

OFFLINE VEKTOROVÉ MAPY

Seznam.cz

Ing. Lukáš Korba

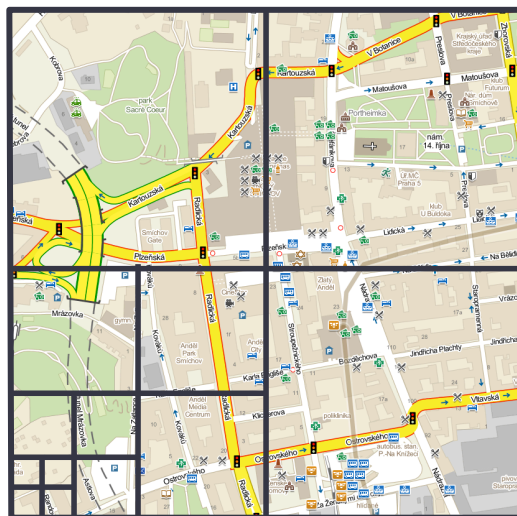
www.mugeaters.com

Osnova

- Historie
- Vektory
- OpenGL
- Render
- Camera
- R-Tree
- Triangulace
- Texty
- Optimalizace
- Závěr

Historie - rastr

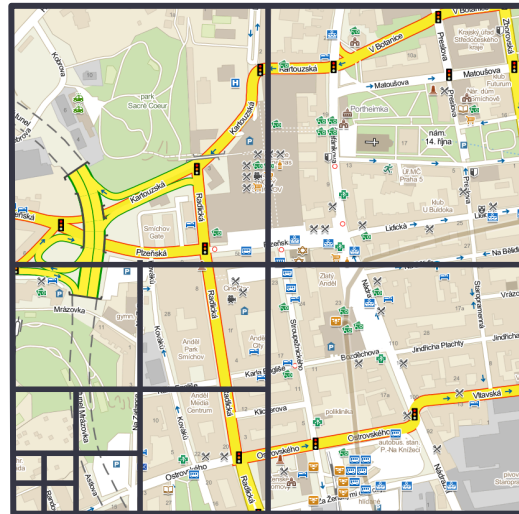
- Současný produkt ve všech mobilních zařízeních (iOS, Droid, Win)
- ale i tzv. velké mapy (www.mapy.cz)
- Proč nevyhovuje?



Historie - rastr

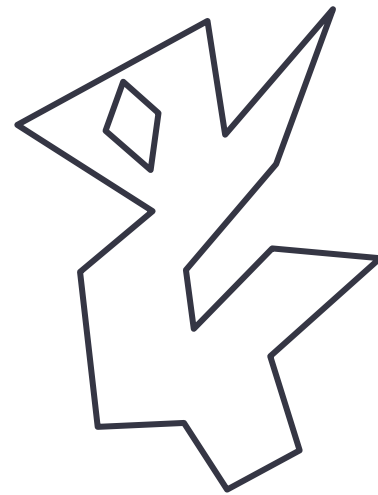
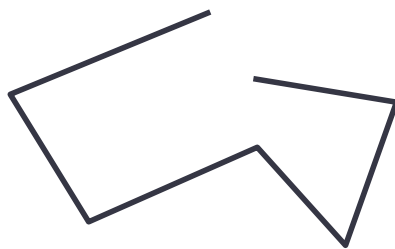
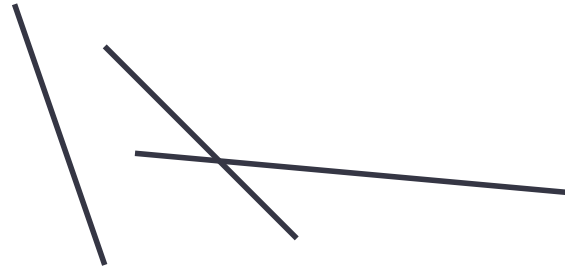
- Současný produkt ve všech mobilních zařízeních (iOS, Droid, Win)
- ale i tzv. velké mapy (www.mapy.cz)
- Proč nevyhovuje?

