

Institut geoinformatiky VŠB – TU Ostrava

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FMG 2008

# Webové projekty pro tvorbu MapMashups aplikací



# Co je Mashup ?

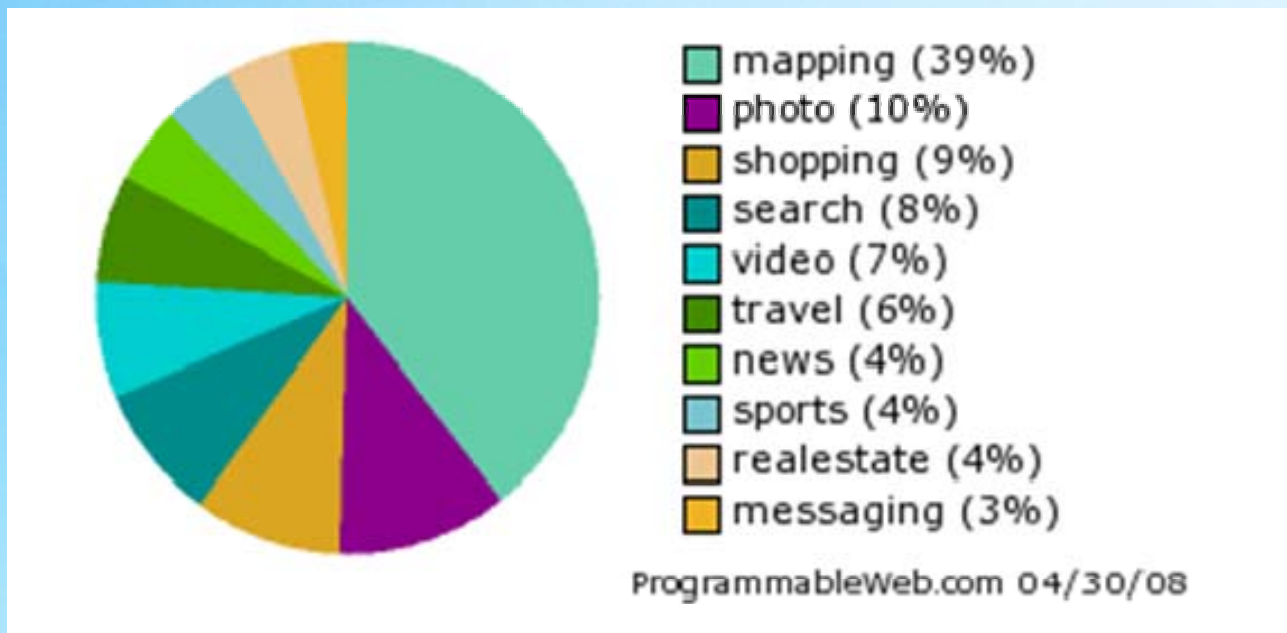
- V českém překladu znamená – míchanice
- Jedná se o webový aplikační hybrid, který v sobě kombinuje
  - Data z více než jednoho zdroje (např. mapy, XML, RSS)
  - Obsahuje logiku zpracovávající data
  - Přidaná hodnota
- Produkuje novou informaci, kombinací existujících informací

# a co MapMashup ?

MapMashup = Mashup + prostorová informace

- Na internetu **spousta dat** i prostorových
- Formáty jako KML, GeoRSS, GML, ...
- **Vizualizace** pomocí API mapových služeb
  - **Google** maps API, **Yahoo!** Maps, **Microsoft** virtual earth interactive SDK
  - **Seznam** Mapy API, **Atlas** Amapy API

# MapMashup vede !



- Nejvíce vytvořených Mashup aplikací jsou právě Map Mashups

# Webové projekty pro tvorbu (Map)Mashup aplikací

„Editory“



Microsoft®  
Popfly™



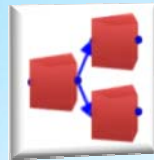
beta pipes™



Google Mashup Editor

# Microsoft Popfly

- online vizualizační nástroj
- Postaven na technologii Microsoft SilverLight
- Umožňuje vytvářet:



Mashup aplikace



Hry (alpha)



Internetové stránky

# Microsoft Popfly

The screenshot displays the Microsoft Popfly web application interface. At the top left is the Popfly logo. The top right shows the user profile 'gisova08' with options for 'Save', 'Save As', and 'Sign Out'. Below the header is a navigation bar with 'Create Stuff', 'My Stuff', 'Help Stuff', and 'Overview Stuff'. The main area features a map of Ostrava, Czech Republic, with several red 3D blocks representing data feeds and processing steps. Blue arrows indicate the flow of data from the feeds to the processing blocks. The blocks are labeled: 'GeoRSS for Seldom', 'Combine', 'Combine (2)', and 'Virtual Earth'. A 'KmlParserTest' block is also visible. On the left side, there is a 'Blocks' sidebar with a search bar and a list of available blocks, including 'GeoNames', 'Virtual Earth', 'Yahoo! Traffic', 'HostIP Lookup', 'TellMeWhere', 'Virtual Earth Bertin', 'GeoRSS for Seldom', 'IPlocation', 'TestZipCode', 'Virtual Earth - centers on', 'Dpe MapLeader', 'Stand Abrv to Name', 'VE Findlocation', and 'VE\_Optional'. The bottom of the page contains copyright information: '© Microsoft 2007' and links for 'Privacy', 'Legal', 'Behave', and 'Report Abuse'.



# Microsoft Popfly

Microsoft Popfly

Operations: add@pushpin  
Add a plugin to the map.

Inputs:  request

PROPERTY	SOURCE	VALUE
latitude	Combine (2)	Latitude
longitude	Combine (2)	Longitude
url	Combine (2)	Image
title	Combine (2)	Title
description	Combine (2)	Description
centerMapOnPushpin	[custom]	true

Properties:  
defaultZoomLevel: 18

OK

Virtual Earth

Switch to an advanced view

© Microsoft 2007 Privacy Legal Behave Report Abuse

Microsoft Popfly

Virtual Earth

Feel free to tweak the JavaScript below, if you know how.

```
data["Virtual Earth"] = new Array();
var num = data["Combine (2)"].length;
virtualEarth.__reserved.pendingCalls = num;
if (num == 0)
{
  console.write("There are no incoming items.");
  environment.finish();
}
For (var i=0; i<num; i++)
{
  try
  {
    var result = virtualEarth.addPushpin(data["Combine (2)"][i].latitude, data["Combine (2)"][i].longitude, data["Combine (2)"][i].url, data["Combine (2)"][i].title, data["Combine (2)"][i].description);
  }
  catch (ex)
  {
    environment.reportErrorInLoop(i, ex);
  }
}
```

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# Yahoo! Pipes

- Online vizualizační Drag and Drop nástroj
- Grafické rozhraní je postaveno na AJAX technologii
- Schématické programování
- Kombinace modulů a zdrojů dat pomocí „Pipes“

