# What is Multimedia?

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The expedition begins…

Definition from ACM SIGMM

"Multimedia is now a mature field, having evolved over approximately 20 years. **The term "media" traditionally referred to entities such as audio, video, text, images, graphics, animation.** New media will be added in the future, including virtual reality, holography, haptics, eSmell, eTaste, eThought,…. **The term "multimedia" has now been accepted to mean documents composed of at least two correlated media.** The correlation could be temporal, spatial or semantic. Applications now appear in many fields such as entertainment, publishing, advertising, banking, insurance, e-commerce, travel, medical, defense, training, geographical information systems, weather and many others."

American Heritage Dictionary

"ADJECTIVE: 1. Of or relating to the combined use of several media: a multimedia installation at the art gallery. 2. *Computer Science* **Of or relating to an application that can combine text, graphics, full-motion video, and sound into an integrated package.** PLURAL NOUN: (used with a sing. verb) 1. The combined use of media, such as movies, music, lighting, CD-ROMs, and the Internet, as for education or entertainment. 2. The combined use of media, such as television, radio, print, and the Internet, as for advertising or publicity."

But what is a medium?
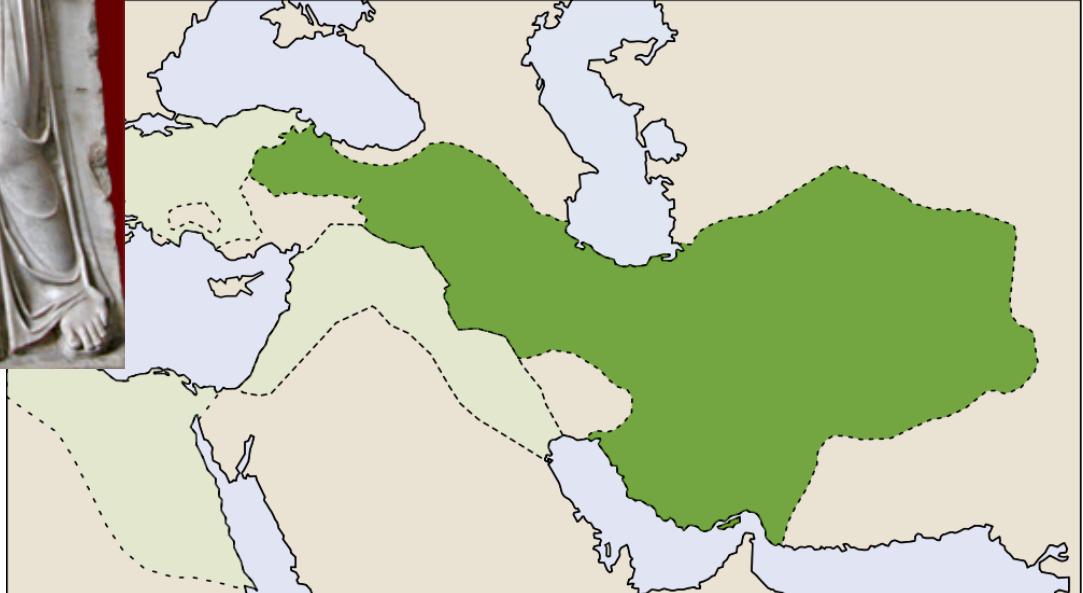
"NOUN: Inflected forms: pl. me·di·a (-d-) or me·di·ums 1. Something, such as an intermediate course of action, that occupies a position or represents a condition midway between extremes. **2. An intervening substance through which something else is transmitted or carried on.** 3. An agency by which something is accomplished, conveyed, or transferred: *The train was the usual medium of transportation in those days.* 4. Inflected forms: pl. media a. A means of mass communication, such as newpapers, magazines, radio, or television. b. media (used with a sing. or pl. verb) The group of journalists and others who constitute the communications industry and profession. 5. Inflected forms: pl. media *Computer Science* **An object or device, such as a disk, on which data is stored.** 6. Inflected forms: pl. mediums A person thought to have the power to communicate with the spirits of the dead or with agents of another world or dimension. Also called psychic."