1. Objem dat
2. Rozlišení displaye
3. Striktně 2D
4. Nelze editovat

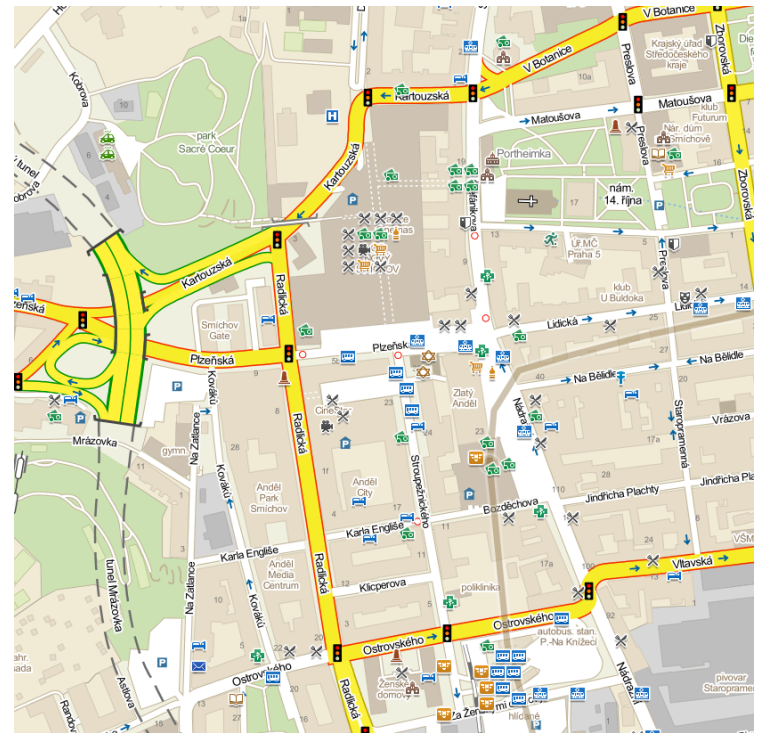
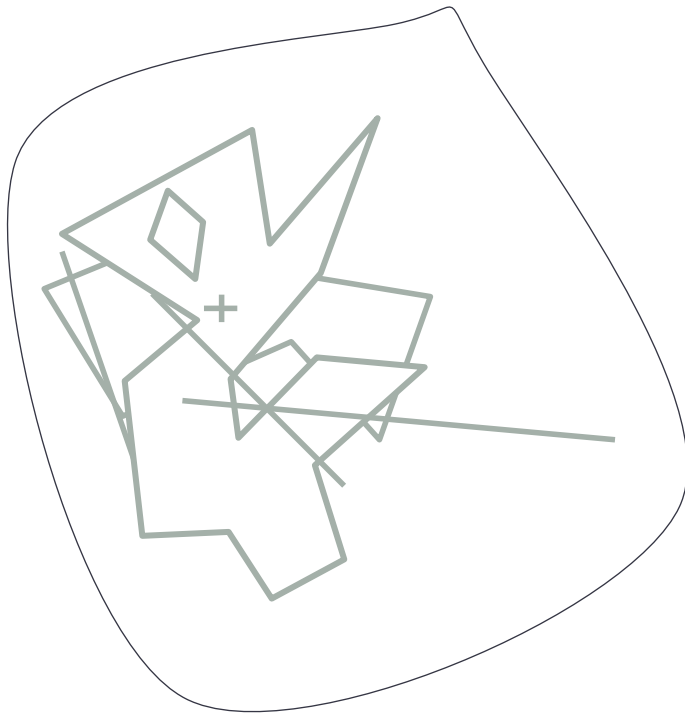


