Prof. Dr.-Ing. Ralf Steinmetz
Multimedia communications Lab

Dipl. Inf. Robert Konrad
Polona Caserman, M.Sc.

TECHNISCHE UNIVERSITÄT DARMSTADT

„Game Technology“
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Exercise 10

For bonus points upload your solutions until **Tuesday, January 16th, 13:29**

General Information

- The exercises may be solved by teams of up to three people.
- The solutions have to be uploaded to the Git repositories assigned to the individual teams.
- **The submission date (for practical and theoretical tasks) is noted on top of each exercise sheet.**
- If you have questions about the exercises write a mail to game-technology@kom.tu-darmstadt.de or use the forum at https://www.fachschaft.informatik.tu-darmstadt.de/forum/viewforum.php?f=557

P10 Practical Task: Coarse Texture Streaming (5 Points)

Implement coarse texture streaming – load in higher resolution textures for close objects, kick out higher resolutions for far away objects. Try to keep the framerate high and steady.

https://github.com/TUDGameTechnology/Exercise10.git contains additional code to help you out. You can either copy the code changes manually or just pull them into your own repository using
git pull https://github.com/TUDGameTechnology/Exercise10.git

T10 Theoretical Tasks: Compression (5 Points)

T10.1 Hardware

What makes it so important that texture compression algorithms are directly supported by the hardware?

T10.2 Artifacts

ETC is a lossy texture compression algorithm. Describe what characteristics an image should have to make those losses clearly visible.

T10.3 Tilemaps

Outline an algorithm to display tilemaps correctly in a 3D environment.