The origin of the word: **Medea**

In Greek mythology Medea was the wife of Jason. Due to various intrigues she had to flee from Greece. The kingdom she founded in exile is called the Medean Empire, a **middle kingdom** between West and East. Citizens of a cultural crossroads, the Medes were considered wise men in the ancient world. One of the tribes of the Medes was called the Magi, the root of the English word "magic".

Above, the sorceress Medea (center) with her daughters. At right, the Medean Empire, stretching from Iran to Afghanistan.

So a medium is that "thing" in the middle.

A fortune teller is often called a spiritual medium.
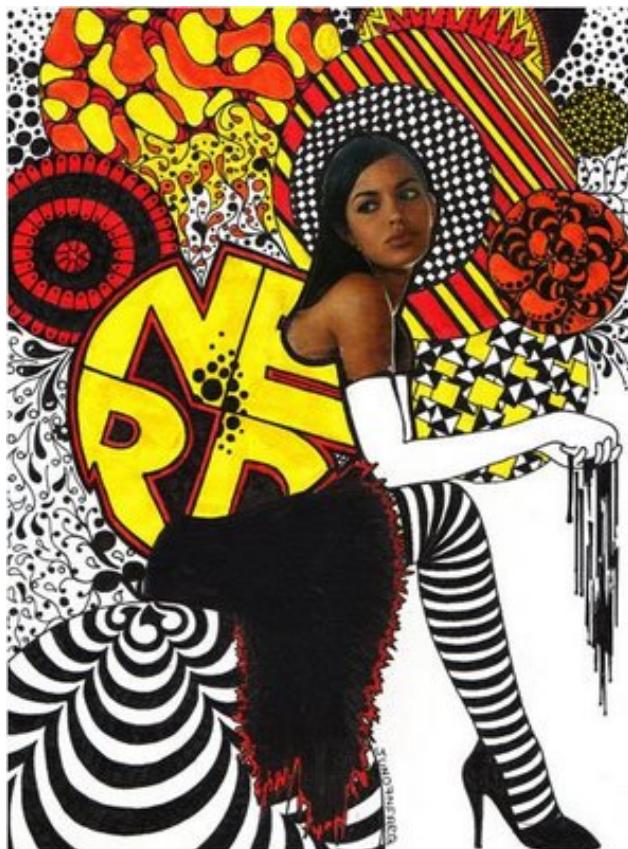
The middle of the road is called the median.

Other examples…

- A mediator is a person who gets in the middle of a dispute.
- The Mediaeval period was the Middle Ages.
- A median is the midpoint in a set of values (e.g. test scores).
- An artist's medium (e.g. watercolor, sculpture, photography) is a vehicle for their expression.

A medium is a conduit of ideas and communication.

Mixed Media

Mass Media

New Media
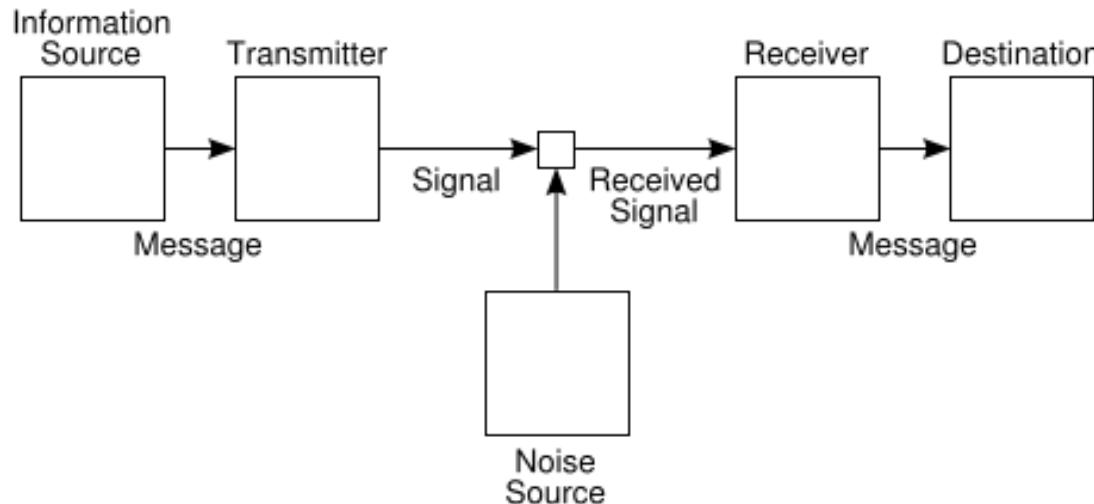
A systemic approach to multimedia:

- **STIMULUS >> MEDIUM >> RECEPTOR**

- Signal >> Conduit >> Receiver
- Design >> Medium >> Audience
- Server >> Network >> Client
- Energy >> Transducer >> Actuator

Properties of Stimulus, Medium, and Receptor:
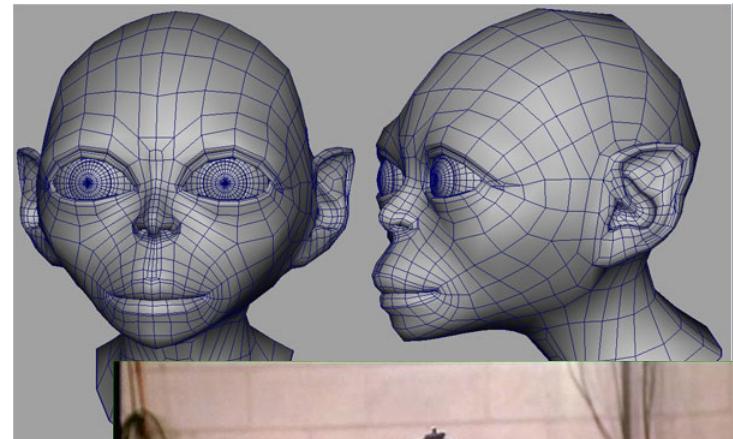
- The stimulus can be either strong or weak.

- A medium is judged by its conductivity.

- The level of sensitivity defines the receptor.

- **A communications system is only as good as the weakest link in the chain.**

- **Efficiency comes from optimizing all 3 variables simultaneously.**

The Shannon-Weaver Model of Communications

Introduced by Claude Shannon in a paper in 1948, and published in a book he co-authored with Warren Weaver, "The Mathematical Theory of Communication".