Vektory I

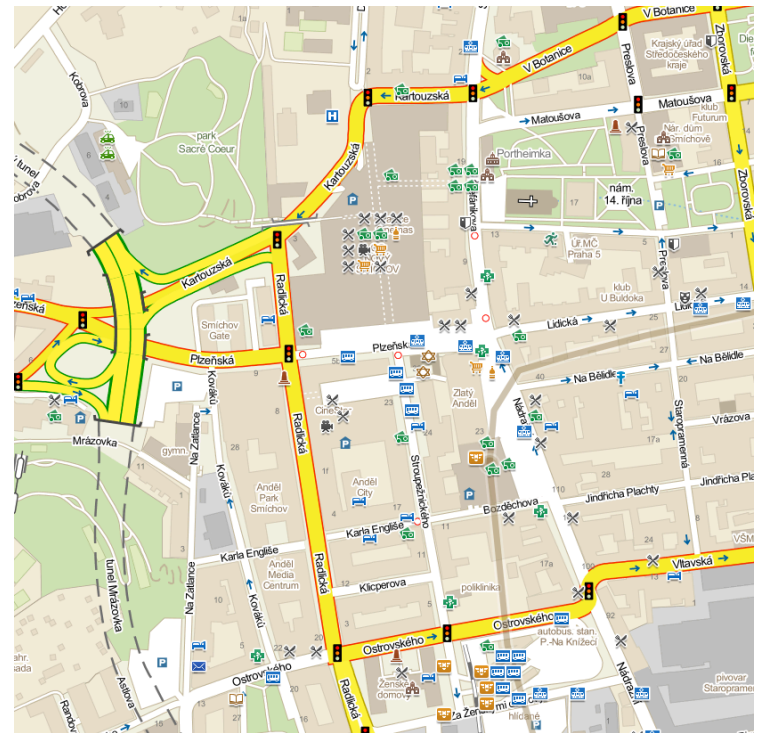
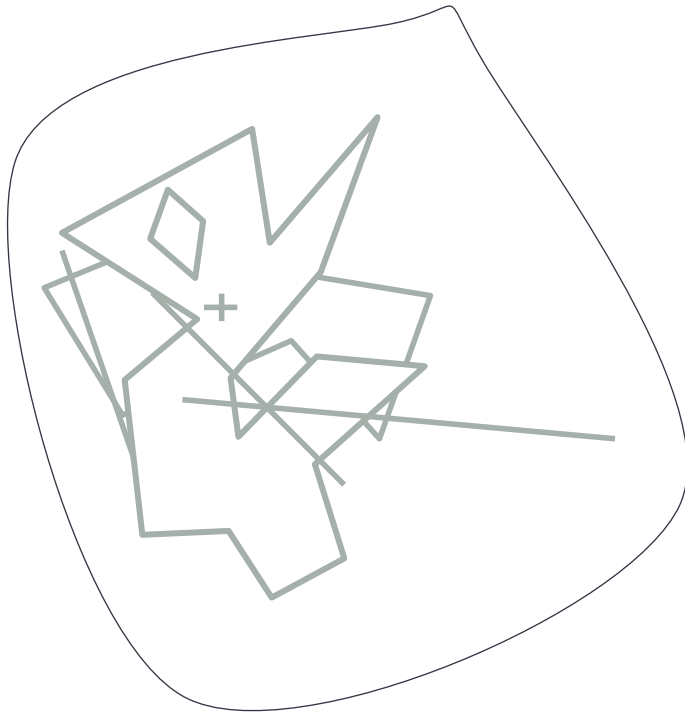
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Vektory II



