



METODE PERANCANGAN

Minggu 12



SHAPE GRAMMAR

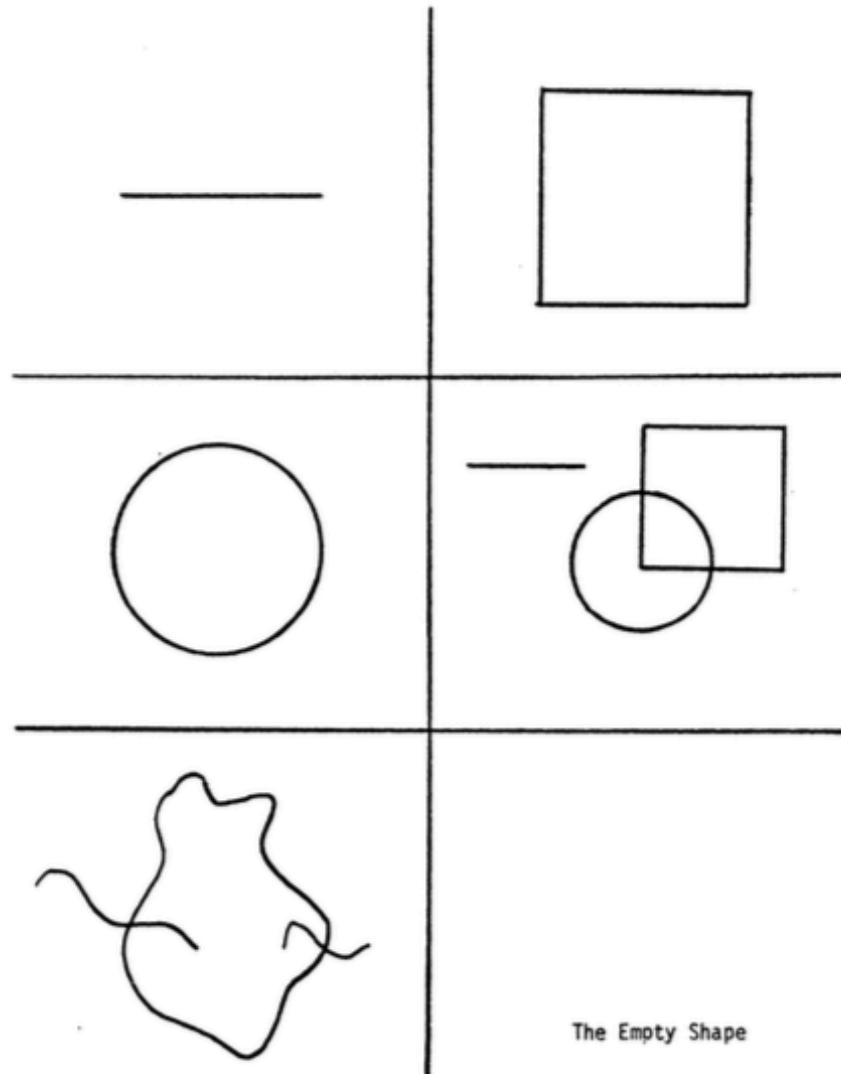
By G. Stiny



1. APA YANG DIMAKSUD DENGAN *SHAPE GRAMMAR*?

SHAPE GRAMMAR?

- **SHAPE (Bentuk)**
 - Suatu susunan garis yang memiliki rincian gambar (*pictorial specification*)
 - *Pictorial specification*: gambar apapun yang dapat dieksekusi di bidang datang yang terbatas dalam rangkaian waktu yang terbatas pula
- **SHAPE GRAMMAR (Tata Bahasa Bentuk)**
 - Suatu sistem penataan bentuk dengan peraturan (*rule*) tertentu hingga dapat membentuk komposisi dari turunan bentuk yang berulang-ulang
 - Sistem ini semestinya dirancang untuk dapat dimengerti oleh orang yang tertarik pada pengaturan bentuk untuk tujuan visual



The Empty Shape

Stiny, 1975

Figure 1-1
Some examples of shapes.

