COMPARATIVE ANALYSIS OF PREFABRICATED BUILDING SYSTEMS

OBJECTIVES		tent	Levitt house	Filler's Wichita house*	Fuller's geodesic dome	Soviet housing system	Maciunas system
WORKABILITY							
Enclosure and protection from:	rain	yes	yes	yes	yes	yes	yes
	vapor	no	no	no	no	yes	yes
	dust	no	no	no	no	no	yes (filterring system)
	heat&cold	no	yes	yes	yes	yes	yes
	sunlight	yes	yes	yes	no	yes	yes
	sound	no	no	no	no	yes	yes
Servicing:	traffic&communication	yes	yes	yes	yes	yes	yes
	temperature control	no	yes	yes	yes	yes	yes
	light&air control	no	no	no	no	no	yes
	storage facilities	no	yes	no	no	yes	yes
	hygiene	no	no	yes	yes	no (not washable)	yes
ECONOMY							
In material:	minimum use of material	yes	no	yes	yes	no	yes
	use of abundatly available material	yes	yes	no	yes	yes	yes (except alum.)
In manufacture:	minimum number of components	yes	no	no	yes	yes	yes
	simple method of fabrication	yes	no	no	yes	yes	yes
	simple tooling requirements	yes	yes	no	yes	yes	yes
	adaptability to automated fabrication	yes	no	yes	yes	yes	yes
In labor use:	minimum use of labor on site	yes	no	yes	yes	yes	yes
	more produce use of labor in plants	yes	no	no	yes	yes	yes
	use of unskilled labor on site	yes	no	no	yes	no	yes
In transport:	light and well packaged	yes	no	yes	yes	no	yes
	building weight per m^2 of floor area	.5 kg			8 kg	1,150 kg	30 kg
In erection:	speedy and simple erection	yes	no	yes	yes	yes	yes
	no heavy equipment required	yes	yes	yes	yes	no	yes
In maintainance:	permanency of materials	no	no	yes	yes	yes (except wood)	yes
	efficiency of insulation	no	no	no	no	no	yes
	washability of surfaces	yes	no	yes	yes	no	yes
estimated cost	per square foot	$.50	$10	$30**		$6 to 7	$7.50
ADAPTABILITY							
To function:	residential	yes	yes	yes	no	yes	yes
	institutional	no	no	no	yes	yes	yes
	industrial	no	no	no	yes	yes	yes
	agricultural	yes	no	no	yes	no (heavy trasnport)	yes
To plan:	flexibility in shape & size of building	no	no	no	no	yes	yes
To climate:	climatic change	no	no	no	no	no (fixed widows)	yes
To dwellers:	their special needs and habits	no	no	no	no	no (fixed plan)	yes
To site:	toporography and soil conditions	yes	no	no	no	no (flat ground)	yes
DURABILITY							
Resist aging:	due to rot	no	no	yes	yes	yes (except wood)	yes
	termites	no	no	yes	yes	yes "	yes
	discoloration	no	no	yes	yes	no (concrete)	yes
	corrosion	no	no	no	yes	yes	yes
Resist disasters:	hurricanes	no	no	yes	yes	yes	yes
	earthquakes	yes	no	yes	yes	no (concrete)	yes
	floods	no	no	yes	yes	yes	yes
	vandalism	no	no	no	no	no (concrete)	yes

*also Monsanto house and Nelson-Chadwick house
**estimate only - exact figures not available