Vektory II



Vektory III

- Styly

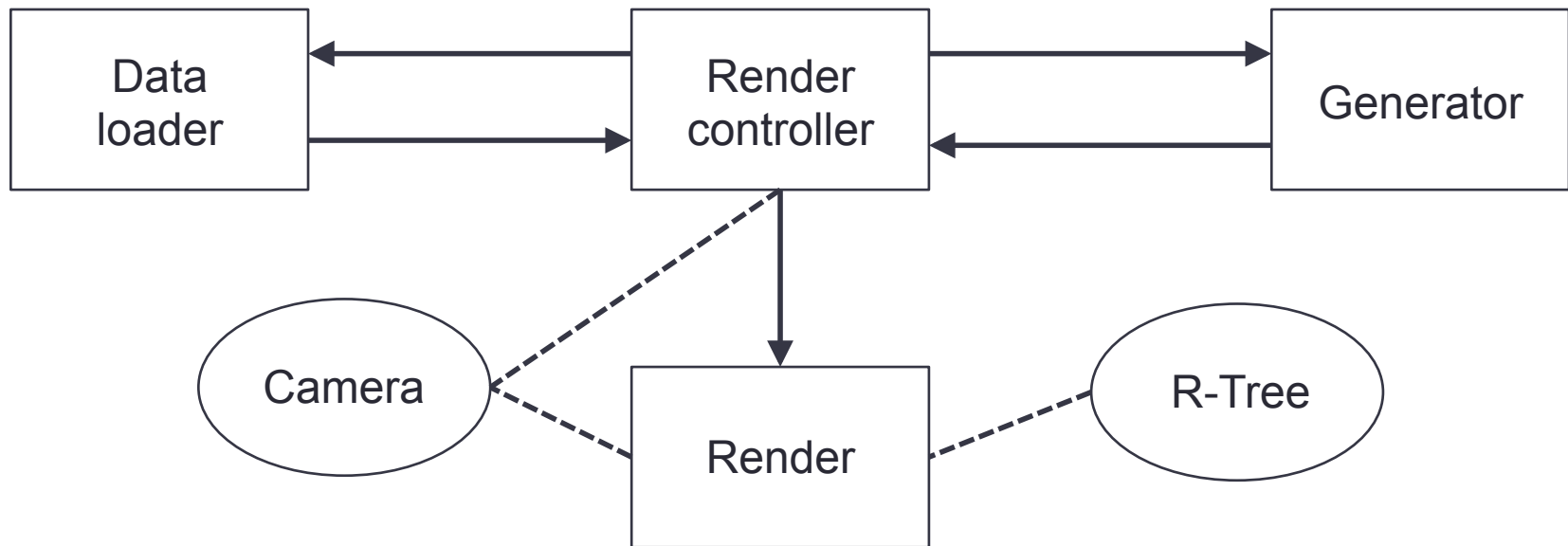
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- Určují vzhled a pořadí

OpenGL

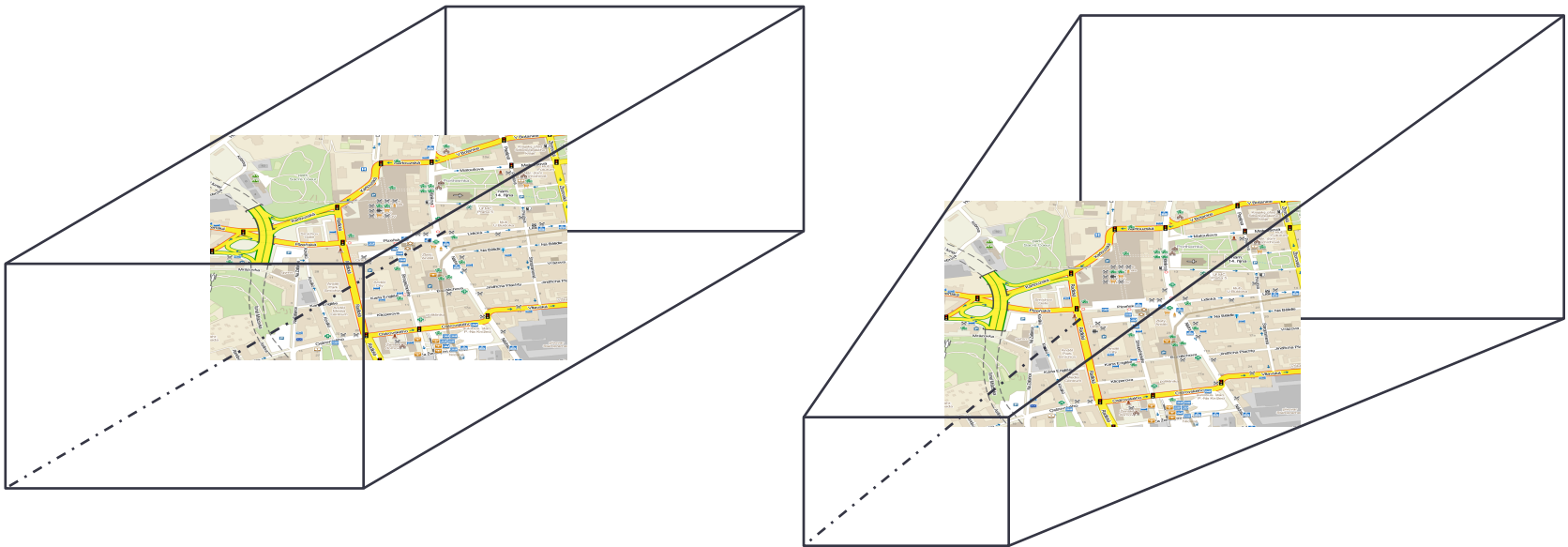
- OpenGL ES 1.1 – fixní pipeline
 - Nutnost řešit antialiasing
 - OpenGL ES 2.0 – programovatelná pipeline
 - Multisampling
 - Shadery – verze 1.2, precision
-
- OpenGL
 - Nejobecnější
 - Shadery dle grafické karty

