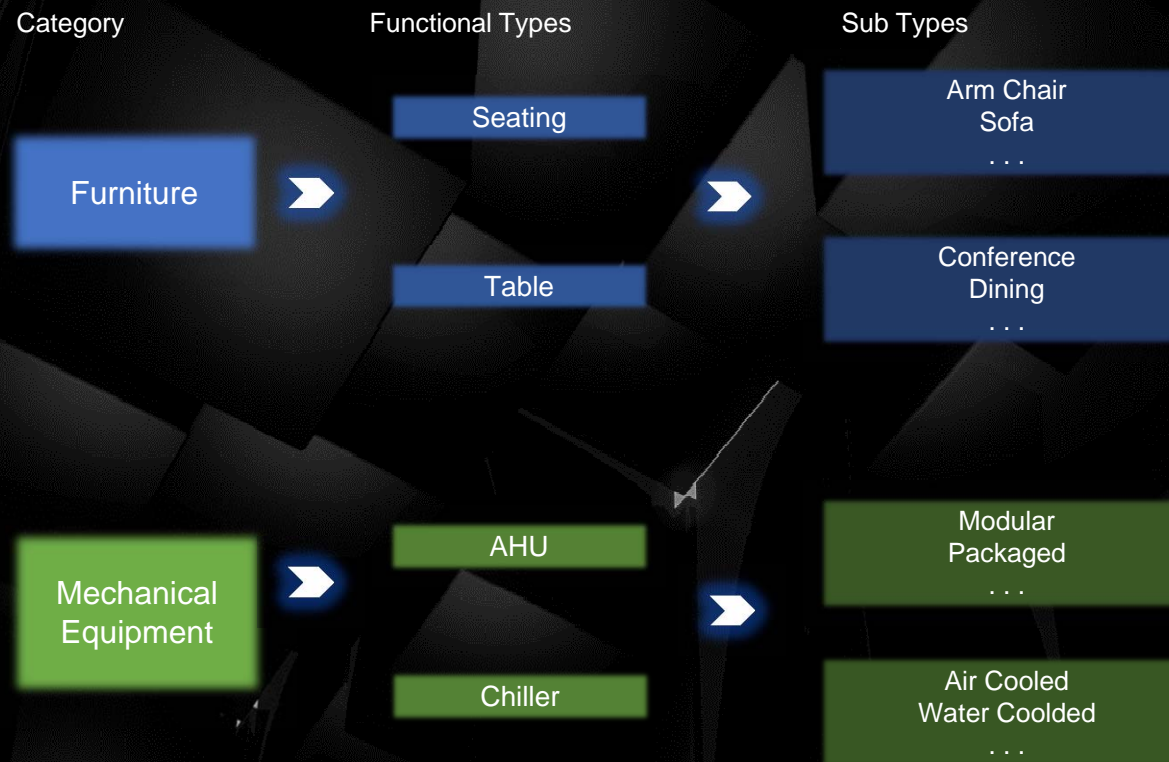
2.0 Developing the Family Library 模型族庫

2.2 Family – Origins of the BIM Process 成果主導



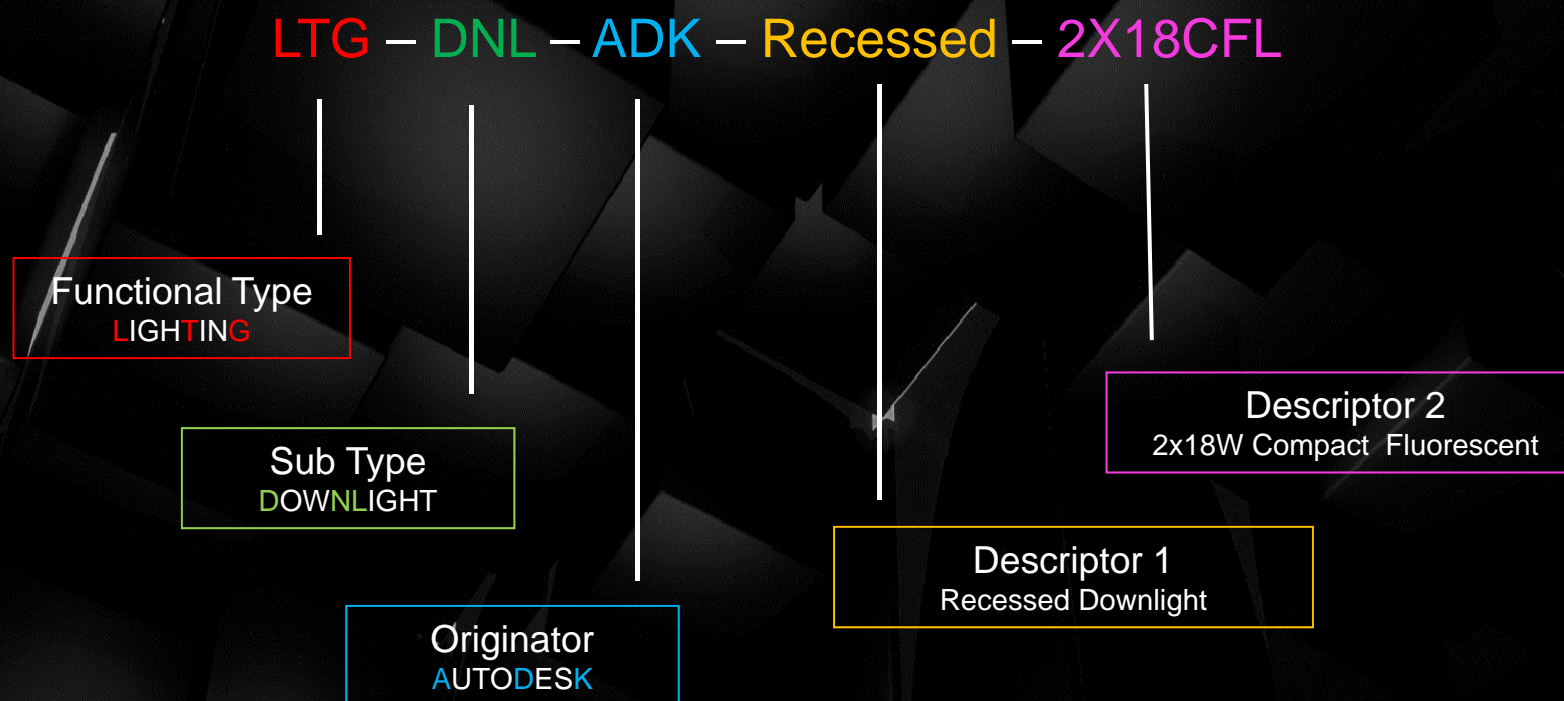
3.0 The Structure of the Family Library 模型族庫標準化

3.1 Hierarchy of the Family



3.0 The Structure of the Family Library 模型族庫標準化

3.2 Naming Convention 命名



3.0 The Structure of the Family Library 模型族庫標準化

3.3 Naming Convention of the Family 命名

Functional Type:

AHU – AIR HANDLING UNIT

COL – COLUMN

DOR – DOOR

FAD – FIRE ALARM DEVICES

Sub Type:

FAN – FAN MODULE
FLT – FILTER MODULE

MTC – METAL CLAD
WDT – WOOD TIMBER

SLD – SLIDING
BFD – BIFOLD

FHS – FIRE HOSE CABINET
SMD – SMOKE DETECTOR

3.0 The Structure of the Family Library 模型族庫標準化

