Iwane 3D Building Model technology

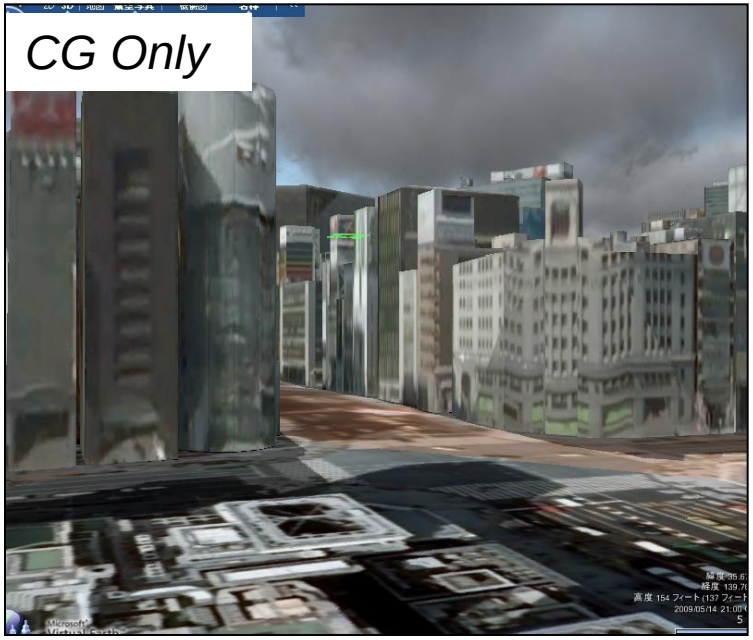
Presentation

Iwane Laboratories., ltd

The 1~ of texture acquisition ~ from image

3D Model Comparison : Extraction of Texture by different Software and Technology

Microsoft「Virtual Earth」



・The satellite photograph and the aero –photograph are used as a base

GSCG by the PCCI tool

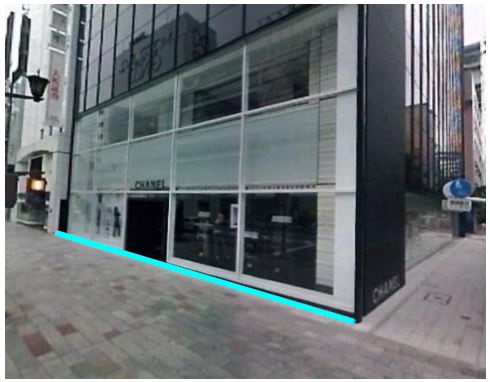
・Made from all surrounding Image of the same condition as GSV

The 1~ of modeling ~ texture acquisition ~ basic compilation

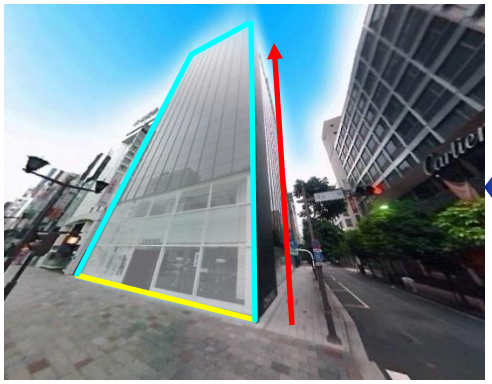
The source : All surrounding image

Acquiring point (1st point) 3 dimensional coordinate in the red circular part

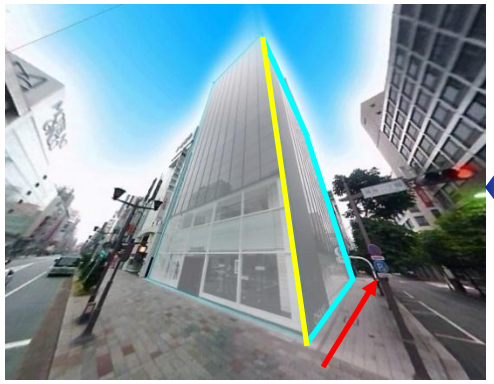
Acquiring point additional (2nd point) 3 dimensional coordinate in the red circular part