Render

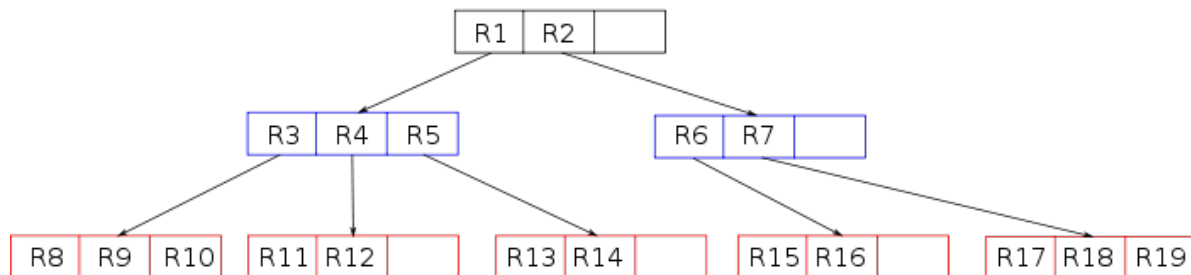
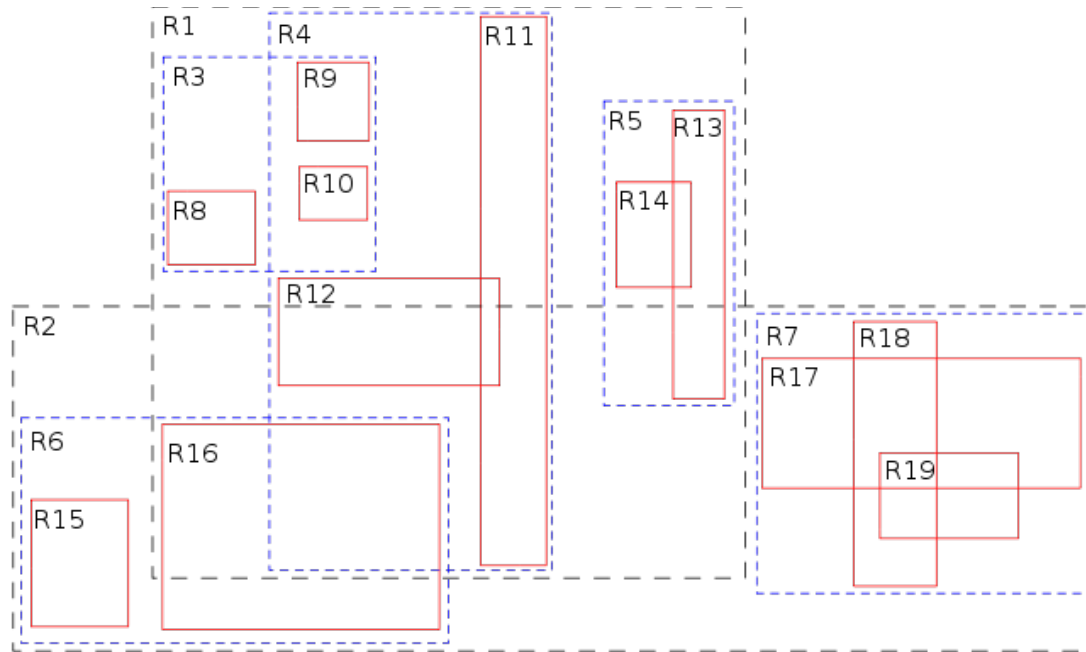


