

Applied informatics

Ensuring optimal conversion of graphic information in a selected software

ZEMÁNEK, Z. – PLUSKAL, D. – ŠUBRT, Z.

Ensuring optimal conversion of graphic information in a selected software

1. Modification and conversion of graphic object in a selected SW application
2. Selection and parameterization of compression algorithms
3. Complex modifications of graphic objects
4. Check questions and assignments



Aims of the exercise

1. **Basic information about the SW applications used.**
2. **Explain conversion processes and setting in graphic applications.**
3. **Describe modification processes for the assignment.**

MS Paint

- ❑ Simple bitmap editor.
- ❑ Part of Windows OS.
- ❑ Default file format: **bmp**.
- ❑ Supported file formats: **jpg, gif, tif** and **png**.

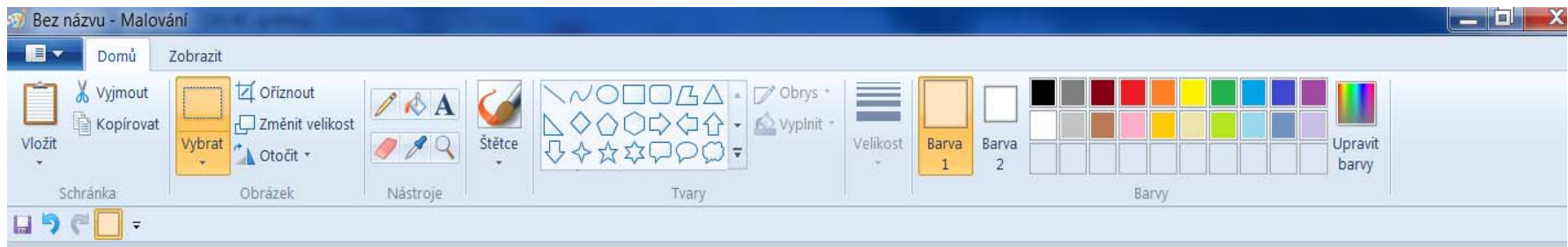
Basic terms:

Drawing - essential elements are lines, points and more or less shaded areas.

Painting - is created by applying paint in a continuous layer, from drawings they differ mainly in the flatness of color on paper substrate.

MS Paint

- ❑ Creation of images for use in other applications
- Editing and retouching of digital images (captured by a scanner or a digital camera).
- Making wallpapers for the desktop background
- Editing clip arts.



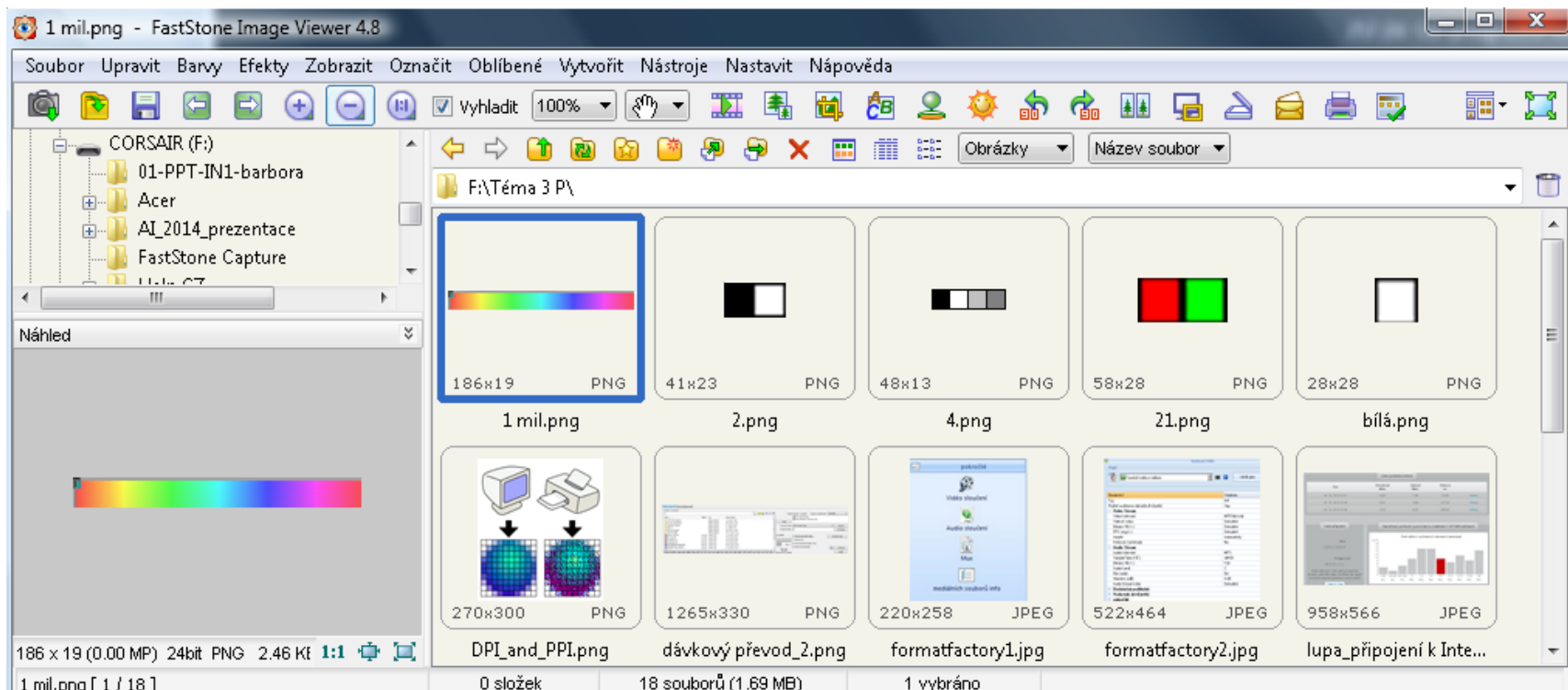
- ☐ Realistic digital "brushes" - this program will revive your images in shades of watercolors, pastels and calligraphy.
- ☐ The new Ribbon - bar at the top of the screen shows what operations are available on the program - allows direct access to the various options that were previously hidden in menus.