3.4 Categories to be covered in the Library 分類標準

Architectural

CASEWORK
COLUMNS
CURTAIN PANELS
DETIAL ITEMS
DOORS
ELECTRICAL EQUIPMENTS
ENTOURAGE
FURNITURE
FURNITURE SYSTEM
LIGHTING FIXTURES
MECHANICAL EQUIPMENTS
PARKING
PLANTING
PUMPLING FIXTURES
RAILINGS
SITE ITEMS
SPECIALTY EQUIPMENTS
WINDOWS

MEP

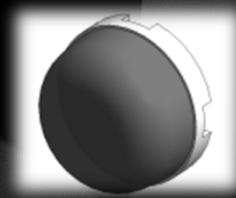
AIR TERMINAL
CABLE TRAY FITTINGS
COMMUNICATION DEVICES
CONDUIT FITTINGS
DATA DEVICES
DETIAL ITEMS
DUCT ACCESSORIES
ELECTRICAL EQUIPMENT
ELECTRICAL FIXTURES
FIRE PROTECTION
LIGHTING FIXTURES
MECHANICAL EQUIPMENT
NURSE CALL DEVICES
PIPE ACCESSORIES
PLUMPING FIXTURES
SECURITY DEVICES
SPECIALTY EQUIPMENTS
SPRINKLERS
TELEPHONE DEVICES

