



Escuela Profesional de
Ciencia de la Computación

ICC Fase 1

Computer graphics

Introduction

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Overview

- 1 Computer graphics overview
 - Overview
 - Movies/special effects
 - Video games
 - Simulations
 - Computer-Aided Design (CAD)
 - Virtual reality
 - Visualization

- 2 Research
 - Graphics Areas

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Overview

What are the applications of graphics?

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Movies/special effects



Figure: Movie visual effect example.

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Video games



Figure: Video game example.

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Simulations

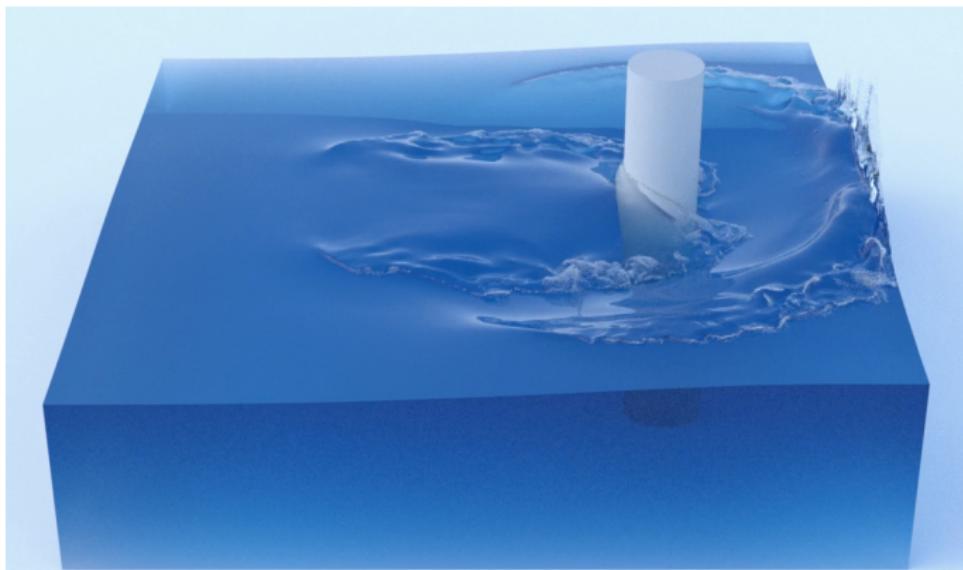


Figure: Water simulation. Source: [1]

Simulations

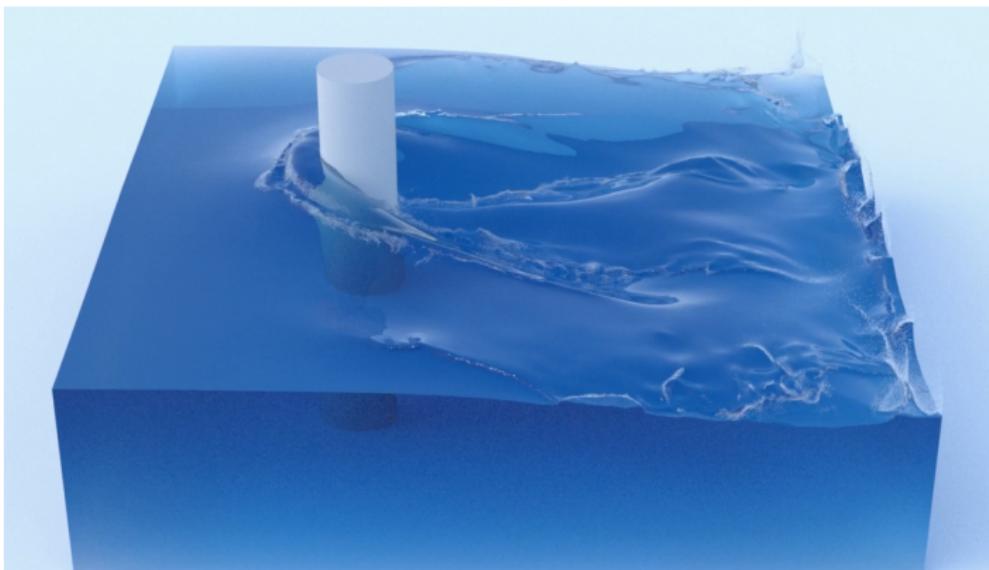


Figure: Water simulation. Source: [1]

Simulations

Example 1: [Video](#).

Example 2: [Video](#).