Shannon is known as the "father of information theory".
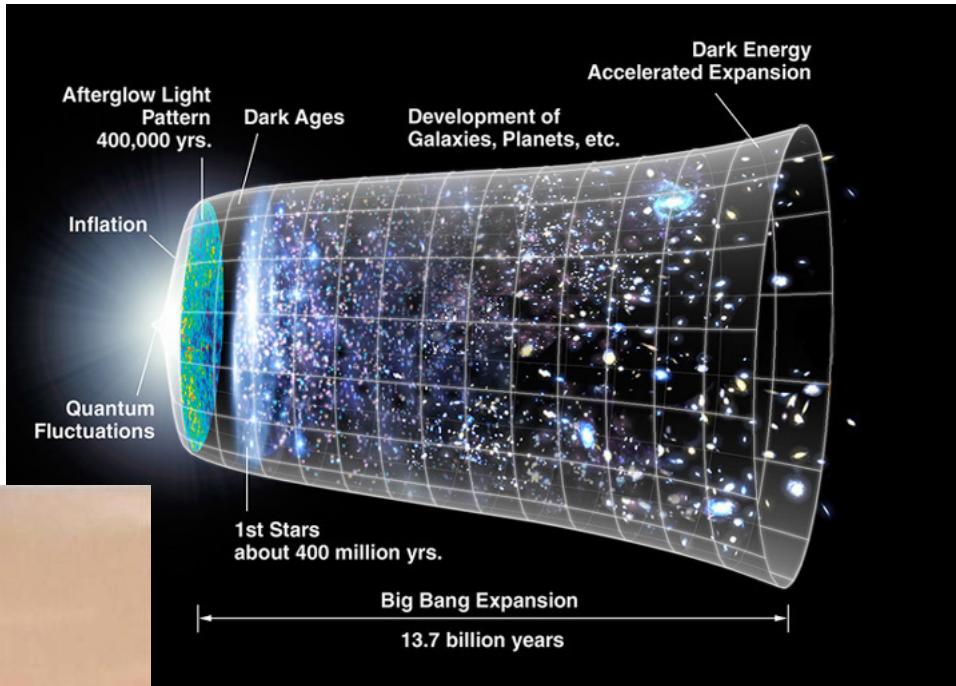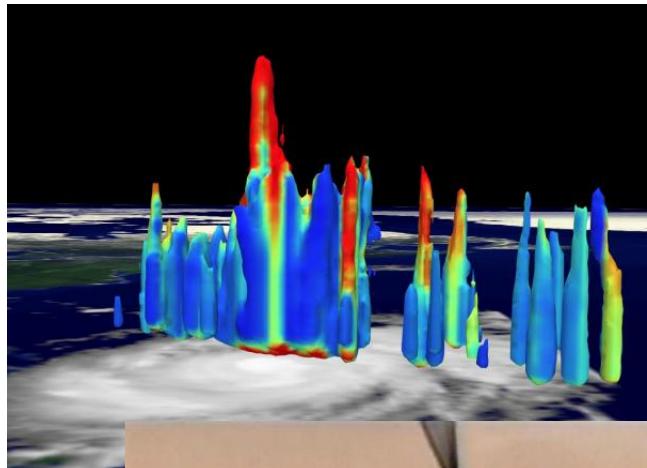