FastStone Image Viewer

- ❑ SW tool for viewing, editing and conversion of images and photos. It has a set of features that include image viewing, management, comparison, red-eye removal, resizing, cropping and color adjustments.
- ❑ Editing and image conversion is also possible to do in a batch with advanced options.
- ❑ Possibility to create a musical slideshow with more than 150 different effects.
- ❑ Supported file formats: BMP, JPEG, JPEG 2000, animated GIF, PNG, PCX, TIFF, WMF, ICO, TGA, ...

FastStone Image Viewer

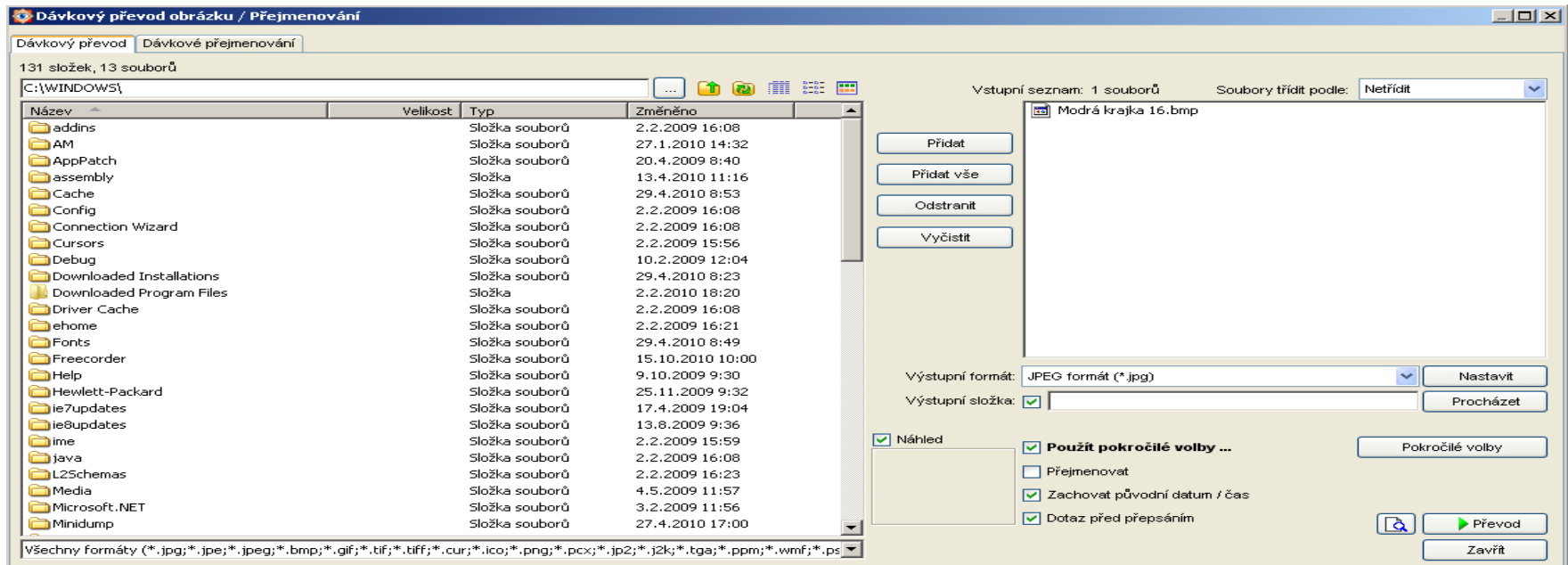
The environment resembles a file manager