# Yahoo! Pipes

The screenshot displays the Yahoo! Pipes web application interface. The top navigation bar includes the 'pipes' logo, the user name 'gisova\*', and buttons for 'Layout', 'Expand All', 'Collapse All', 'Back to My Pipes', 'New', 'Save', 'Save a copy', and 'Properties...'. On the left, a sidebar lists various sources and operators, including 'Fetch CSV', 'Fetch Feed', 'Fetch Data', 'Fetch Page', 'Fetch Site Feed', 'Flickr', 'Google Base', 'Item Builder', 'Yahoo! Local', 'Yahoo! Search', 'User inputs', 'Operators', 'Url', 'String', 'Date', 'Location', 'Number', 'Favorites', 'My pipes', and 'Deprecated'. The main workspace shows a workflow diagram with several interconnected components: three 'Fetch Feed' nodes, one 'URL Builder' node, three 'Location Extractor' nodes, one 'Loop' node containing an 'Item Builder' node, one 'Union' node, and one 'Pipe Output' node. The 'Fetch Feed' nodes are configured with URLs from 'gis.vyjimecny.cz' and 'rss.accuweather.com'. The 'URL Builder' node is configured with a base URL 'http://maps.live.com' and query parameters 'action: retrieverss', 'mkt: cs', and 'mapurl: http://gis.vyjimecny.'. The 'Loop' node is configured to 'emit all results'. The 'Item Builder' node is configured with attributes: 'latitude = 49.833', 'longitude = 18.161', 'title = item.y.title', and 'description = item.description'. The 'Union' node is connected to the outputs of the three 'Fetch Feed' nodes and the 'Loop' node. The 'Pipe Output' node is connected to the output of the 'Union' node. At the bottom, a status bar shows 'Time taken: 2.631519s Refresh' and a 'Debugger: Union (10 items)' window displaying a list of results: 'Aktuální stav počasí na VŠB-TU Ostrava', 'Nová aula VŠB-TU Ostrava', 'Menza VŠB-TU Ostrava', and 'Rektorát VŠB-TU Ostrava'.

# Yahoo! Pipes

- Možnost kombinace již vytvořených pipes
  - sdílení s ostatními uživateli
- Vestavěný debugger
- Export do mnoha formátů (například RSS, JSON, PHP, KML a další)

# Google Mashup Editor

- Online AJAX grafické prostředí
- Registrace pouze pro zvané (beta verze)
- Složen ze tří částí
  - Editor
  - Feed Browser
  - Sandbox

# Google Mashup Editor

Google Mashup Editor  
index.gml in mashup-tomas-minarcik-mapmashup

tomas.minarcik@gmail.com | Help | Sign out  
Published 2008-04-29 06:24 PM (GMT): trada.googlemashups.com

Editor Feed Browser **Sandbox** Published Apps

Reload Clear  Google Gadget PopUp

[View source](#) | [Sign in](#)

## Maps Mashup

Aktuální stav počasí na VŠB-TU Ostrava

Nová aula VŠB-TU Ostrava

Menza VŠB-TU Ostrava

**Rektorát VŠB-TU Ostrava**

Budova A koleje VŠB-TU Ostrava

Budova J VŠB-TU Ostrava

Buřet E

Vrtule

Studentský klub

Myslivna

Slovan

Asia Bar

Mukade

Kongres kafé

Zlaté zrnko

Panorama

Vzpomínka

Currently: Mostly Clear: 14C

5/14/2008 Forecast

Map data ©2008 PRN/K, Tele Atlas, Terra, GeoEye

# Vybrané oblasti k využití MapMashups

- Zemětřesení
- Doprava
- Výstražné systémy
- Evakuační zóny
- Zločinost
- Kultura
- Hledání pohřešovaných osob
  
- Mnoho dalších ...



# Využití Mashups

## Mashup pro sledování zemětřesení

Past 2 Months  
Past 2 Days  
Today

Felt Zone  
Damage Zone

World Wide Earthquakes

Europe **Australia** United States World

2008/05/13 10:29:28 Northern Sumatra, Indonesia  
2008/05/12 19:44:22 Port Pirie SA  
2008/05/12 06:43:15 Eastern Sichuan, China  
2008/05/12 06:28:01 Eastern Sichuan, China  
2008/05/11 11:20:57 Hindu Kush Region, Afghanistan  
2008/05/09 21:51:31 Guam region  
2008/05/07 19:16:37 Fiji Islands Region  
2008/05/07 16:45:20 Near East Coast of Honshu, Japan  
2008/05/07 16:02:02 Off East Coast of Honshu, Japan  
2008/05/07 14:56:42 SE of Broken Hill, NSW  
2008/05/07 07:27:30 Wyalkatchem WA  
2008/05/06 23:27:37 Flores Islands Region, Indonesia  
2008/05/06 12:42:23 Loyalty Islands, New Hebrides Islands  
2008/05/05 02:50:32 Loyalty Islands  
2008/05/03 22:14:31 Near Wyalkatchem, WA  
2008/05/03 19:01:49 Solomon Islands  
2008/05/03 03:53:36 Southern Sumatra, Indonesia