MM Applications: Movie & Video
SPFX and animation
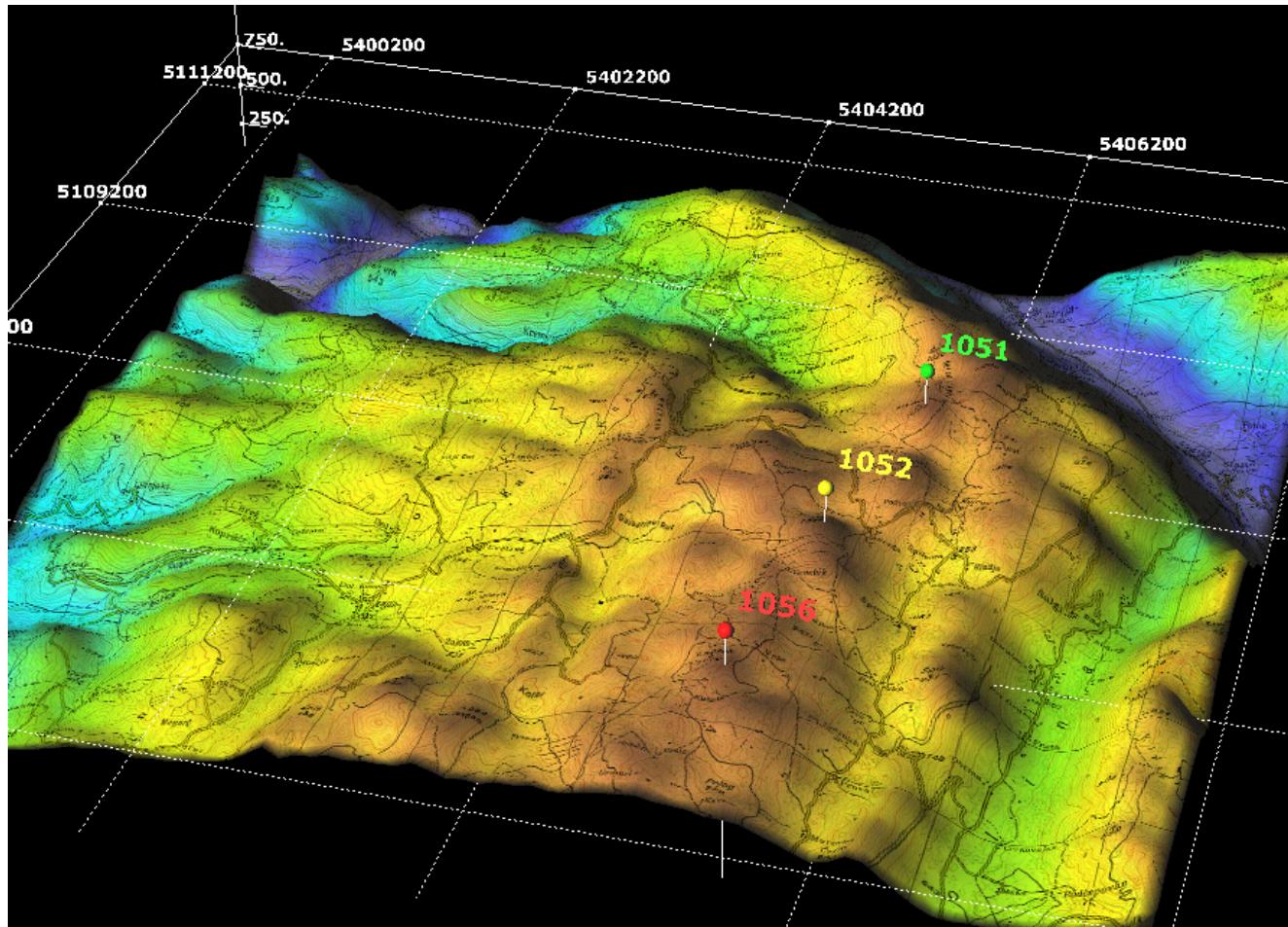
MM Applications: Games
