Educational MapApps

apps4schools
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Agenda

- General idea
- What kind of apps?
- Apps
  - Location
  - Orientation

General idea

- focus on applications for educational purposes
- searching for areas where such tools would be helpful
- feedback from the institute "Didaktik der Geographie"
  - "Educational Standards in Geography for the Intermediate School Certificate"
  - meeting helped to finalize the concepts of the apps

What kind of apps?

Location study

Orientation

Location study, why?

- simple form of location analysis
- location factors:
  - infrastructure, taxes, sales market, resource availability, ...
- => students should learn how difficult it is to find the right location in an urban area

What we...

- use:
  - OpenStreetMap data
    - customized with ArcMap 10.0
- provide:
  - different layers
    - e.g:
      - streets
      - kindergarten
      - bus stops
      - industrial areas

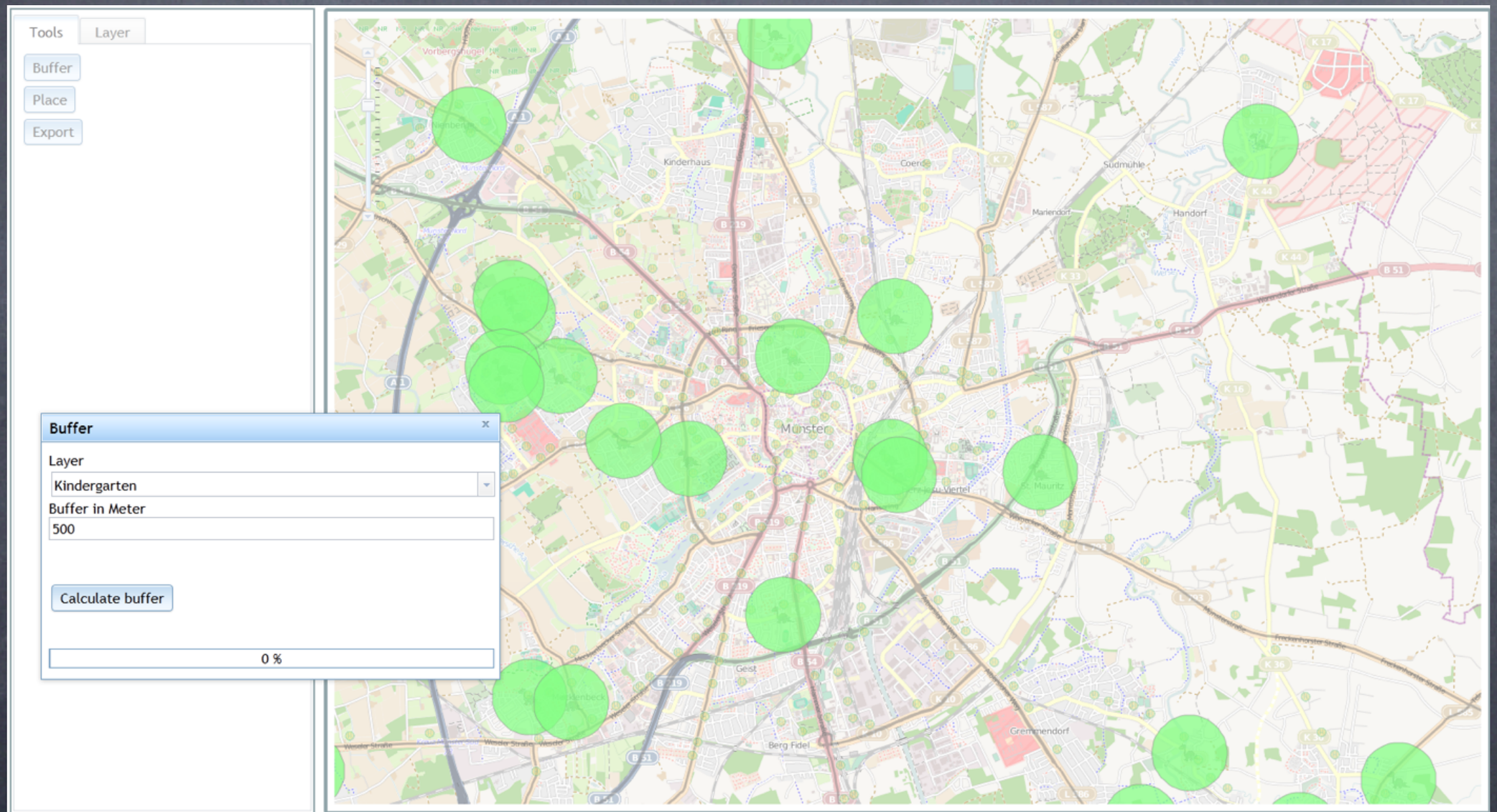
Technologies

- Backend:
  - ArcGIS Server
    - setup Geoprocessing Service for buffering
      - to publish our layers
- Frontend:
  - HTML & JavaScript
  - ArcGIS JavaScript API
  - Dojo Toolkit

Demo scenario

- how we implement it in the app
  - scenario:
    - "find the best location for a new kindergarten"
  - restrictions:
    - >1.000 m to next kindergarten
    - <300 m to next short - range transit
    - >150 m to main streets