Map Satellite Hybrid

2008/05/09 21:51:31 Guam region  
Magnitude: 6.7  
[More quake details...](#)

Earthquake data provided by [Geoscience Australia](#)

Ads by Google

**Loving the Storm-Drenched**  
How can followers of Christ be a counterculture for the common good?  
[www.christianitytoday.com](#)

**Peace in Hurricanes**  
You can have peace with God In the midst of hurricanes  
[www.WhenHurricanesSt...](#)

**Humanitarian Dating**  
Meet someone who cares about the world and its people  
[www.humanitariandatin...](#)

All times given in UTC. 'Felt' and 'Damage' radii are approximations only.

©2007 Reto Meier - Radioactive Yak Software

<http://earthquake.googlemashups.com>

# Využití Mashups

## Mashup pro sledování zemětřesení


The screenshot shows a web interface for a Popfly mashup. At the top left is the Microsoft Popfly logo. To the right, there's a title 'Latest Earthquake Around the World' with a rating of 5 stars and a 'Sign Out' button. Below the navigation bar, a warning message states: 'This is a user-created page. Do not enter any personal information or passwords.' The main content is a map of the world with several red pins indicating earthquake locations. A tooltip for an earthquake in Java, Indonesia, is displayed, showing the magnitude 'M 5.2, Java, Indonesia' and the time 'November 10, 2007 02:43:46 GMT'. The map includes labels for various countries and cities, and a scale bar at the bottom right indicates 900 miles. The footer contains copyright information for Microsoft 2007 and other entities.

[Latest earthquake around the world](#)




# Využití Mashups


## Mashup pro sledování zemětřesení

 Home My Pipes Browse Discuss Documentation [Create a pipe](#)

Sign In with your Yahoo! ID or [Join Now](#)

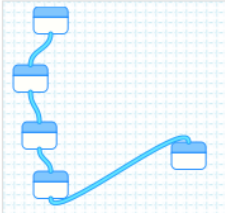
Author:  **nchampin**

Properties  
Published on **05/23/07**  
35 runs  
1 clones

Bookmark / Share  




Sources (2)  
[usgs.gov](#)  
[earthquake.usgs.gov](#)

Modules (4)  
[fetch](#)  
[sort](#)  
[truncate](#)  
[geotag](#)

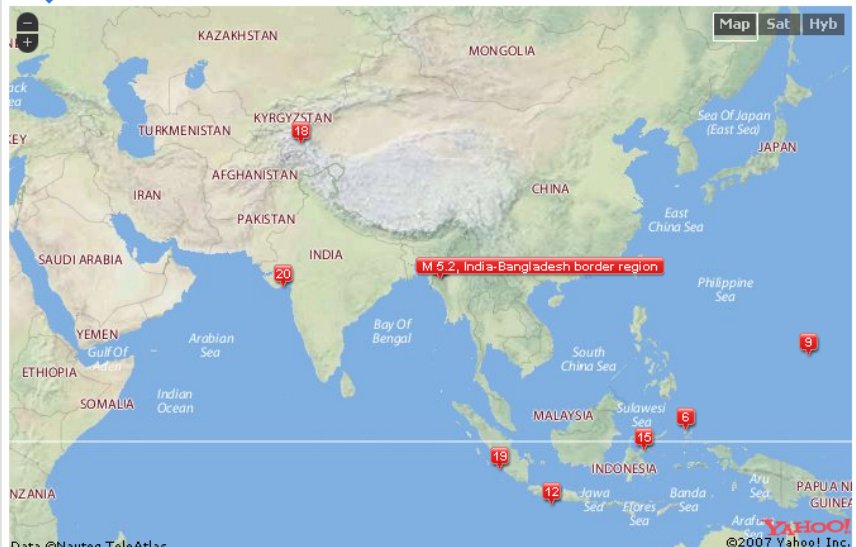
  
[View Source](#)