FastStone Image Viewer

Conversion:

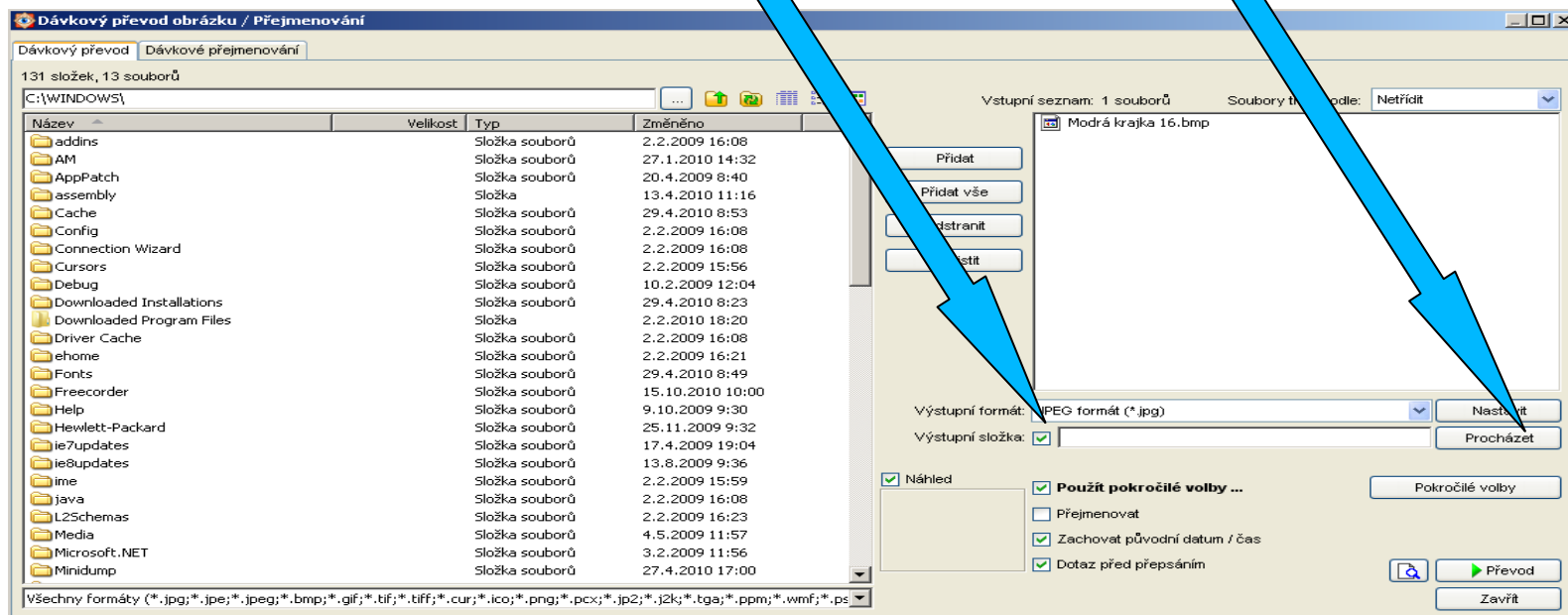
- Select files to convert
- Menu “Tools”
- Batch conversion



