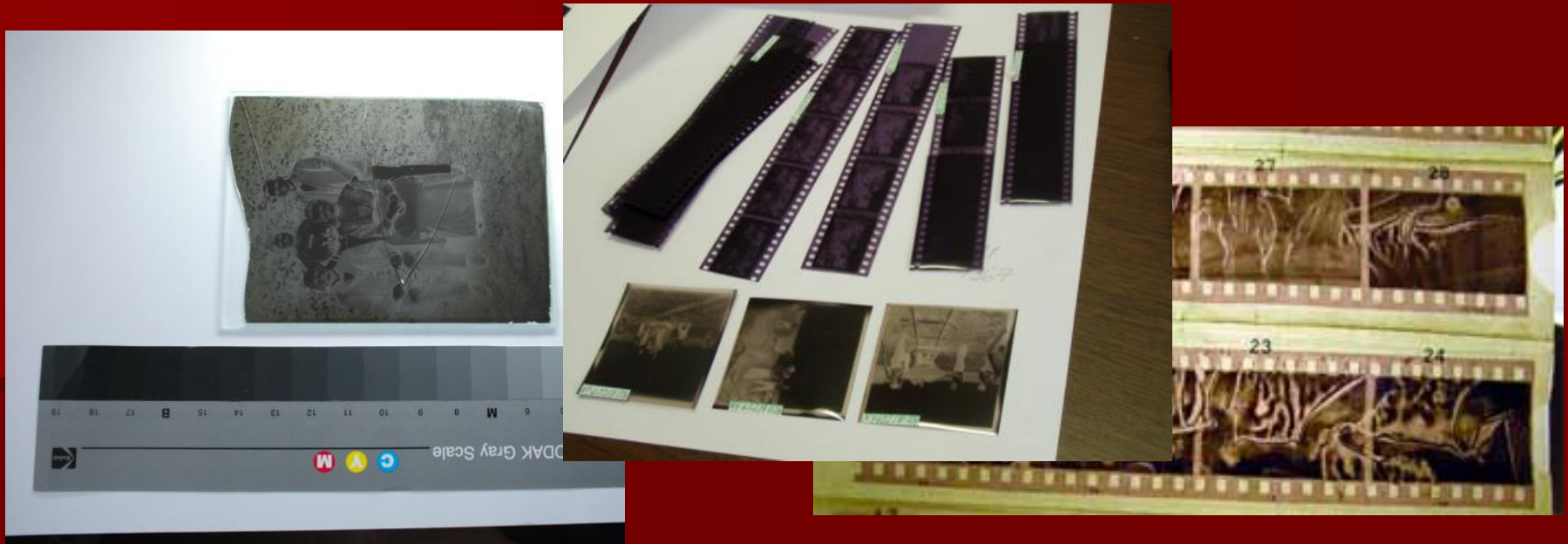


Survey, Conservation Report and Conservation Plan for Glass Plate Negatives

Petra Vávrová ^{1,2}, Jan Novotný ¹

¹ **National Library of Czech Republic in Prague, Czech Republic**

² Department of photography, FILM AND TV SCHOOL OF ACADEMY OF
PERFORMING ARTS IN PRAGUE



Special Collections of the National Library of Czech Republic

- collection of glass plate negatives,
- collection of plastic negatives, microfilms
- collection of postcards,
- collection of positives,
- collection of shellac records,
- ...



Description - collections of glass plate negatives

- very large,
 - include different chemical structure of used materials, formats, photographic techniques,
 - different kinds of deterioration,
 - different storage conditions of glass plate negatives collections
- influence on physical state of glass plate negatives

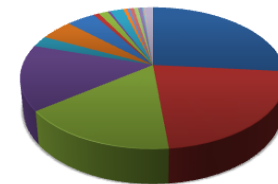


Survey of glass plate negatives collections

- methods for collecting quantitative information about items - glass plate negatives - databases,

Focus on:

- description of the organization system and access to the collection,
- number of glass plate negatives,
- owner of glass plate negatives,
- subjects/titles of glass plate negatives,
- finding situation,
- historical and present storage and housing,
- ...
- identification of photographic processes and materials.