### Earthquakes

Pipe Web Address: [http://pipes.yahoo.com/pipes/pipe.info?\\_id=Urt\\_ZAQJ3BGEtWRoeNLYQ](http://pipes.yahoo.com/pipes/pipe.info?_id=Urt_ZAQJ3BGEtWRoeNLYQ)  
[View Source](#) [Clone](#)

Use this Pipe  
[MY YAHOO!](#) [Add to Google](#)  Get results by Email or Phone  More options ▶

**Map** List 20 items



**M 5.2, India-Bangladesh border region**

Data @Nautica,TeleAtlas  
13. M 5.2, India-Bangladesh border region  
November 07, 2007 07:10:21 GMT

[Your Privacy](#) | [Terms of Service](#) | [Copyright/MP Policy](#) | [Help](#) | [Feedback](#)  
Copyright © 2007 Yahoo! Inc. All rights reserved.

this is **YAHOO!**

## Earthquakes (Yahoo! Pipes)

# Využití Mashups

## Mashup pro sledování dopravy

**REAL-TIME TRANSPORTATION STATUS**  
New York State Transportation Federation

Save My 'Map View' Clear My 'Map View'

MAP VIEW | TEXT VIEW

NAVIGATION  
Select only those Legend items of interest  
Click icon to view more information OR select Text view for list  
[FAQS](#)

LEGEND  
 Cameras  
 Roadwork  
 Critical Incidents  
 Closures  
 Weather / Alerts  
 Traffic Speed