FastStone Image Viewer

3) Select output format

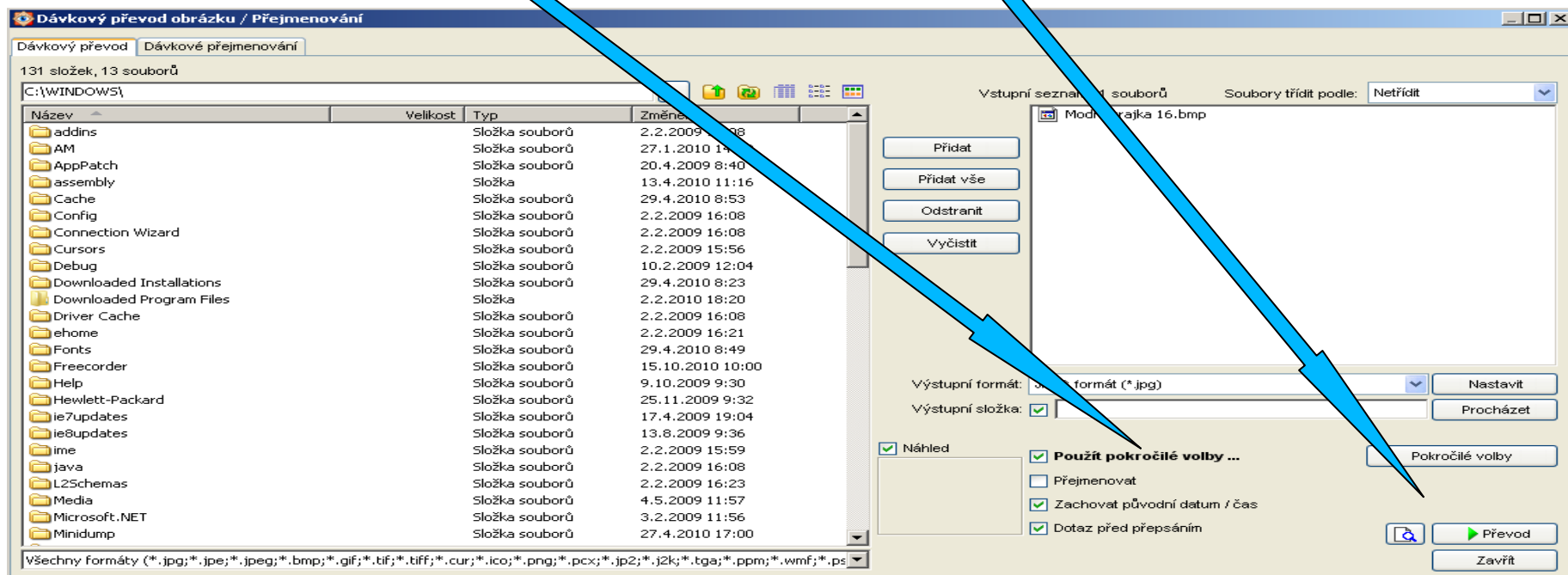
4) Select compression ratio



FastStone Image Viewer

5) Select output folder

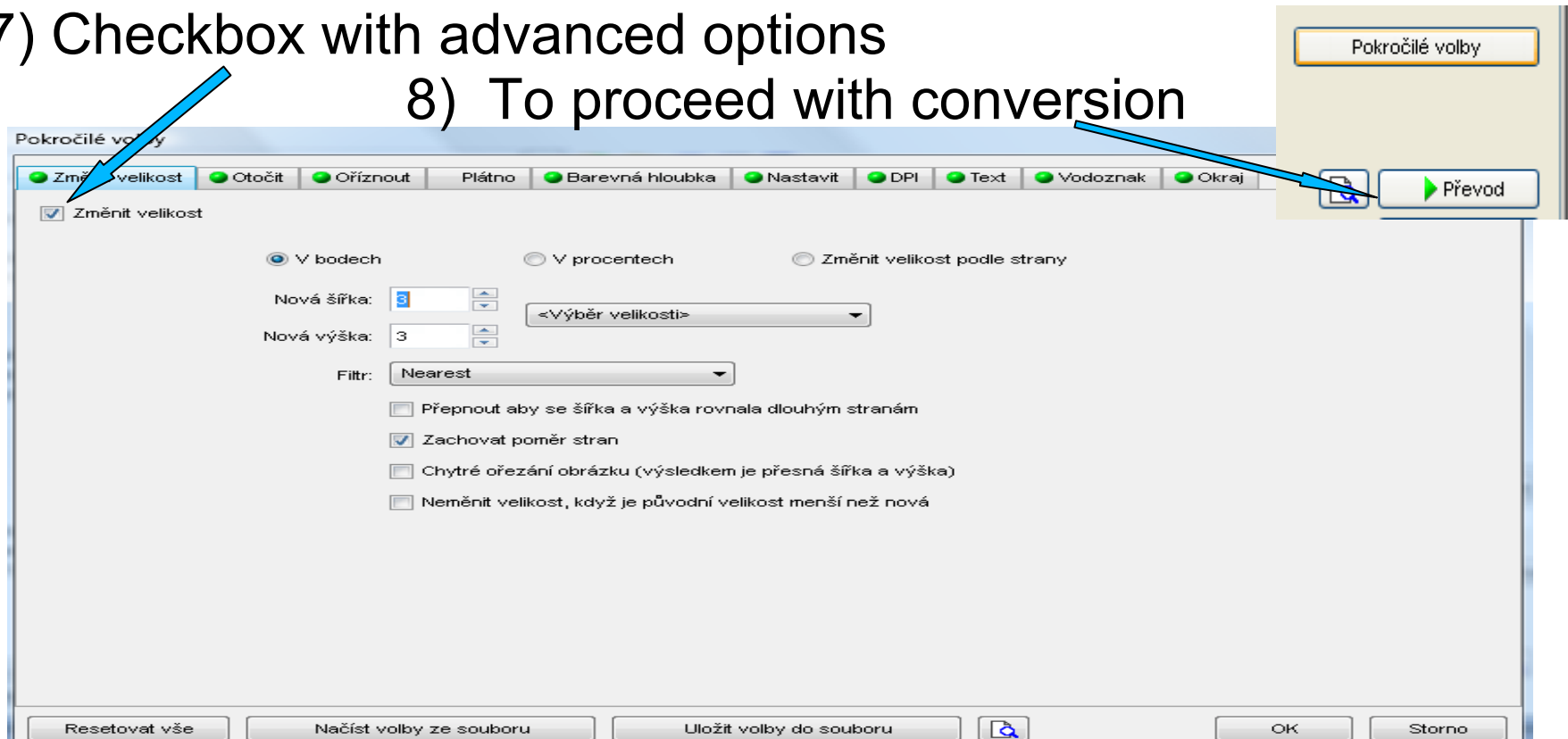
6) Open advanced options



FastStone Image Viewer

7) Checkbox with advanced options

8) To proceed with conversion



Format Factory

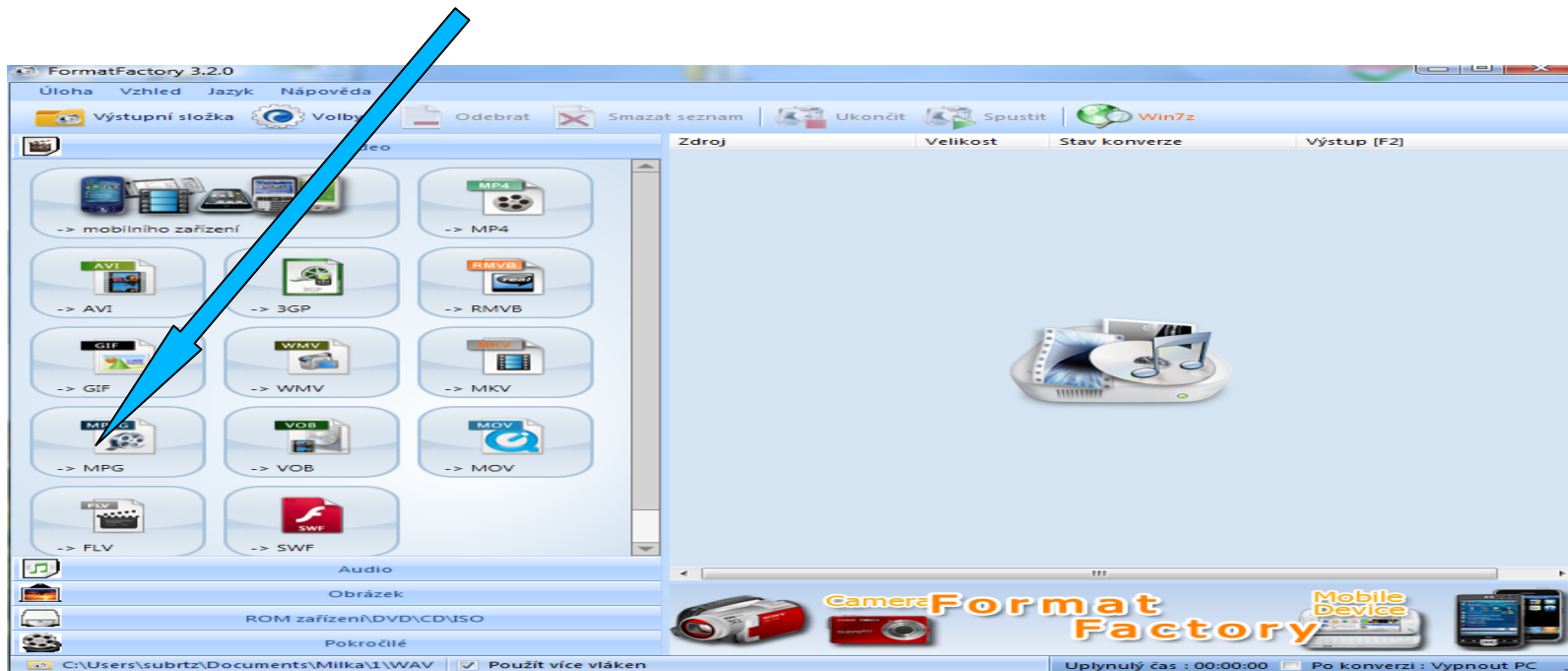
High quality multi-purpose software tool for converting bitmap and multimedia files. Conversion is possible for video and audio files as well as various graphic formats.

Main features:

- converts DVD and videos to the formats: P4/3GP/MPG/AVI/WMV/FLV/SWF
- conversion and audio to CD formats: MP3/WMA/AMR/OGG/AAC/WAV
- Image conversion and photo formats: PG / BMP / PNG / TIF / ICO / GIF / TGA
- clear user interface
- Supports batch processing
- Format Support iPod / iPhone / PSP / BlackBerry
- doesnot convert vector graphics