Structural

CURTAIN PANEL
STRUCTURAL COLUMNS
STRUCTURAL CONNECTIONS
STRUCTURAL FOUNDATIONS
STRUCTURAL FRAMING
STRUCTURAL REBAR SHAPES
STRUCTURAL RETAINING WALL
STRUCTURAL STIFFENERS
STRUCTURAL TRUSSESS

4.0 Deliverables of the Family Library 出圖標準

3D Geometry



2D Symbol

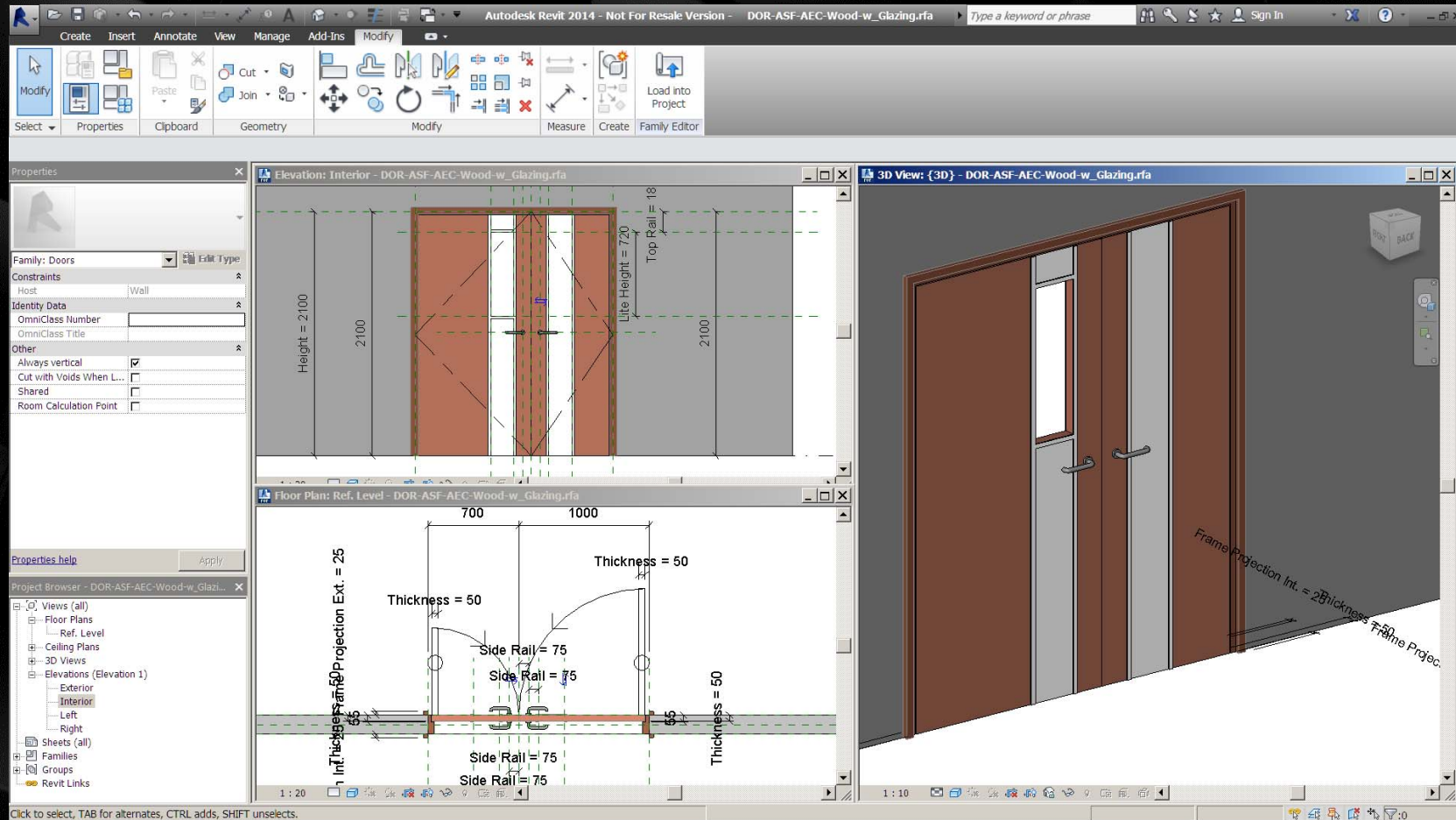


Annotation, Detail Items



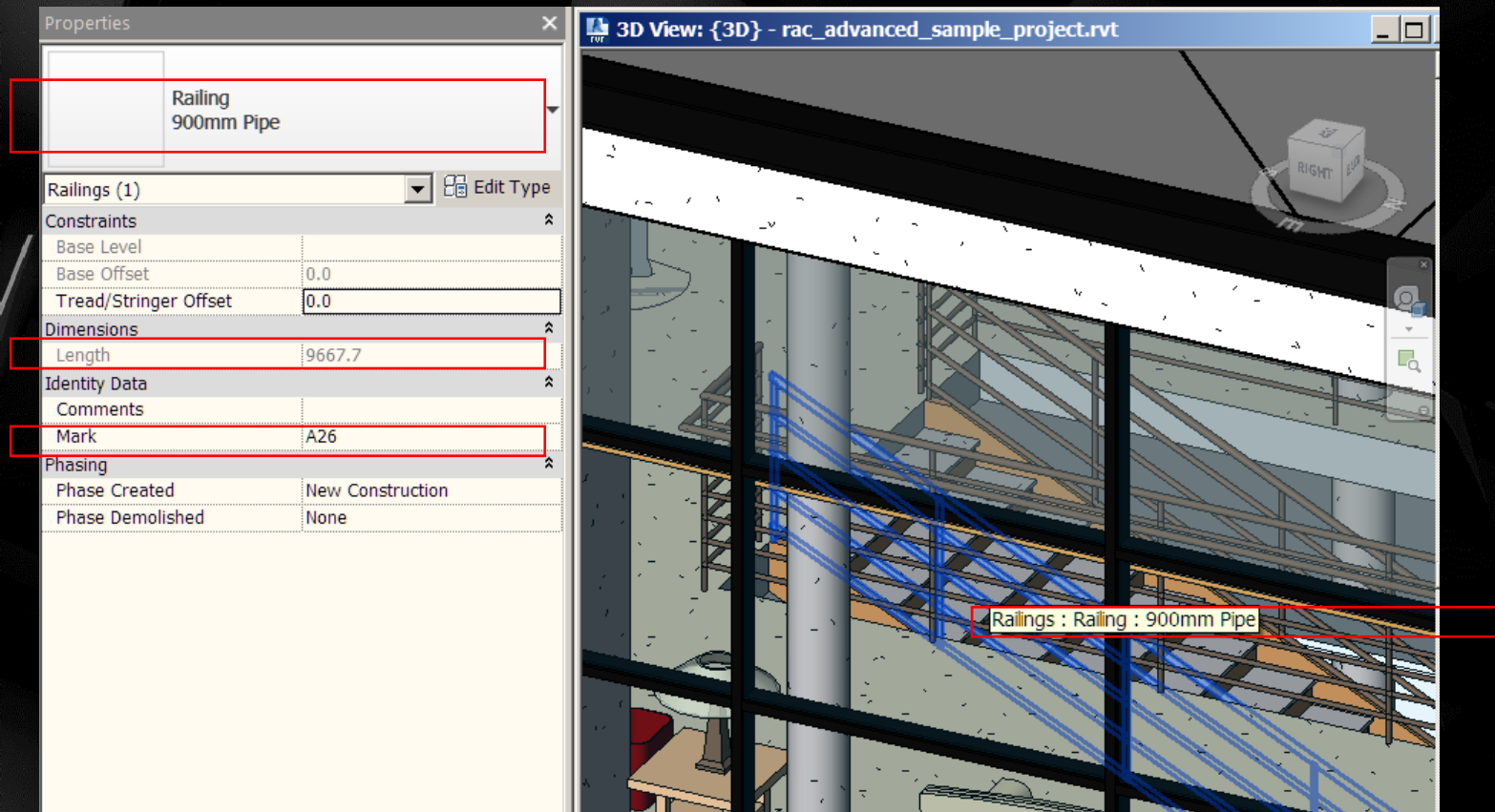
4.0 Deliverables of the Family Library

4.1 Family Content 包含本地化信息



4.0 Deliverables of the Family Library

4.2 Parametric data in family本地化信息



4.0 Deliverables of the Family Library