**I-787 At Watervliet Arsenal**  
Traffic closest to camera is traveling southbound  
Images updated every 5 minutes

Copyright © 2007  
New York State Department of Transportation

<http://www3.travelinfony.com/carsgoogle>

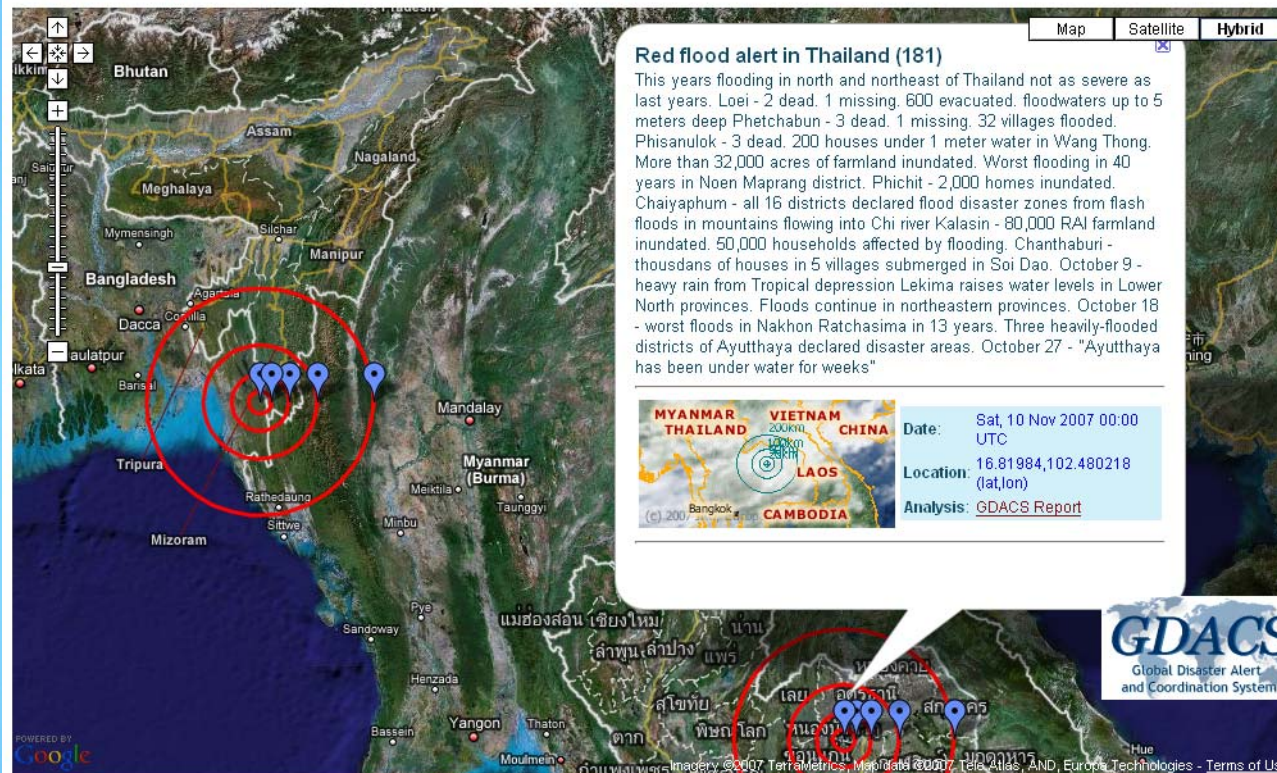


# Využití Mashups

## Mashup jako výstražný systém

### New and ongoing disasters

This google map mashup is using the GDACS KML file: <http://www.gdacs.org/kml/gdacs.kml>



Joint Initiative of the United Nations and the European Commission - Contact us: [info@gdacs.org](mailto:info@gdacs.org) - [Disclaimer](#)

Information on this website has been collected from or in participation with the following organisations: EC Joint Research Centre - UNOSAT - Virtual OSOCC - ReliefWeb - WAPMERR

Financially supported for 2004-2007 by EC ECHO



<http://www.gdacs.org/map/googlemap.asp>

# Využití Mashups

## Mashup jako výstražný systém

The screenshot displays the Havaría Information Service - AlertMap interface. At the top, the logo of the RSDE (Hungarian State Emergency Service) is visible, along with the text "Havaría Information Service - AlertMap" and language options for "MAGYAR" and "ENGLISH". Below the header, a world map is shown with numerous yellow diamond-shaped markers indicating emergency events. A pop-up window is open over a marker in Greece, displaying the text: "VI-20071111-14096-GRC Vehicle Incident in Greece on 2007-11-11 at 12:49:35". Below the map, the current location is set to "Budapest, Hungary". The interface includes navigation controls, a search bar, and a "Select area" section with a grid of regional buttons: "World Wide Alert", "Europe", "Hungary", "USA / Canada", "Middle-America / Caribbean", "South-America", "Asia", "Pacific Ocean", "Indonesia", and "Australia / New Zealand". At the bottom, there is a "Google Custom Search" input field and a "Search" button.

[Havaría information service - AlertMap](#)



# Využití Mashups

## Mashup k identifikaci evakuačních zón

We cannot prevent a tsunami, but we can prepare for one.

Map Preparedness Warning Evacuation Risk Travel Time Search Again

### TSUNAMI HAZARD MAP

Island Area: HAWAII

Map Satellite Hybrid Print

Map data ©2007 Tele Atlas - Terms of Use

POWERED BY Google

10 mi  
10 km

**Important Map Notes**

When evacuation boundaries are drawn along streets and roadways, they are considered to be safe from wave action.

Steel and/or concrete buildings of six or more stories in height should provide adequate protection if people move to the third floor or above.

Hawaii County residents and visitors click here

Due to the probability of strong currents and wave action all vessels should be secured, removed, or put to sea.

The maximum rise of water in harbors should not exceed four feet. Accordingly, the immediate shoreline and beach areas should be evacuated. All vessels should be secured, removed, or put to sea due to the probability of strong horizontal currents, surges, and wave action.

**Legend**

Tsunami Evacuation Zones (Metadata)

ATTENTION: These tsunami evacuation zone maps are identical to those located in the front section of your phone book. They are based on data from tsunamis that have hit Hawai'i in the past and represent the best information available at this time. The University of Hawai'i, under direction of State Civil Defense with funding from the NOAA National Tsunami Hazard Mitigation Program, is currently using the latest scientific techniques and technology to improve this information. Once complete, county governments will be able to update their tsunami evacuation zones if necessary. Everyone is urged to apply common sense when using these maps. If you live or work just outside an evacuation zone - marked as the shaded area on the map - prudence would dictate that you consider evacuating during a tsunami warning.