Formation of 3 dimensional line which ties the point on the line



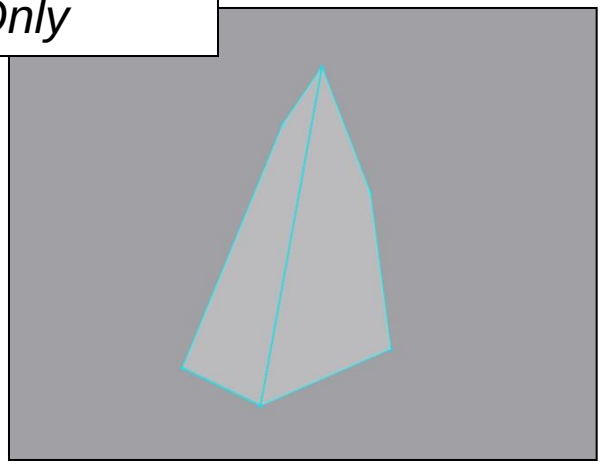
It pushes out the yellow line, forming the surface the aspect of compilation (front) 3 dimensions



To push out the yellow line, the surface compilation (side) in the same way formation of 3 dimensional aspect

The 2~ of modeling ~ texture acquisition ~ basic compilation

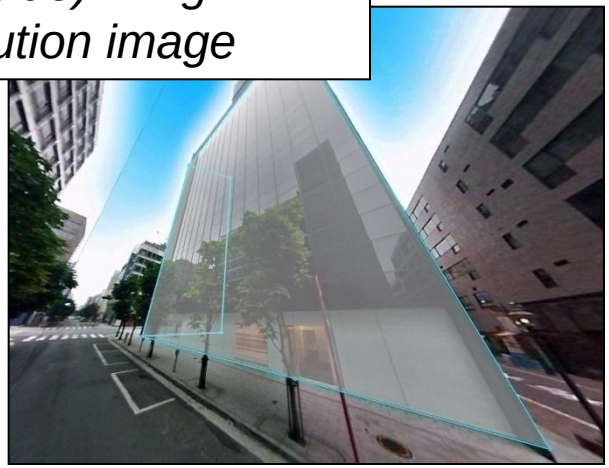
CG Only



LB5 – 30 MP /Frame

CG (front) + image

CG (side) + high resolution image



The 3~ of modeling ~ texture acquisition ~ basic compilation

Image

CG

Acquisition of two side texture

Acquisition of front texture

Modeling ~ texture acquisition ~ applied compilation ~

Image +CG (With wire frame）

Image +CG (Without wire frame)

