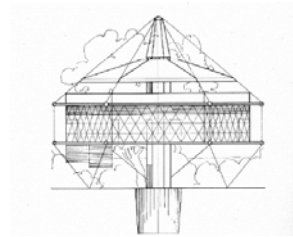


Further House of the Future: The "Networked" House

Bruce Nordman

Which Future ?



or

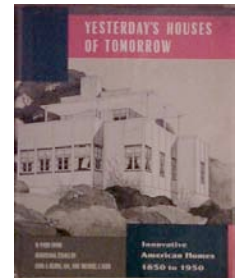


Houses of the Past Future

- goals
 - comfortable, efficient, affordable
- focus on structure, materials
- paradigms
 - physics
 - chemistry
 - [information]



- “the first thing to do in planning a house, is to know the wants of the person who is to occupy it” (The American Builder’s Companion, 1827 !)
- “the introduction of modern utilities ... **transformed the activities** that occurred within the house” (emph. added)
- “what had once been luxuries, soon became seen as necessities”



PAST : FUTURE

physics : information

architectural /
structural design : building network

static structure : dynamic activity



WHY

networks designed
around functionality

molded around
needs of people

to provide exactly
what we want



WHY [2]

Internet transformed our relationship to
information world

Building networks will transform our
interaction with the physical world

Need infrastructure for applications
we can't even imagine

“Apps for buildings”



or “Apps for rooms”



HOW

data transmission method unimportant

devices (mostly) manage themselves

central devices mostly coordinate

decisions made close to people, spaces

ENERGY ?

ENERGY ?

the network is not put there for energy

but we can use it

devices can minimize energy *after* providing functionality

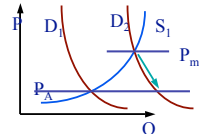
WHAT DO PEOPLE WANT?

devices need to 'harvest' preferences

- static and dynamic

everything price-responsive

- based on defaults and user preferences
- dynamic pricing universal (and uninteresting)
- no direct coordination between buildings and grid (except for vehicles)



GETTING THERE

- networking will be incremental
- forget about the grid
- throw away early technology
- “universal interoperability”
- demand
 - high functionality
 - simplicity