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CAD

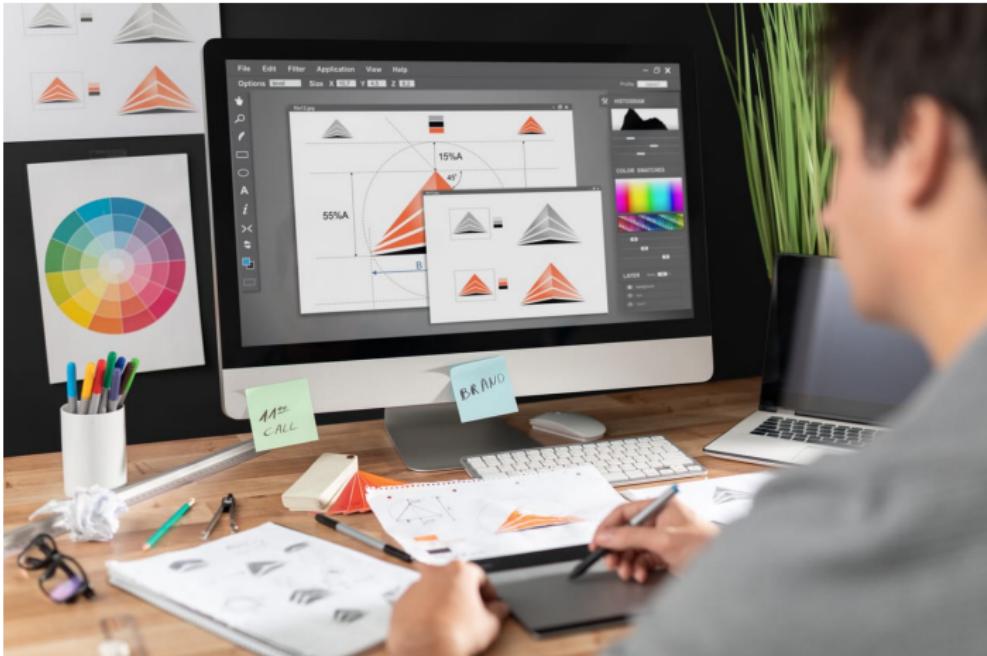


Figure: CAD example

CAD

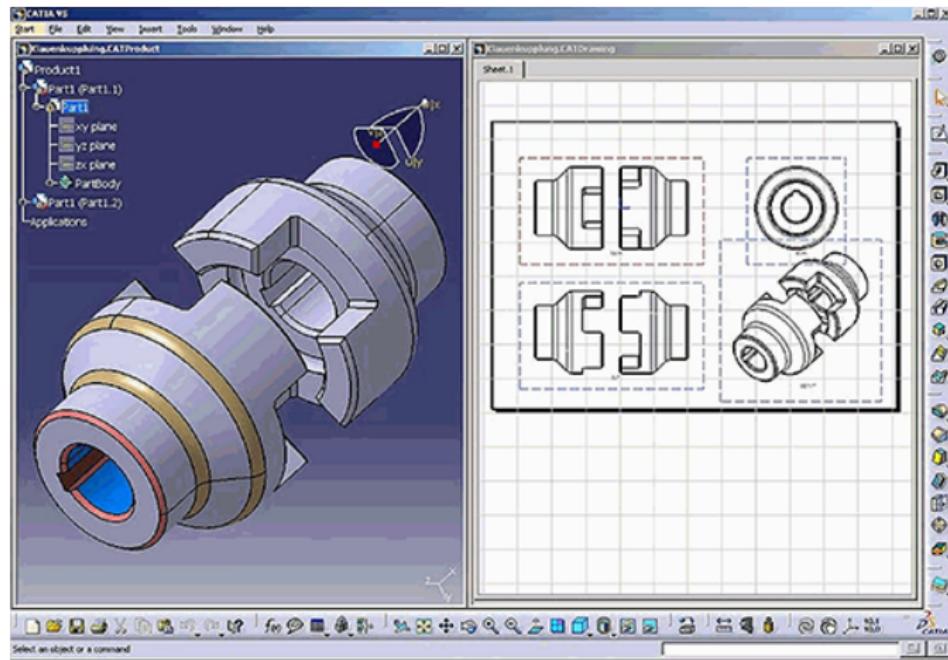


Figure: CAD example

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Virtual reality



Figure: Virtual reality example

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Visualization

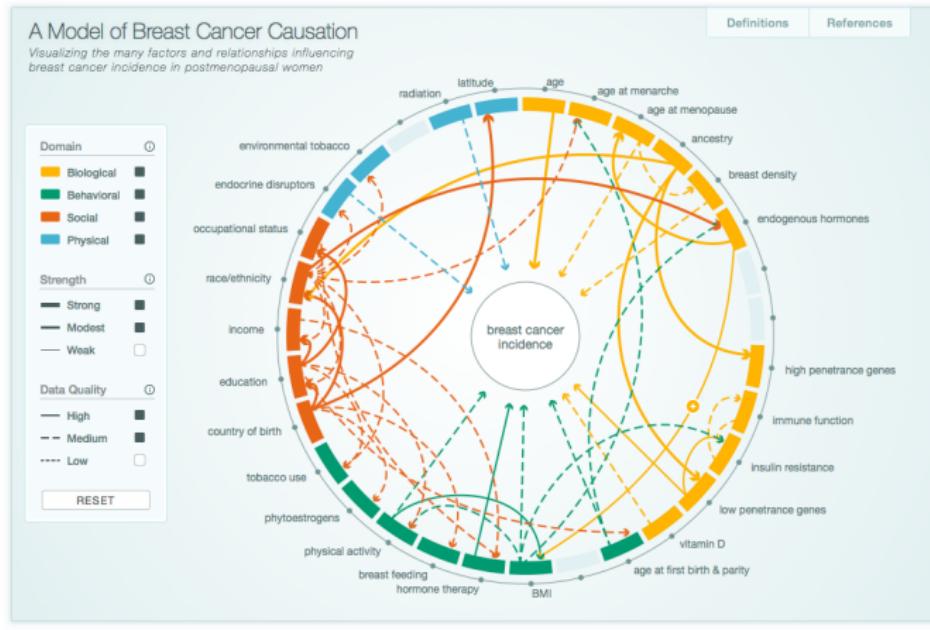


Figure: Visualization example.

Visualization

P4 tool example: [Enlace](#) [2].

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Graphics Areas

- Modeling.
- Rendering.
- Animation.
- User interaction.
- Virtual reality.
- Visualization.
- Image processing.
- 3D scanning.
- Computational photography.

References I

-  R. Ando and C. Batty, "A practical octree liquid simulator with adaptive surface resolution," *ACM Transactions on Graphics (TOG)*, vol. 39, no. 4, pp. 32–1, 2020.
-  J. K. Li and K.-L. Ma, "P4: Portable parallel processing pipelines for interactive information visualization," *IEEE transactions on visualization and computer graphics*, vol. 26, no. 3, pp. 1548–1561, 2018.

Questions?