CG Only

CG Only

Comparison : CG inside Google and PCCI

From Google Earth

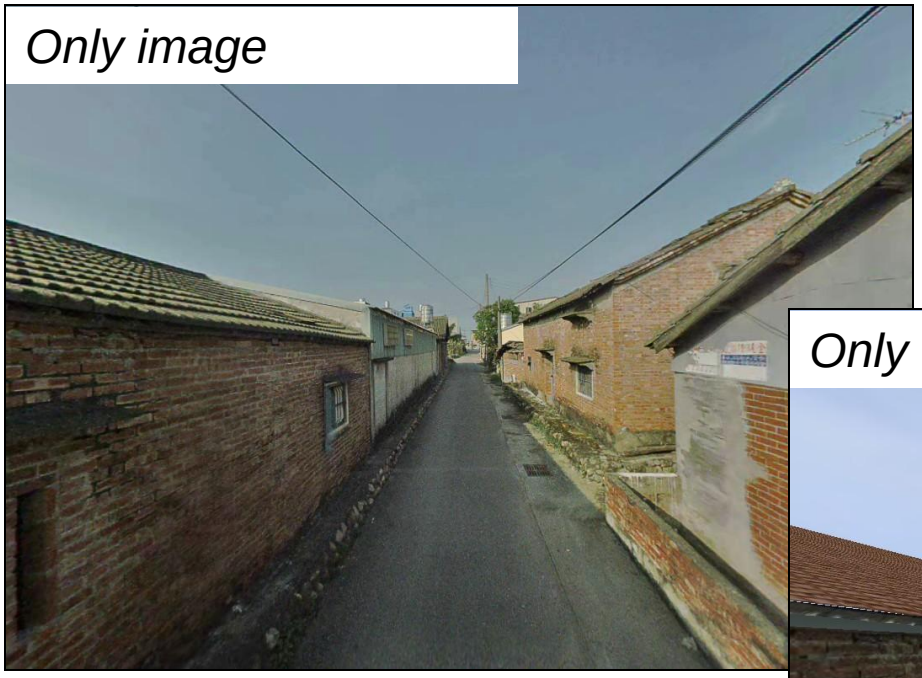
GSCG which was drawn using PCCI tool

The comparison of Google Sketch Up and PCCI tool

	PCCI	SketchUp	Remark
Modeling			
Use of Sophia	◎	×	Image display function is not loaded
Modeling function	◎	◎	
Wide-ranging modeling	◎	○	Possible, more time is required
Texture			
Getting texture from Image	◎	×	General function
Compilation of texture	◎	×	To use another software for compilation
In addition			
3D Coordinate acquisition	◎	×	Because there is no image coordinates, while verifying position inside the tool
Draw of CG : Tools needed	One	Many	The modeling software and the picture compilation software etc ..for texture are needed

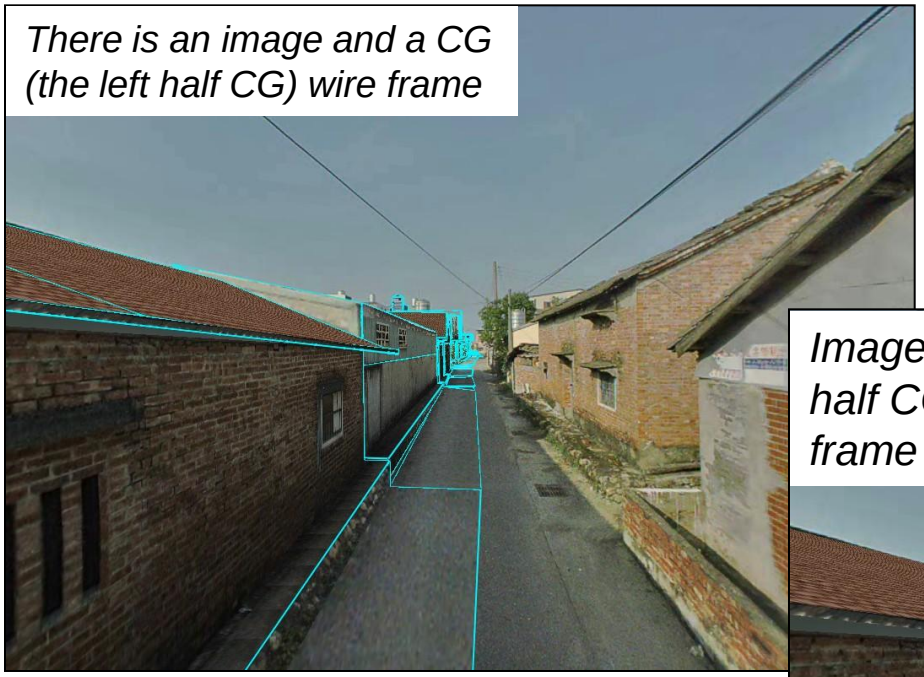
The 1~ of the ~ which moves continually from image to CG