4.3 Parametric data shown in schedule本地化信息

Schedule: Railing Schedule - rac_advanced_sample_project.rvt

<Railing Schedule>

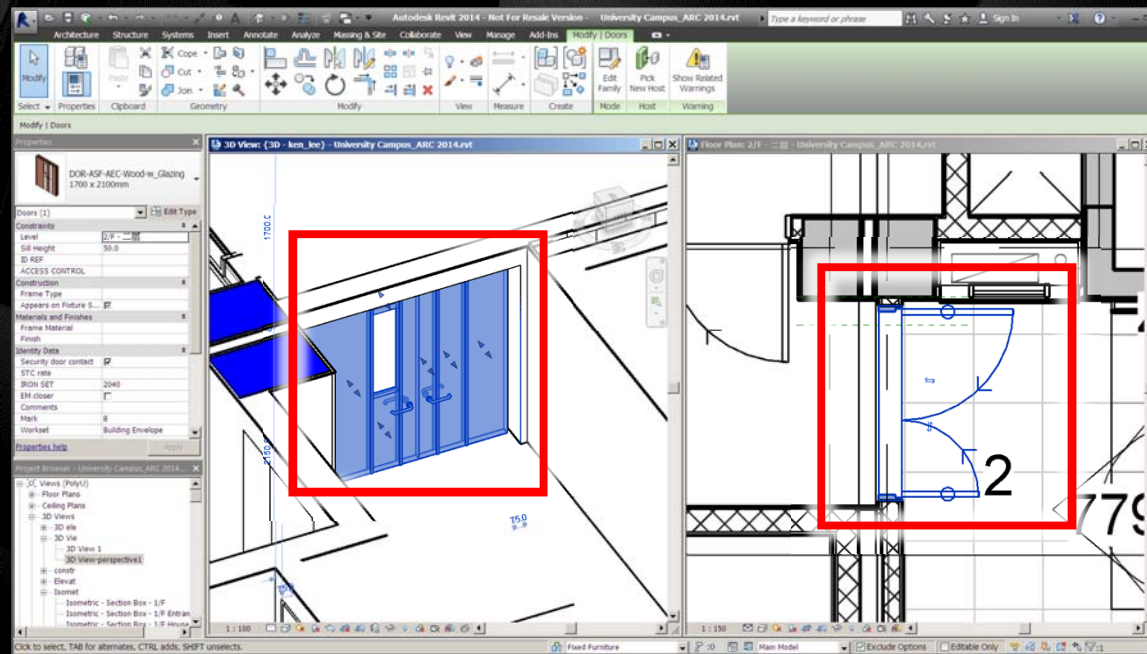
A	B	C	D
Family and Type	Mark	Length	Model
Railing: 900mm Pipe	A06	9667.7 mm	
Railing: 900mm Pipe	A05	9667.7 mm	
Railing: 900mm Pipe	A17	8163.4 mm	
Railing: 900mm Pipe	A13	8163.4 mm	
Railing: 900mm Pipe	A18	8163.4 mm	
Railing: 900mm Pipe	A26	9667.7 mm	
Railing: 900mm Pipe	A27	9667.7 mm	
Railing: 900mm Pipe - Wall Mounted	A11	4004.5 mm	
Railing: 900mm Pipe - Wall Mounted	A10	4004.5 mm	
Railing: 900mm Pipe - Wall Mounted	A15	4004.5 mm	
Railing: 900mm Pipe - Wall Mounted	A12	4004.5 mm	
Railing: 900mm Pipe - Wall Mounted	A09	4004.5 mm	
Railing: 900mm Pipe - Wall Mounted	A16	4004.5 mm	
Railing: Guardrail - Pipe	A14	6119.1 mm	
Railing: Guardrail - Pipe	A02	20161.8 mm	
Railing: Guardrail - Pipe	A01	20161.8 mm	
Railing: Guardrail - Pipe	A03	21886.8 mm	
Railing: Guardrail - Pipe	A19	9195.8 mm	
Railing: Guardrail - Pipe	A20	9195.8 mm	
Railing: Guardrail - Pipe	A04	18778.8 mm	
Railing: Guardrail - Pipe	A08	9195.8 mm	
Railing: Guardrail - Pipe	A07	9195.8 mm	
Grand total: 22		211079.3 mm	

Project Browser - rac_advanced_sample_p...