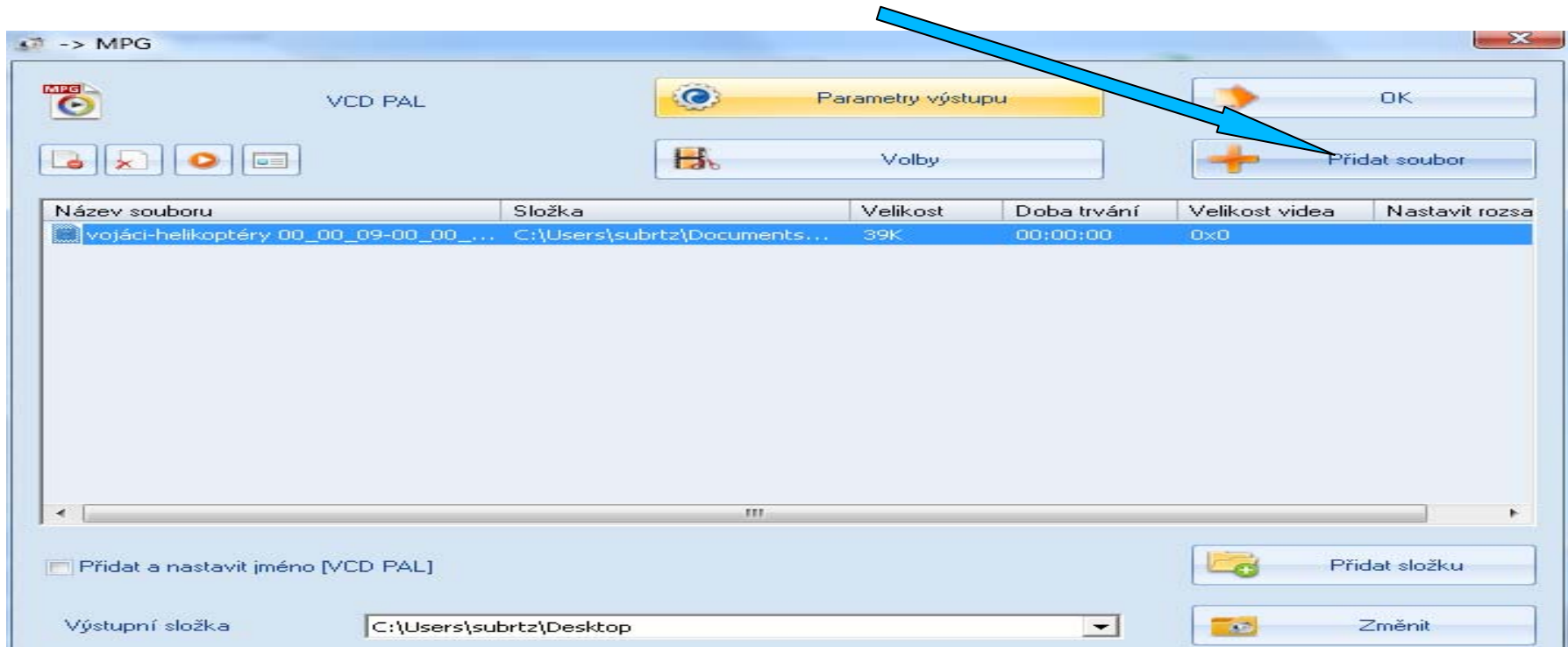
FormatFactory

1) Select the target graphic format first



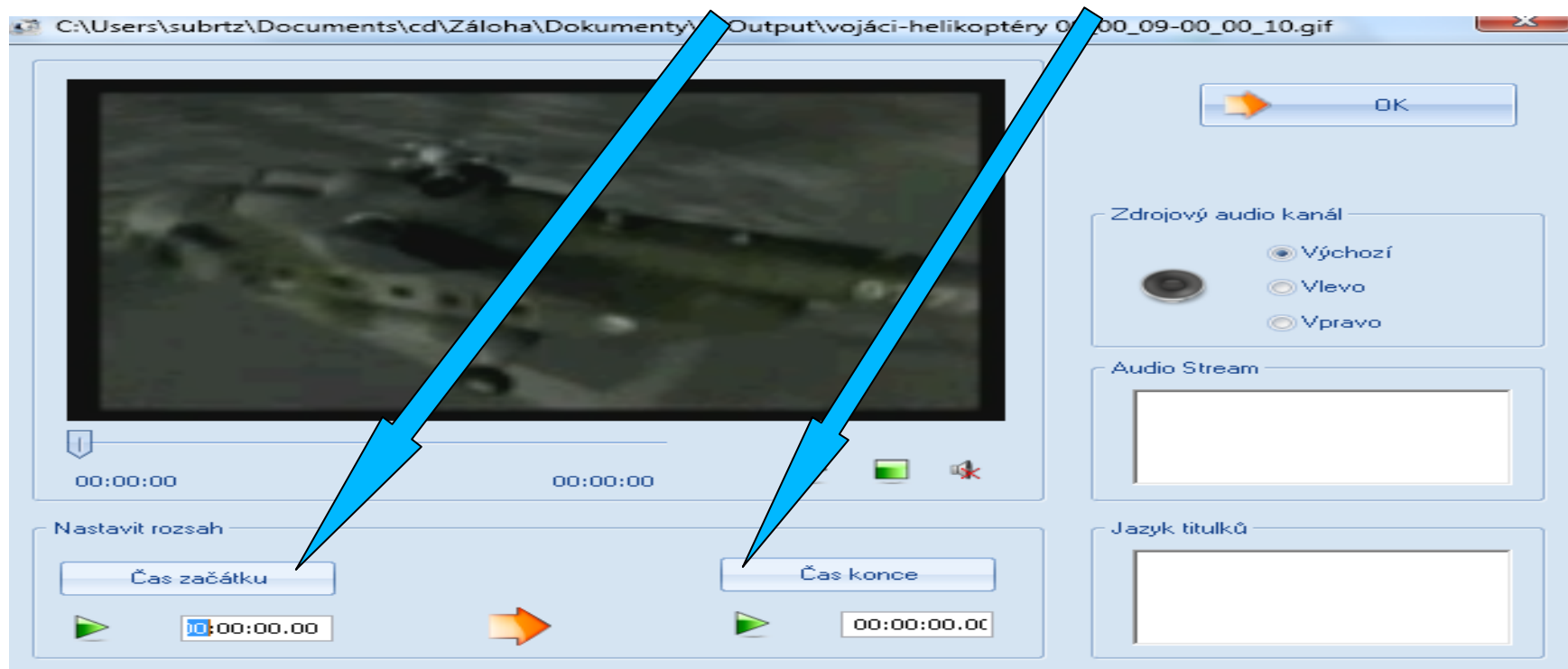
FormatFactory

2) Click on “Add Files” and select the files



FormatFactory

3) Select the advanced options (click on file) – start and end time



FormatFactory

4) Then proceed with the conversion



Inkscape

☐ Prvotřídní editor vektorové grafiky