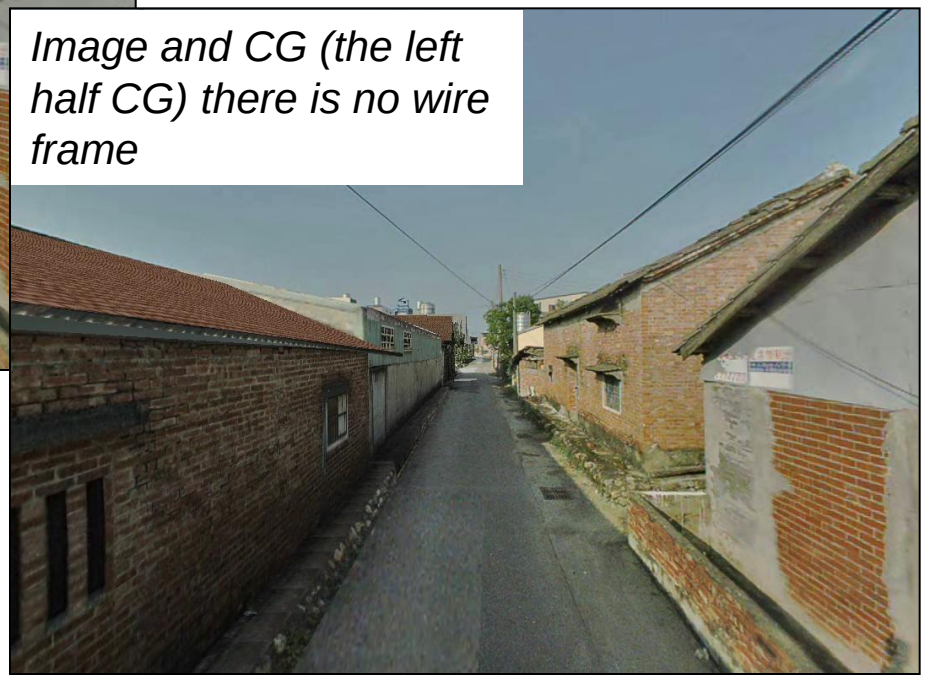
Only image



Only CG

The 2~ of the ~ which moves continually from photograph taken on the spot to CG

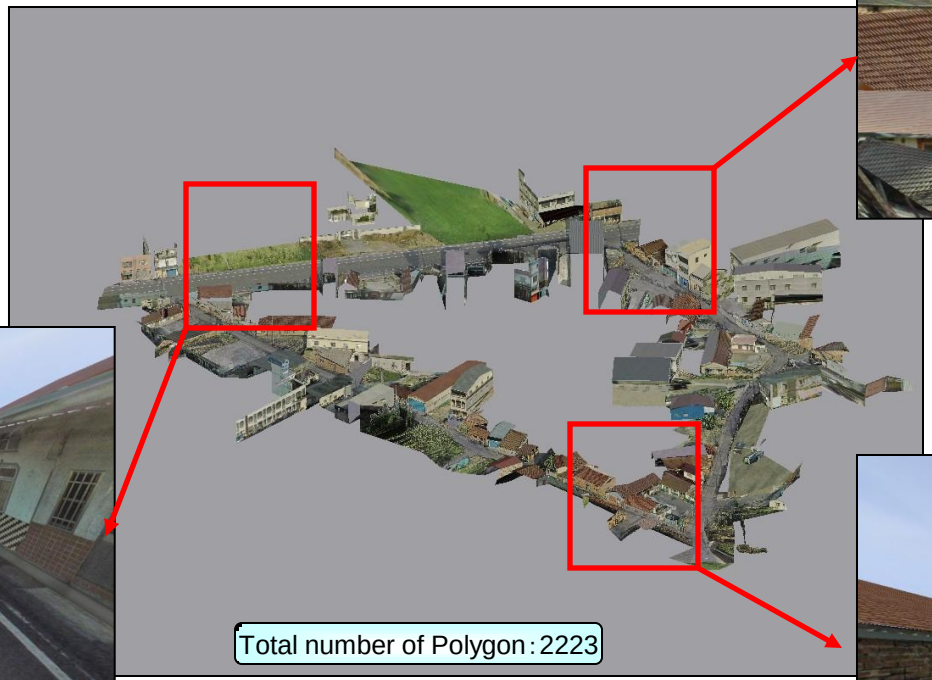




- Can translate from image to CG by just digitize CG from image!!