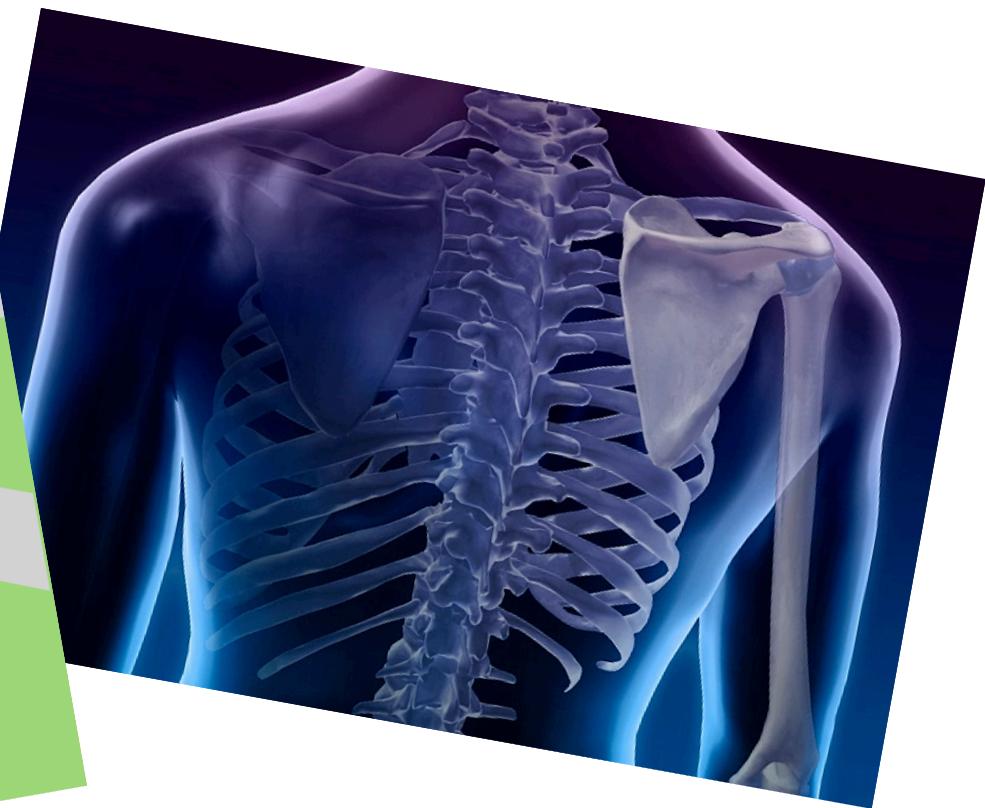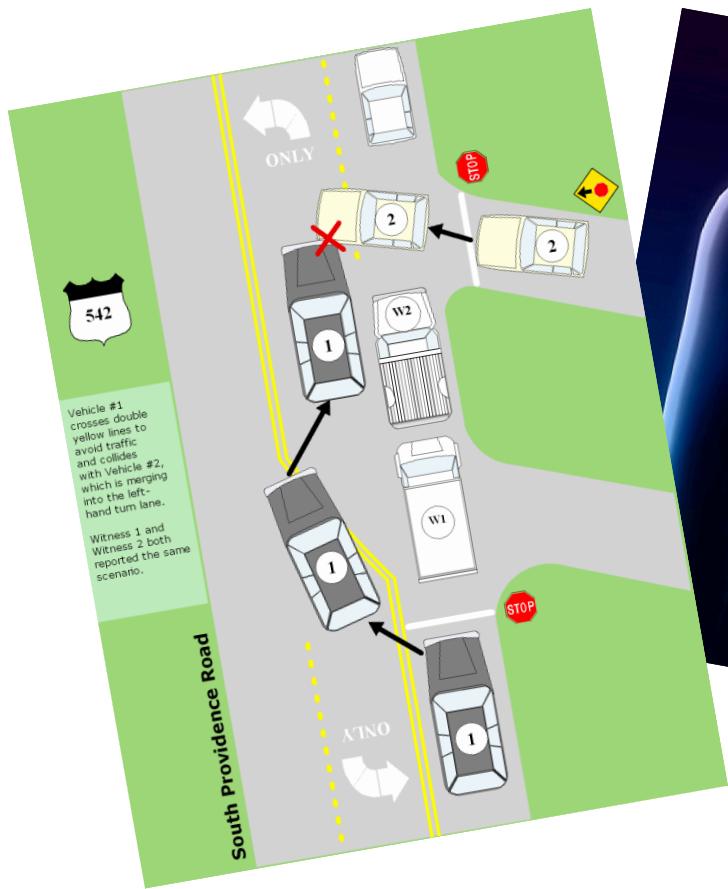
MM Applications:
Scientific Visualization