- {3D}
- Elevations (Building Elevation)
 - Courtyard Elevation - South Win
 - East
 - North
 - South
 - West
- Sections (Building Section)
 - Section Through Main Stair
- Sections (Wall Section)
 - Typical Wall Section
- Detail Views (Detail)
 - Detail At Grade
 - Detail At Parapet
- Renderings
 - From Parking Area_3pm
- Drafting Views (Detail)
 - Roofing Termination Detail
- Walkthroughs
 - Fly into Building
- Area Plans (Gross Building)
 - 01 - Entry Level
 - 02 - Floor
 - 03 - Floor
- Legends
- Schedules/Quantities
 - Area Schedule (Gross Building)
 - Door Schedule
 - Furniture Schedule
 - Hardware Schedule
 - Landscape Schedule
 - Mass Floor Schedule
 - Parking Schedule
 - Railing Schedule
 - Room Finish Schedule

4.0 Deliverables of the Family Library

4.4 Family in Project Level中本地化信息應用



5.0 Application of the Family

5.1 Demonstration of the Family application

[Demonstration of the Family application .avi](#)

6.0 Launching of F.L.I.P.

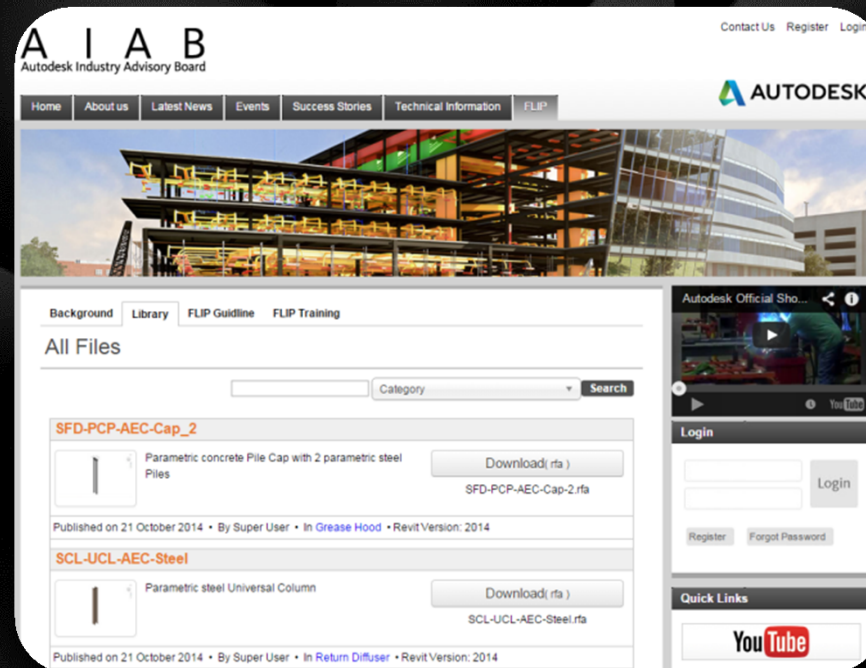
建築信息模型族庫交換計劃



1. Background

1.2 What is FLIP?

Family Library Interchange Program (FLIP) is a web service (under webpage of AIAB) that allows designers - architects, engineers, construction professionals - to search and find manufacturer-specific or generic building products and associated design content. This content could include 3D models, 2D drawings, and specifications.



2. Accessing FLIP

2.1 Mechanism of Family exchange

Any Family being uploaded by users will be reviewed by the BIM professionals of the FLIP. If the uploaded Family complies the standard suggested by the FLIP Guideline, the Family will be marked as “FLIP Approved” .

Background

Library

FLIP Guidline

FLIP Training

Upload a new file

Family Name *

Category *

-- Select --

Functional Type *

-- Select --

File *

Upload the Thumbnail image to be displayed in the Library
Only .JPG, .GIF, .PNG and .BMP files are accepted
*This is a required field