Camera

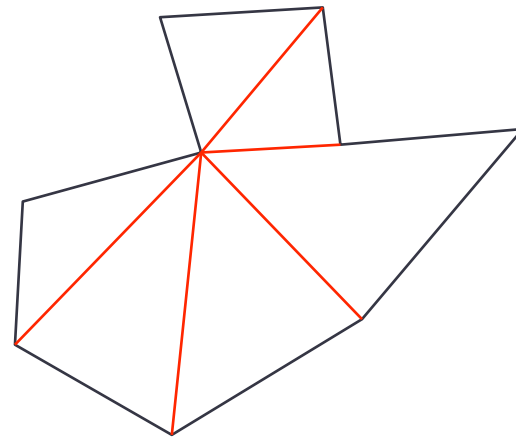
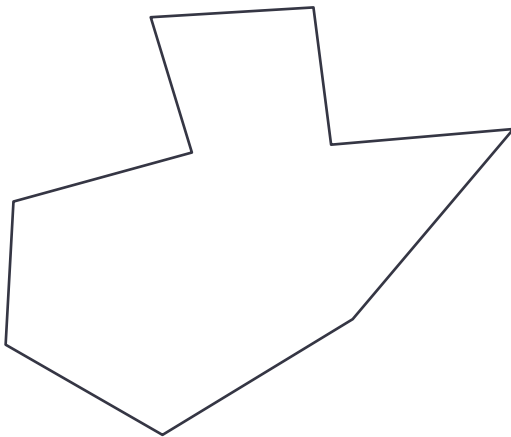
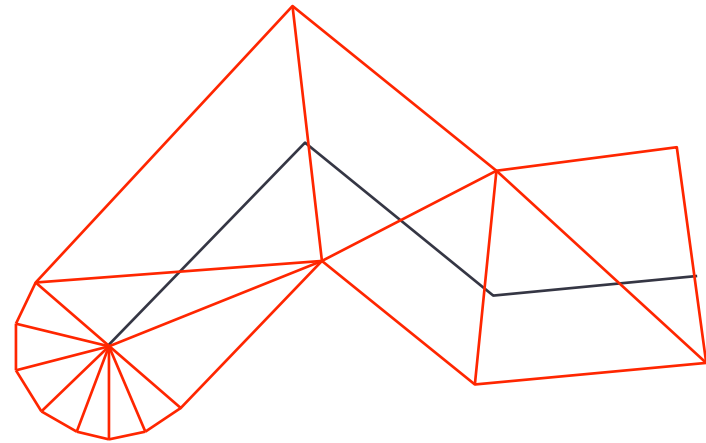
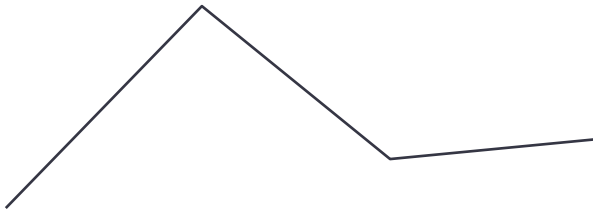
- Ortho vs. Frustum (2D vs. 3D)
- Poloha v prostoru



R-Tree



Generator - Triangulace



Texty

- Bodové vs. vektorové

Pozicování na vektor

M a s a r y k o v a

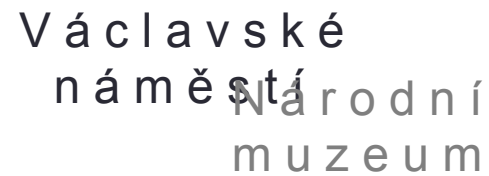


- Kolize

Nábřeží
Paláceho



Václavské
náměstí
Národní
muzeum



Optimalizace

- Vícevláknová aplikace
- R-Tree s “dlaždicemi”
- Generování vektorů do rasteru
- Čáry pomocí textur

Závěr

- Zpět k nevýhodám rasteru
 1. Objem dat řádově MB
 2. Nezávislost na rozlišení
 3. 2D, 2.5D a 3D efekty
 4. Možnost stylizovat

- Dotazy