☐ SW nástroj na **tvorbu a úpravu vektorové grafiky**.

Tento editor je svou kvalitou srovnatelný se svými konkurenty (Adobe Illustrator, Freehand, CorelDraw). Veškerá tvorba probíhá za použití W3C standardu škálovatelné vektorové grafiky (SVG).

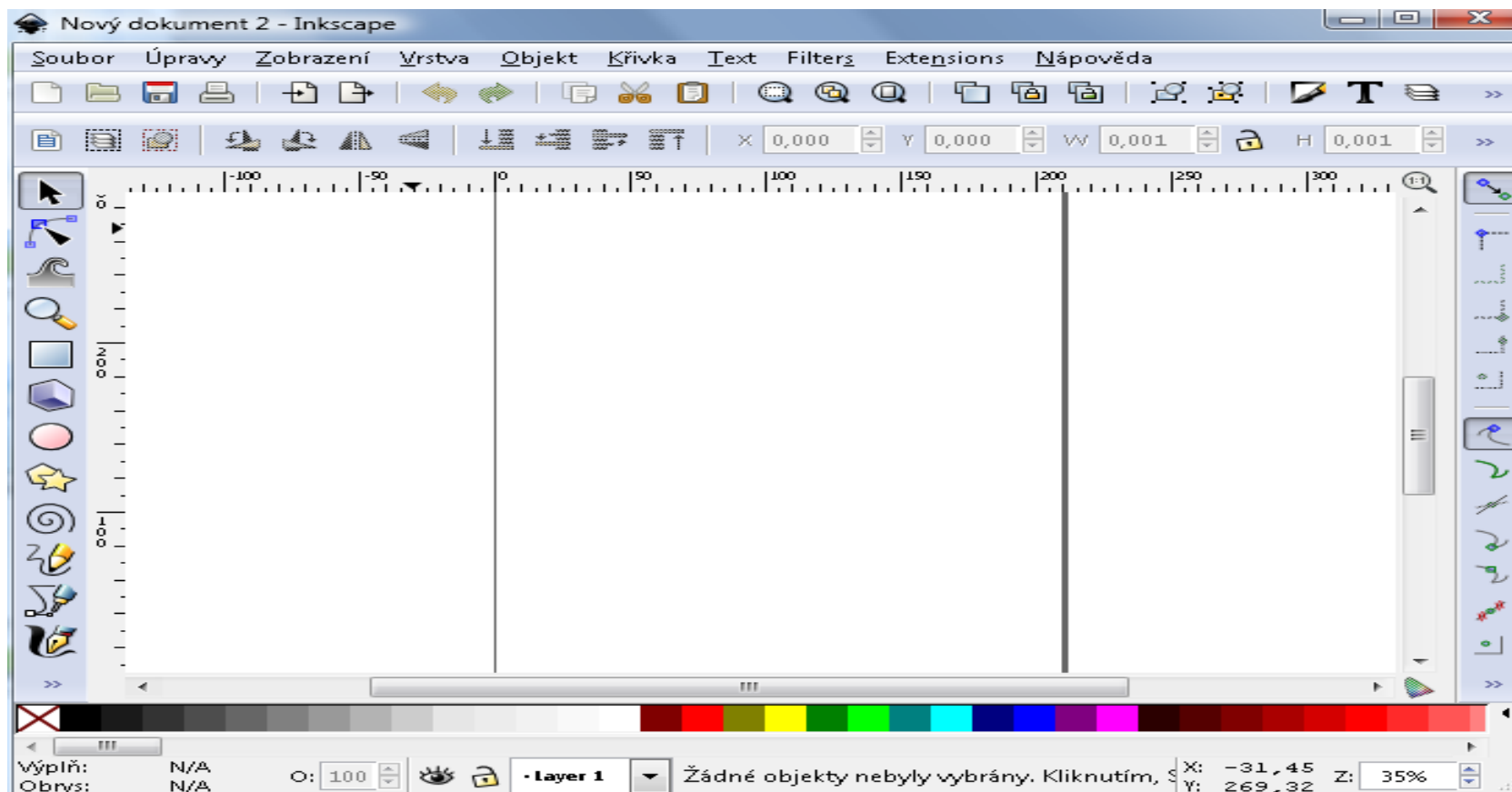
☐ Program podporuje **tyto SVG prvky**: *text, tvary, cesty, značky, klonování, změnu velikosti, průhlednost, barevné přechody, vzorky a seskupování.*