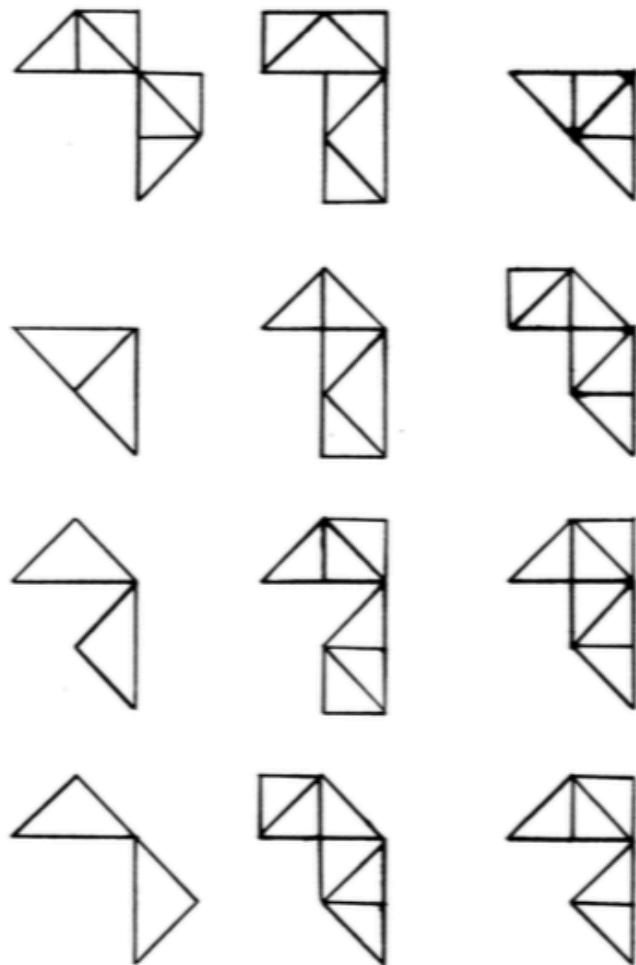


Figure 1-13
Some shapes resulting from the recursive application of
rule (ii) to the shape in Figure 1-12a.