The tsunami evacuation maps available in phonebooks statewide are also available from the Pacific Disaster Center.

This site has been developed by the National Oceanic and Atmospheric Administration (NOAA) in partnership with the State of Hawai'i. For feedback, contact the NOAA Pacific Services Center

PRIMO  
PACIFIC RISK MANAGEMENT 'OHANA

<http://www5.hawaii.gov/tsunami>

# Využití Mashups

## Mashup jako mapa zločinosti



[Mapa vražd v Los Angeles](#)

# Využití Mashups

## Mashup v kultuře

**grüvr** Track bands  
Discover local music  
Stop missing great shows!

sign up add band top bands [Send to a friend](#)

EMAIL:   to get a reminder about this show

Sat Dec 01 **DRUMSOUND at Club Fabric** 1 shows found

Sat Dec 01  
**DRUMSOUND tour**  
Club Fabric  
Ostrava

NOTE: Locations approximate. For details, see [band webpage](#)

Search for band:  within  of

**Concert Schedule** [tour](#)

When	Tour map	Where	Address
Sat Dec 01	DRUMSOUND	Club Fabric	Ostrava <input type="button" value="CLOSEST"/>

**TIP**  
Hover to pause. Click name for band page.  
This page will remember these bands and concerts when you come back.  
Set up alerts with one click  
**All with no account needed!**  
Watch here for lots more tips.

**YOUR BAND RADAR**  
  
 Email me if any play here

**TOP OSTRAVA SHOWS**  
DRUMSOUND  
 people have saved this show

**SHOWS YOU LIKE**  
map these  
 Sat Dec 01 : DRUMSOUND   
 Remind me about these shows

<http://gruvr.com>



# Využití Mashups

## Mashup k vyhledávání pohřešovaných osob

**Google Earth**  
Soubor Upravit Zobrazit Nástroje Přidat Nápověda

**Hledání**  
Přelést Najít firmy Trasy  
Přelést na např. 37 25.818° S, 122 05.36'

**Mista**  
GeoEye-ikonos\_1m\_image  
GE-3\_image  
GeoEye\_Delivery4  
Satellite Boundaries  
Points of Interest  
Yellow  
39% or Less  
White  
40% - 59%  
Blue  
60% - 79%  
Green  
80% - 99%  
Red  
100%

**Vistvy**  
Zobrazit: Základní

Prádní databáze  
 Terén  
 Zeměpisný web  
 silnice  
 Weather  
 Prostorově zobrazené budovy  
 Hranice a značky  
 Galerie  
 Globální povědomí  
 Zajímavá místa  
 Další

**Placemark ID:** 11912425091441346517  
**Coordinates:** 38° 11'40.76"N, -119° 33'23.96"W  
**Decimal Degrees:** -119.558655556,38.194655556  
**Description:** 3 bright objects, near lower left corner of image, pls see: [http://219.photobucket.com/albums/cc235/kc2007\\_album/search10.jpg](http://219.photobucket.com/albums/cc235/kc2007_album/search10.jpg)  
**100% of 1 reviewers** flagged this entry.  
**Posted:** October 1, 2007 at 5:48 AM PDT  
**Posted by:** kimba  
[Amazon Mechanical Turk - Fossett Search](#)  
[Search For Steve Fossett](#) From: Violent Skies Tours  
[Comment on this Entry](#)  
Trasy: [Sem](#) - [Odsud](#)

Image © 2007 DigitalGlobe  
© 2007 Europa Technologies  
© 2007 TurnHere, Inc.  
Datový proud 100%  
Vyška pohledu 133.57 km

[Pátrání po Stevu Fossettovi](#)



Děkuji za pozornost

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