MM Applications:
# Geographic Information Systems (GIS)
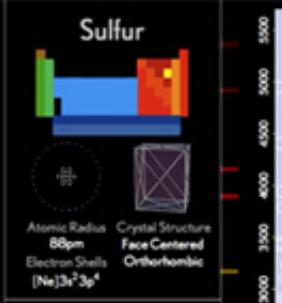
MM Applications:
Legal and Medical
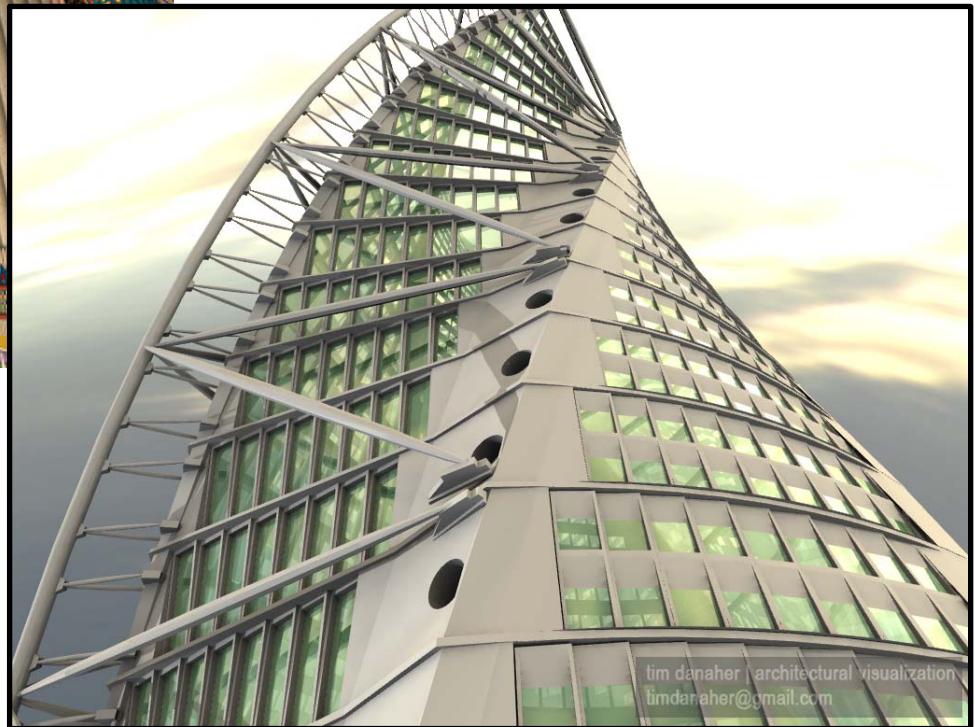
MM Applications: Education
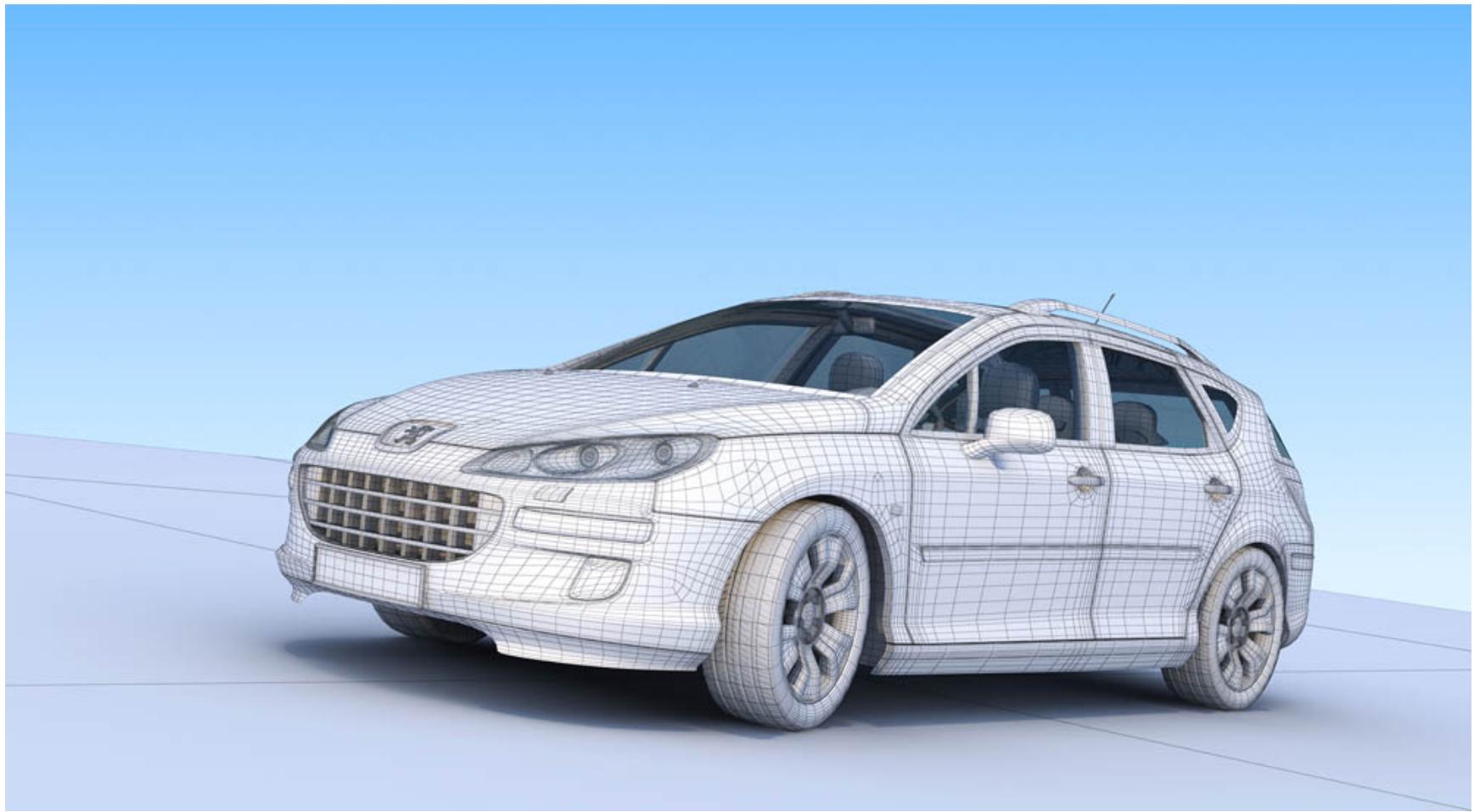
MM Applications: Architecture
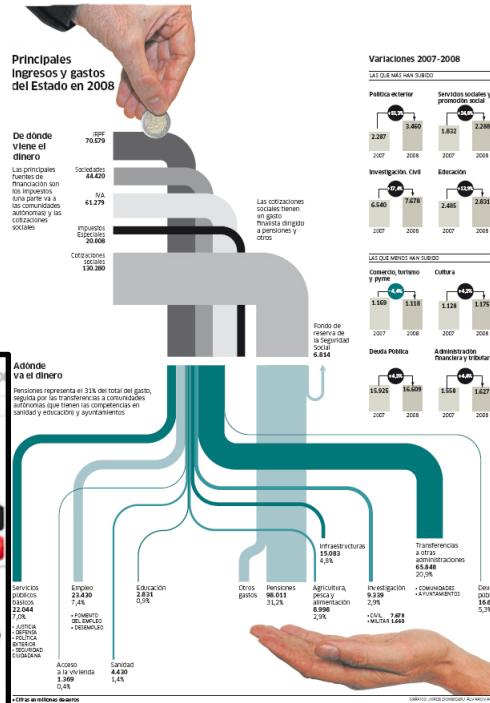
MM Applications: Product Design
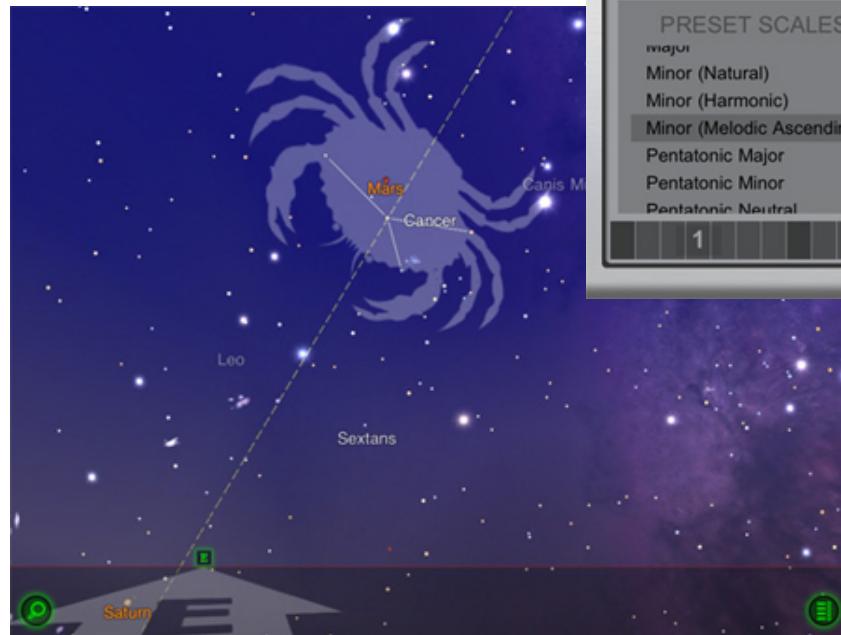
MM Applications: Journalism

MM Applications: Interface Design

"The Medium is the Message."

This phrase by Marshall McLuhan from his book, "Understanding Media" (1964), states that the means by which a message is conveyed is as important as the message itself. In other words, the conveyance shapes the content of the message, and how it is received.