Stiny, 1975

ARC 3152 SHAPE GRAMMAR

EXERCISE 3: TWO RULE 2D SHAPE GRAMMAR

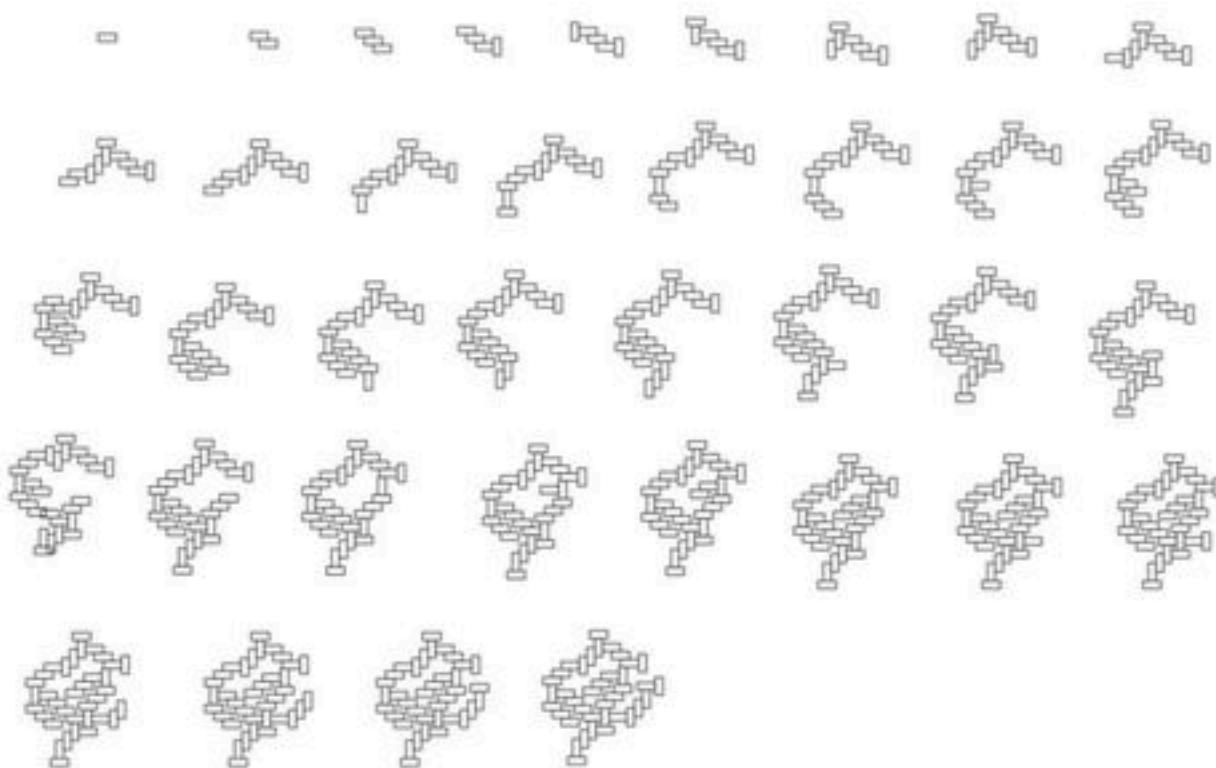
LOO GIAP SHENG 0310390



RULE 1



RULE 2

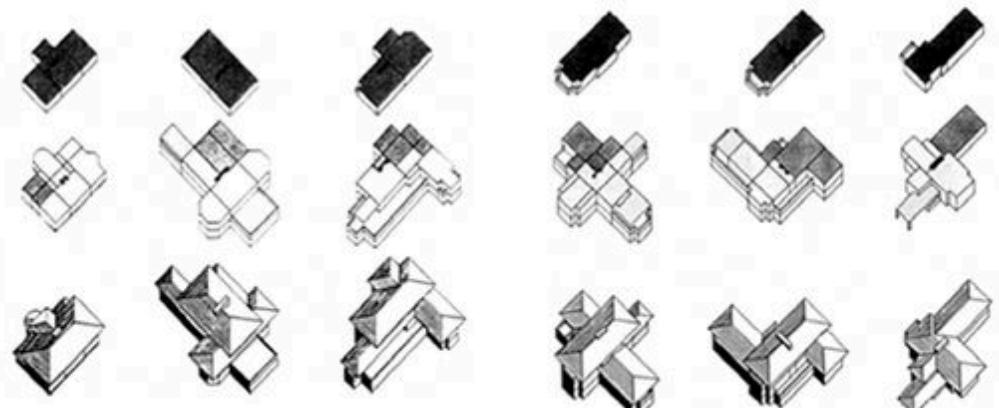
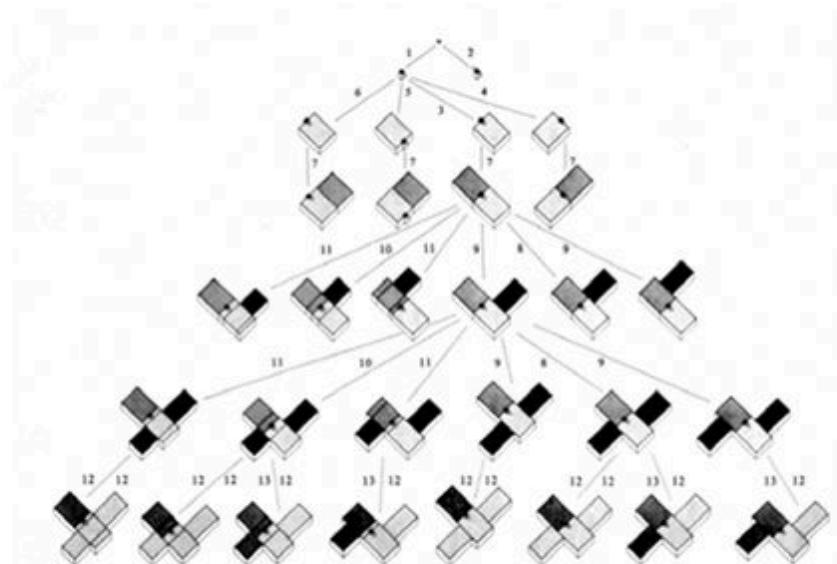


