

# Parallelizing a Traffic Simulation

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Why a simulation?  
Traffic all around us, literally!  
Parallelism is easy, right?  
Parallelism Overview  
What's next?

# Contents

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# Why a simulation?

Real world is always much more fun than the imaginary one.  
However, sometimes it is better to test in the second one

# Traffic all around us, literally!

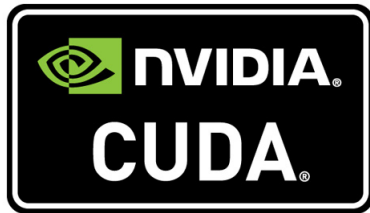
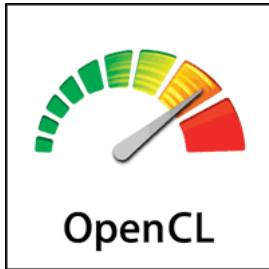
- Public transportation user? It is sooo slow!
- You have a car? Well I don't!
- Why not take a walk? Wonderful idea, not everybody can afford that though

# Parallelism is easy, right?

What we need?

- Fast computers
- Cool new technology to play with
- Free time

But what if you have only the technology?



# Welcome to OpenCL

## ■ Open specification

# Welcome to OpenCL

- Open specification
- Proposed by Apple



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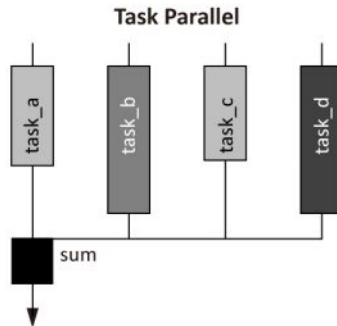
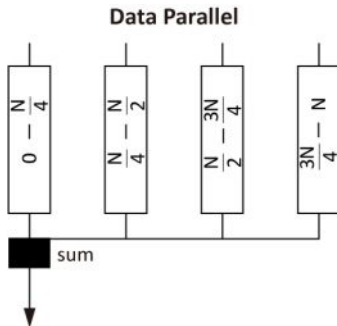
- Open specification
- Proposed by Apple
- Maintained by Khronos Group

# Welcome to OpenCL

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- Heterogeneous Computing

# Welcome to OpenCL

- Open specification
- Proposed by Apple
- Maintained by Khronos Group
- Heterogeneous Computing
- Write once, run everywhere (yeah... almost)



# What's next?

- Come up with a mathematical model for the simulation ( or better yet - steal one )

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- Come up with a mathematical model for the simulation ( or better yet - steal one )
- Writing some code is never bad idea
- Design a fancy UI for the jury

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**What's next?**

Thanks!

*The End*



## Resources

- Khronos Group official OpenCL page
- OpenCL diagram
- OpenCL Overview