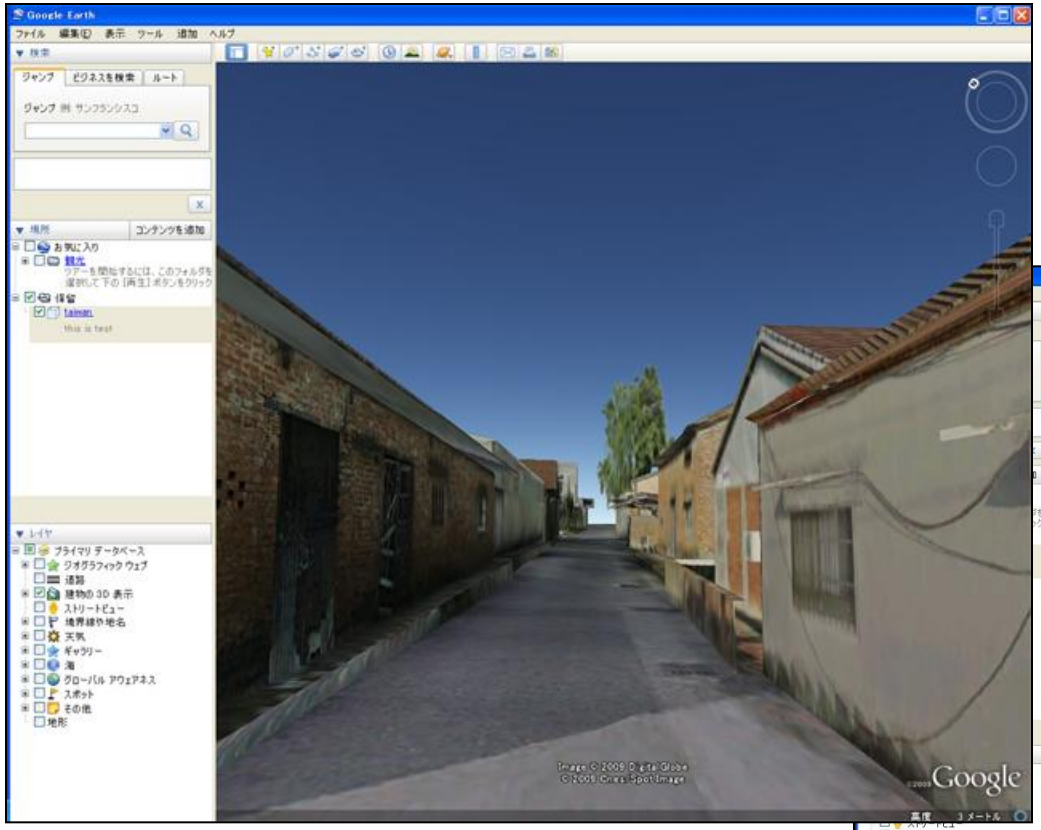
CG Compilation: An example of rural landscape model

Everything CG

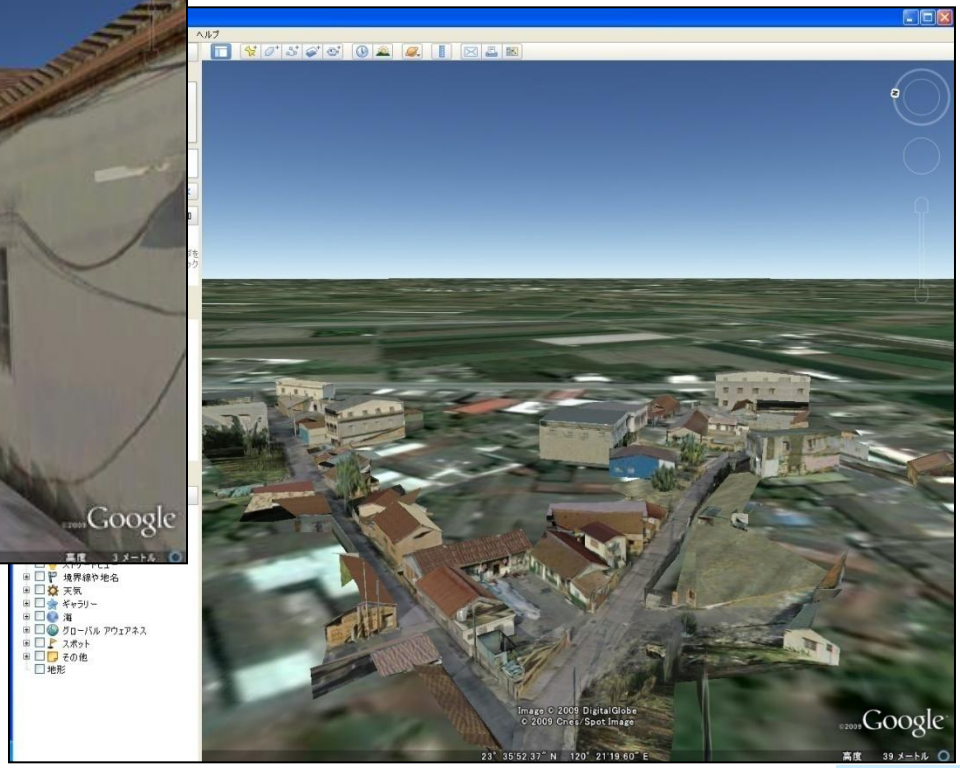


Description above, creation time of rural landscape CG 10 man-days (CG developed by beginners (not experience person))

The arrangement of CG on Google Earth



Arranging CG which was drawn up with the PCCI tool on to Google Earth



Reference material: Simple polygon type 2.5D PCCI

- 2.5 D PCCI : CG which consists of 3 surface polygons
- Automatic model generation from CV image is possible ……..

but still in development !!

Thank You!!