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## LLG Python: Geometric Computing in Python for next generation games and entertainment

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Next generation games and entertainment raise new questions in terms of architecture, design and development. Parallel processing hardware architectures enable disruptive approaches in terms of real time simulation and visualization. Storage capabilities grow ten folds, along with content creation and hyperlarge scenes crucial problems. Massively multiplayer online gaming brings brand new perspectives on networking applications, and concerns about participative content creation and the corresponding bandwidth issues. Finally, 3D makes its way to embedded, mobile devices, spawning with a number of specific difficulties.

LLG Python proposes an original, Python based environment unifying volumic data representation and processing for real time applications. This unification through 3D programming and scripting enables defining solutions to many next generation gaming and entertainment upcoming challenges.

### Summary

I –Next generation gaming and entertainment challenges

- 1 –Parallel processing and multicore hardware
- 2 –Storage capabilities
- 3 –Online gaming
- 4 –Mobile devices

II –LLG Python environment

- 1 –From polygons to polynomials
- 2 –Content creation
- 2 –Data optimization, access and distribution
- 3 –Parallel Geometric Computing
- 4 –Embedded Simulation

III –Gaming and entertainment applications

- 1 –Hyperlarge, hypercomplex environments
- 2 –Physics simulation
- 3 –Non determinist gaming

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