DEMO



Location finding demo

Outlook & Changes

- Upload function for own data
- Download function
- Modify buffer

Orientation on maps

- goals:
  - learn to navigate with maps
  - learn to read maps
  - dealing with different spatial perspectives
  - recognize "real buildings" on a map
  - working with distances & scales

How to reach these goals

- 3 different routes, to train different skills
  - Route 1:
    - direction
    - --> dealing with cardinal and relative directions
  - Route 2:
    - aerial image <--> map
    - --> recognition of building shapes
  - Route 3:
    - recognition of legend symbols

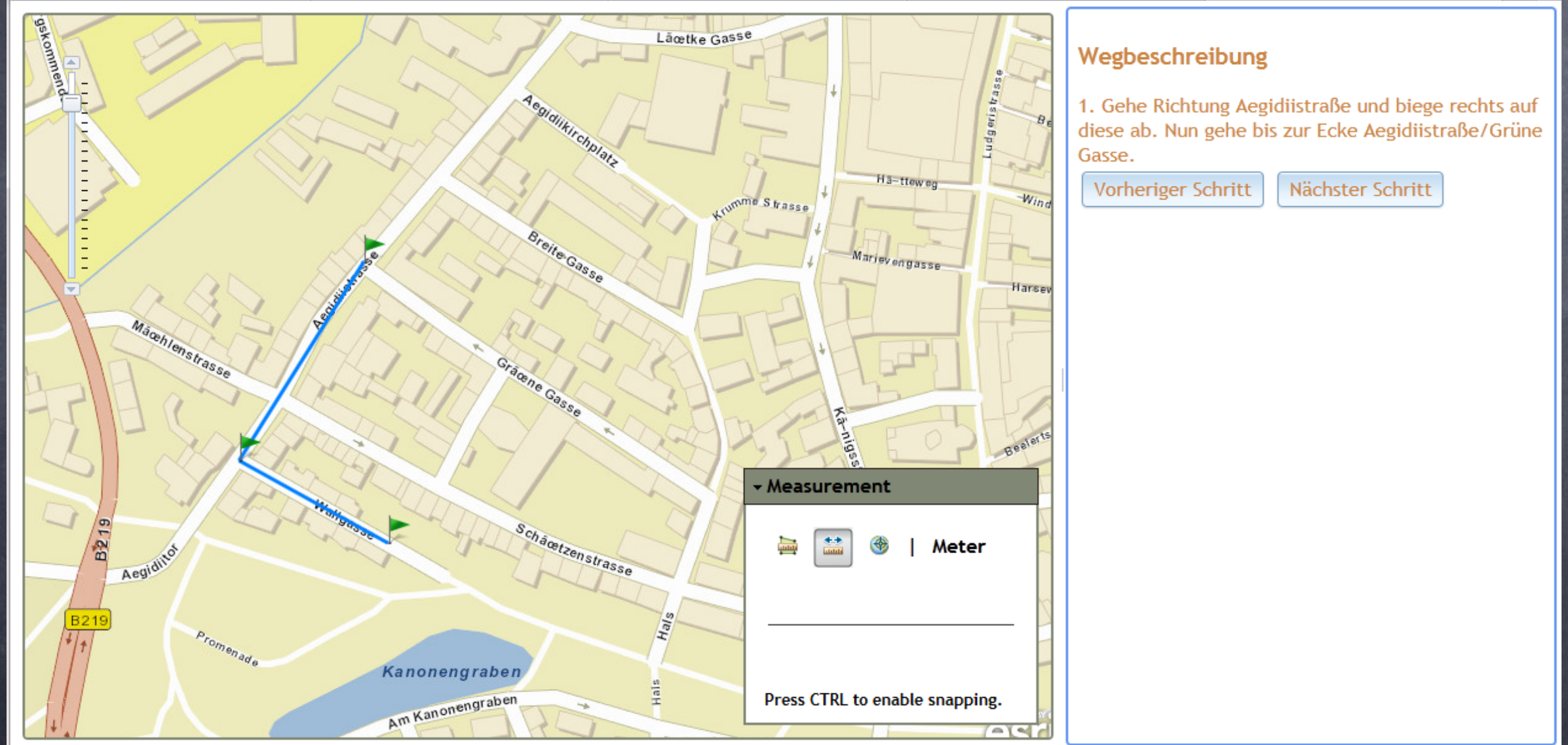
How the routes should be

- have to be easy to understand
- shouldn`t be too complex
- shouldn`t cover too many topics at once
- should have a repetitve aspect

Technologies we use

- ArcGIS Server 10.0
- JavaScript API for ArcGIS Server 10.0
- Dojo ToolKit 1.6.1
  - Dijit Module
- HTML & JavaScript

DEMO



Wegbeschreibung

1. Gehe Richtung Aegidiistraße und biege rechts auf diese ab. Nun gehe bis zur Ecke Aegidiistraße/Grüne Gasse.

Vorheriger Schritt | Nächster Schritt

Orientation Demo

Examples

- Which of these pictures correspond to the building on the map?

Examples

- In which direction should the yellow arrow point on the map.

Thank you for your attention!

Questions?