☐ Také podporuje Creative Commons meta-data, editování uzlů, vrstvy, komplexní operace s křivkami, trasování bitmap, text na křivce, přímé editování XML a mnohem více.

Inkscape

- ☐ Vektorový grafický program pro vytváření a úpravu vektorových obrázků.
- ☐ Formát obrázků je **svg**.
- ☐ Použití:
 - ☐ Tvorba působivých propagačních tiskovin a letáků, vizitek, cenovek, hlavičkového papíru, plánek, nápisů, pohlednic, blahopřání apod.
 - ☐ Tvorba grafiky pro internetové prezentace.
 - ☐ Jak pracovat s programem viz manuály [5],[6].

Inkscape - environment



Assignment

Fine tune your photo using advanced modifications in FastStone Image Viewer

1. Set Image Size to 3,5 x 5 cm.
2. In the photos, insert text, - "Name, teaching group" as a text at the bottom right.
3. Next, add a watermark - "Applied Informatics" at the bottom left position.
4. For a text watermark, set the same density in the range of 11 to 20 (readability).
5. Use any edge effect with a shadow.
6. Change the file stamp to the day and hour set as the start of today's lesson.
7. Convert graphic file to the jpg format with a quality setting of 70% with the photometric se to RGB.
8. Your edited photo insert into the case study.

Resources:

1. *FastStone Image Viewer*. *Stahuj.cz* [online]. 1999 – 2013 © [cit. 2013-11-06]. Dostupné z: [http://www.stahuj.centrum.cz/grafika_a_design/prohlizece_obrazku/faststone-image-viewer/?g\[hledano\]=faststone&g\[oz\]=4.8](http://www.stahuj.centrum.cz/grafika_a_design/prohlizece_obrazku/faststone-image-viewer/?g[hledano]=faststone&g[oz]=4.8)
2. *Inkscape*. *Stahuj.cz* [online]. 1999 – 2013 © [cit. 2013-11-07]. Dostupné z: [http://www.stahuj.centrum.cz/grafika_a_design/tvorba_grafiky/vektorove_editor_y/inkscape/?g\[hledano\]=inkscape&g\[oz\]=0.48.4-1](http://www.stahuj.centrum.cz/grafika_a_design/tvorba_grafiky/vektorove_editor_y/inkscape/?g[hledano]=inkscape&g[oz]=0.48.4-1)
3. *Format Factory*. *Stahuj.cz* [online]. 1999 – 2013 © [cit. 2013-11-07]. Dostupné z: [http://www.stahuj.centrum.cz/multimedia/prevody_formatu/format-factory/?g\[hledano\]=format%20factory&g\[oz\]=3.2.1](http://www.stahuj.centrum.cz/multimedia/prevody_formatu/format-factory/?g[hledano]=format%20factory&g[oz]=3.2.1)
4. *Format Factory 3.0: formáty je třeba krotit*. *Živě.cz* [online]. Mladá fronta. a.s., 2013 © [cit. 2013-11-06]. Dostupné z: <http://www.zive.cz/clanky/format-factory-30-formaty-je-treba-krotit/sc-3-a-166785/default.aspx>
5. HASSMAN, Martin. *Příručka k používání Inkscape*. *Zdroják.cz* [online]. [cit. 2013-11-08]. Dostupné z: <http://www.zdrojak.cz/zpravicky/prirucka-k-pouzivani-inkscape/>
6. *Uživatelská dokumentace*. *Inkscape* [online]. [cit. 2013-11-08]. Dostupné z: <http://inkscape.org/doc/index.php?lang=cs>