DESIGN 1



2. APA KETERKAITANNYA DENGAN RANAH
ARSITEKTUR?

F L Wright Prairie House Grammar (Konig & Eizenberg 1981)





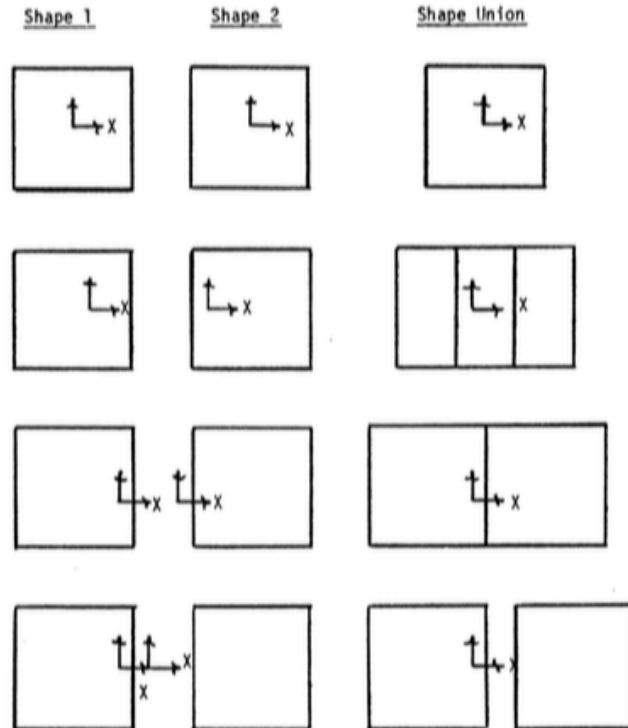






3. APA ITU *SHAPE UNION & EUCLIDEAN TRANSFORMATIONS?*

SHAPE UNION (GABUNGAN BENTUK)

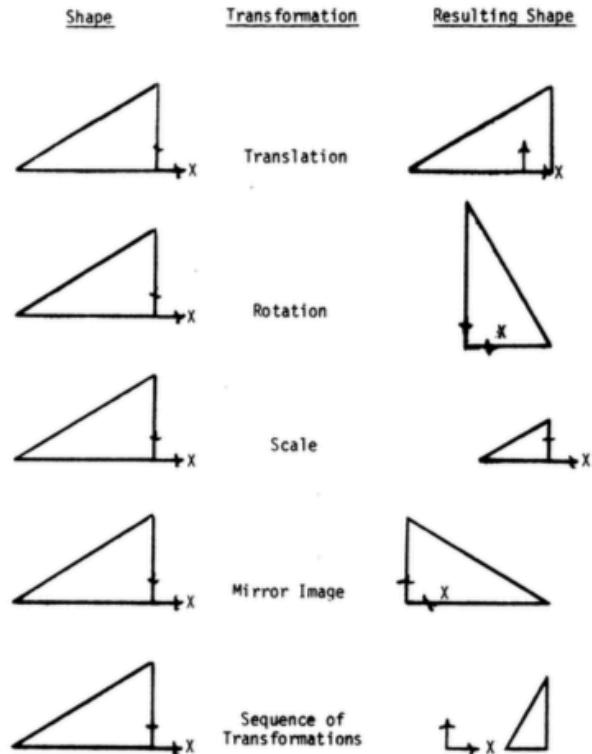


Kombinasi rincian gambar (*pictoral specification*) dari dua bentuk hingga koordinasi sistem setiap bentuk saling terasosiasi satu sama lain

Figure 1-2

Examples of shape union. The co-ordinate system associated with each shape is indicated by arrows at right angles.