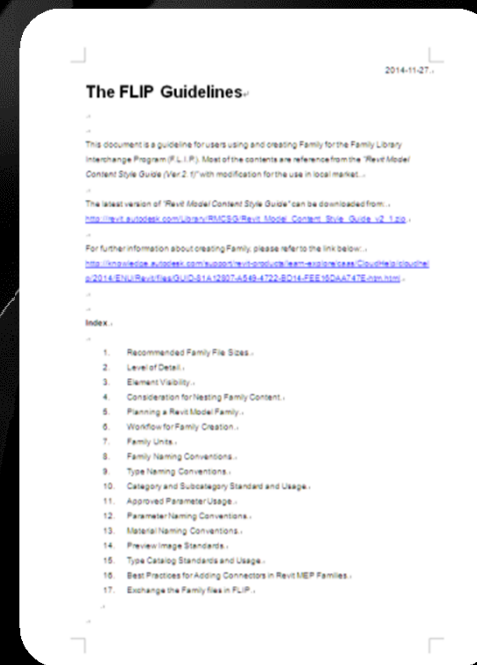
Thumbnail *

Revit Version *

-- Select --

Description

Submit



6.0 Launching of F.L.I.P.

6.1.1 A.I.A.B. webpage: Introduction and guidelines

Background

It has been a while that the Building Information Modeling (BIM) is used in the industry. BIM models are shared within project teams during the design and construction process. As-built BIM models are often required by building owners so that information about the building can be retrieved by the operators. To ensure the consistency flow of information, a well-organized set of information is needed so that everyone in the project team can understand and use the information in the BIM model efficiently. Most of the information (such as building components data, schedules and quantity) in the BIM model is generated from Families, therefore it is important to identify what information is needed in a Family and in which stage of the project.

Localized Data

The default Revit templates and Family library may not wholly tally with the local standards and practices. Our aim is to organize localized contents to reduce individual effort in the industry to repeat the localization process so as to adopt BIM in a more efficient way.

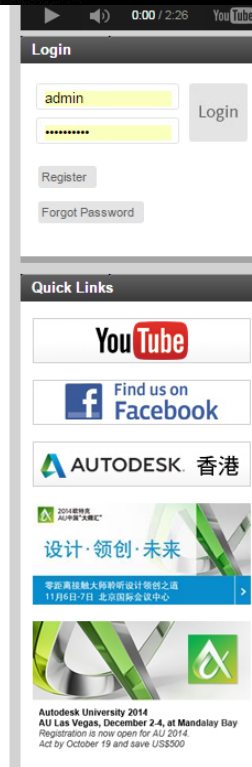
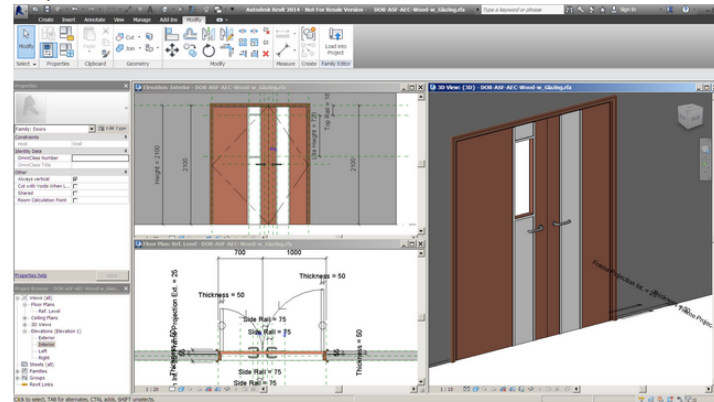
FLIP

Family Library Interchange Program (FLIP) is the collaboration between Autodesk Far East Ltd and local BIM Consultant [Advanced Consultation Information Development Ltd \(A.C.I.D.\)](#) and Synnex Technology International (HK) Ltd.

It is a well-organized web-based platform that standardized and localized Families are stored and categorized according to strict guidelines. Naming convention, styles, level of details and parametric properties are systematically organized according to local practices.

It is an interactive platform that facilitates and encourages Revit users to share and exchange organized families to enhance productivity as a whole. Users can download the guideline on how to build Families, assign Parameters and Level of Development (LOD).

Family Content



6.0 Launching of F.L.I.P.

6.1.2 A.I.A.B. webpage: Family for download 下載

The screenshot displays the Autodesk Industry Advisory Board (A.I.A.B.) website. The header includes the A.I.A.B. logo, the text "Autodesk Industry Advisory Board", and navigation links: Home, About us, Latest News, Events, Success Stories, Technical Information, and FLIP. The Autodesk logo is also present. Below the header is a large image of a modern building under construction. The main content area is titled "All Files" and features a search bar and a "Category" dropdown. Three Revit families are listed for download:

- SFD-PCP-AEC-Cap_2**: Parametric concrete Pile Cap with 2 parametric steel Piles. Download(rfa) SFD-PCP-AEC-Cap-2.rfa. Published on 21 October 2014 • By Super User • In Grease Hood • Revit Version: 2014.
- SCL-UCL-AEC-Steel**: Parametric steel Universal Column. Download(rfa) SCL-UCL-AEC-Steel.rfa. Published on 21 October 2014 • By Super User • In Return Diffuser • Revit Version: 2014.
- Twin Power Socket.rfa**: Twin Power Socket.rfa Twin Power Socket.rfa Twin Power Socket.rfa Twin Power Socket.rfa. Download(rfa) Twin-Power-Socket.rfa. Published on 15 October 2014 • By ronon • In Air Terminals • Revit Version: 2014.