EUCLIDEAN TRANSFORMATIONS (PERUBAHAN EUCLIDEAN)

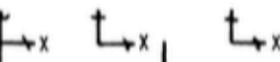


- Mengubah secara (geometri) Euclidean:
 - Translasi
 - Rotasi
 - Skala
 - Cermin

Figure 1-3
Examples of Euclidean transformations
and sequences of transformations.



(a)



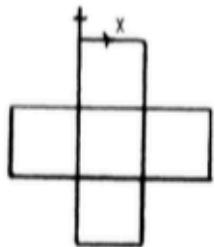
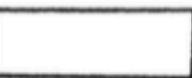
(b)



(c)



(d)



(e)

Figure 1-4

The construction of shapes using
shape union and sequences of transformations.

Stiny, 1975



4. APA SAJA *SHAPE RELATIONS* & *SHAPE RULES* ITU?

SHAPE RELATIONS (RELASI BENTUK)

Shape Union & Euclidean Transformations adalah dua hal mendasar untuk merangkai beragam bentuk-bentuk baru

- Two shapes are **pictorially equivalent** if and only if their pictorial specifications are identical
- Two shapes are **congruent** if and only if one can be made pictorially equivalent to the other by applying some sequence of transformations which does not contain a scale transformation to it
- Two shapes are **similar** if and only if one can be made pictorially equivalent to the other by applying some sequence of transformations (including possibly scale) to it
- One shape is a **subshape** of a second shape if and only if the pictorial specification of the first shape is identical to same part of the pictorial specification of the second shape



SHAPE RULES (PERATURAN BENTUK)

Shape rules: cara-cara mengubah satu atau lebih bentuk hingga mencapai komposisi bentuk yang menarik, baik berupa *sequence of transformations*, *union*, ataupun keduanya.

typologie des Mietshauses	1 Hof	2 Höfe	3 Höfe	Addition von Raumtypen auf 2 Grundstücken (Hlgemeinschaften)	Sonderfälle
Vorderhaus+ Quergebäude					
1	11	12	13	14	15 Ingen-Hof - Wedding Bauj. 1881, Architekt 128/11
Vorderhaus+ 1Seitenflügel					
2	16	17	18	19	
Vorderhaus+ 2Seitenflügel Kombination möglich mit Typ 3					
3	21	22	23	24	25 Tiefbauweise - Querflügelhaus Bauj. 1881, Architekt 163
Vorderhaus+ 1Seitenflügel- Quergebäude Kombination möglich mit Typ 2					
4	26	27	28	29	30 Tiefbauweise - Querflügelhaus Bauj. 1881, Architekt 75
Vorderhaus+ 2Seitenflügel- Quergebäude Kombination möglich mit Typ 2					
5	31	32	33	34	35 Wahlweise - Ausbauteile Bauj. 1881, Architekt 15
Vorderhaus+ Mitteflügel					
6	36	37	38	39	40 Kombination - Mitteflügelhaus Bauj. 1881, Architekt 15-23
Kombinationen von 1-6 auf größen zusammenhangenden Grundstücken					
7	41 Innenhof - Oberkalkberg Bauj. 1881, Architekt 15-6	42 Außenhof - Oberkalkberg (Vorhof) Bauj. 1881, Architekt 15-6	43 Innenhof - Außengang (Vorhof) Bauj. 1882, Architekt 15-6		

Abb. 50 Die Typologie des Berliner Mietshauses und ihre Varianten



TASK:

BUATLAH SUSUNAN *SHAPE GRAMMAR* SEKREATIF
MUNGKIN DENGAN *SHAPE RELATIONS & RULES*
YANG TELAH DIJELASKAN SEBELUMNYA!