The right sidebar contains an "Autodesk Official Sho..." video player, a "Login" section with fields for "admin" and a password, and "Quick Links" for YouTube, Facebook, and Autodesk Hong Kong.

6.0 Launching of F.L.I.P. 發報與分享

6.1.3 A.I.A.B. webpage: Sharing of Family 上傳

The screenshot displays the Autodesk Industry Advisory Board (AIAB) website. The header includes the AIAB logo, the text 'Autodesk Industry Advisory Board', and navigation links: Home, About us, Latest News, Events, Success Stories, Technical Information, and FLIP. The Autodesk logo is also present. A large banner image shows a modern building under construction. The main content area features a 'Background' and 'Library' tab. The 'Library' tab is active, showing a form to 'Upload a new file'. The form includes fields for 'Family Name *', 'Category *', 'Functional Type *', 'File *', 'Thumbnail *', 'Revit Version *', and 'Description'. A tooltip is visible over the 'Family Name' field, stating: 'Enter the Family Name to be shown in the Library. (Please refer to FLIP Guideline) e.g. Wood Single Door with glazing *This is a required field'. The right sidebar contains a video player, a 'Login' section with a 'Hello, Super User' message and a 'Logout' button, and a 'Quick Links' section with buttons for YouTube and Facebook.

6.0 Launching of F.L.I.P.

6.2 Project launch date: 推廣

Phase 1 : **Nov 2014**

30 Families (15 Architectural Families + 15 Structural Families)

Phase 2 : **Feb 2015**

30 Families (15 Architectural Families + 15 MEP Families)

Phase 3 : **May 2015**

30 Families (10 Architectural Families + 20 MEP Families)

F.L.I.P. 建築信息模型族庫交換計劃

- 1 建立**本地化**，行業**標準化**建築信息模型**族庫**。
- 2 鼓勵全建築行業**參與**，F.L.I.P. 互動互助計劃，提高生產效率。
- 3 舉行 F.L.I.P. **推廣**計劃，展示 F.L.I.P.
- 4 舉辦族群**培訓課程**，培養本地人才。

3. Demonstration Session

Title:	AIAB Master Class - Demo of FLIP project for Revit users
Descriptions:	Speaker will demonstrate and explain the logic of the FLIP project
Date:	17 Dec 2014 (WED)
Time:	19:00 – 20:30
Venue:	Rm Z405 The Hong Kong Polytechnic University

4. Training Session

Title:	ACID Master Class – How to make a Family for FLIP
Descriptions:	Tutor will provide training to participants for making a Revit Family suitable for FLIP
Date:	12 Jan 2015 (MON)
Time:	09:00 – 17:00
Venue:	BIM Studio, Rm A2 35/F TML Square, 3 Hoi Shing Rd, Tsuen Wan

4. Training Session

4.1 Course Content

1. Recommended Family File Sizes
2. Level of Detail
3. Element Visibility
4. Consideration for Nesting Family Content
5. Planning a Revit Model Family
6. Workflow for Family Creation
7. Family Units
8. Family Naming Conventions
9. Type Naming Conventions

10. Category and Subcategory Standard and Usage
11. Approved Parameter Usage
12. Parameter Naming Conventions
13. Material Naming Conventions
14. Preview Image Standards
15. Type Catalog Standards and Usage
16. Best Practices for Adding Connectors in Revit MEP Families
17. Exchange the Family files in FLIP



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[LEVEL OF DEVELOPMENT \(LOD\)](#)

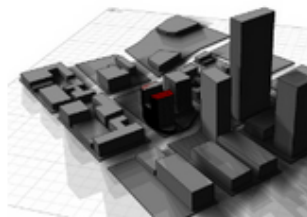
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[CEI] CEI Basic (Revit)



[read more](#)

Duration: 8 hours
Instructor: David Fung
Award: Certificate of Completion CEI Basic (Revit)
Date: 2015-01-02
Time: 09:00 - 17:00
Venue: BIM Studio

Recent News

AIAB Master Class - Demo of the
FLIP project for Revit users
December 8, 2014

[CEII-A] CEII Architecture (Revit)

BIM Courses



- Thank You -