■ 13x18 cm	■ 8,4x8,4 cm - diapozitiv	■ 5,5x5,5 cm	■ 9x12 cm
■ 5,6x6,8 cm	■ 10x15 cm	■ 2,4x3,6 cm kinofilm	■ 8,1x10,6 cm
■ 5,8x8,5 cm	■ 6,2x7,5 cm	■ 8,9x8,8 cm	■ 5,5x13 cm
■ 3,2x4,5 cm	■ 2,4x3,1 cm - kinofilm	■ 6,5x9 cm	■ 18x24 cm
■ kruh průměr 14 cm	■ 11x12 cm	■ 17,3x23,4 cm	■ 10x17 cm
■ 1,7x2,4 cm - kinofilm	■ 8,5x18 cm	■ 8,2x8,2 cm	

Identification of photographic processes and materials

Visual observation and physical measurements:

- Size, date, title, identification marks, stamps, writings, borders, corners, etc.

Microscopic observation:

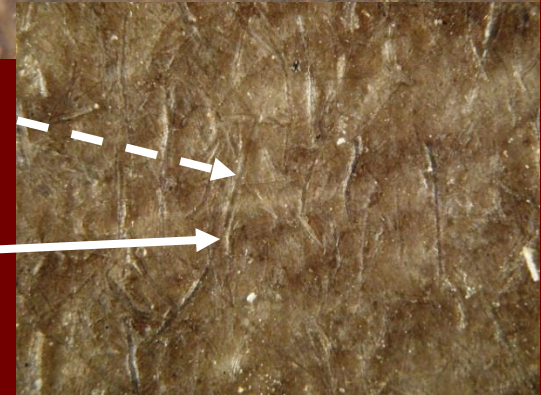
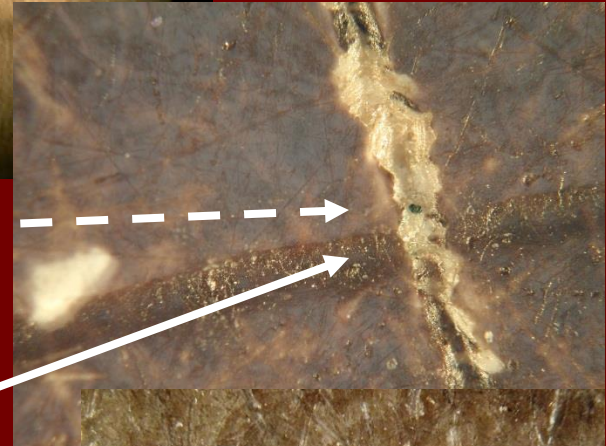
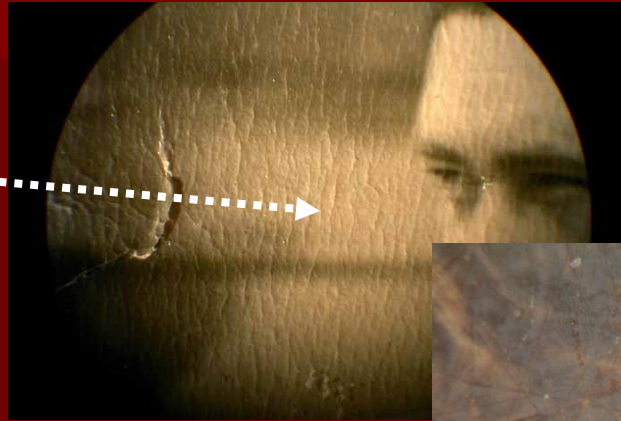
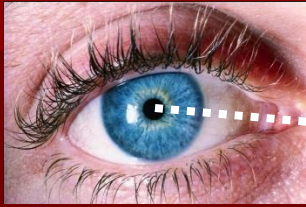
- optical microscope,
- binocular lupe,

description of surface characteristics and identification of photographic techniques.

Instrumental analysis - non-destructive or destructive

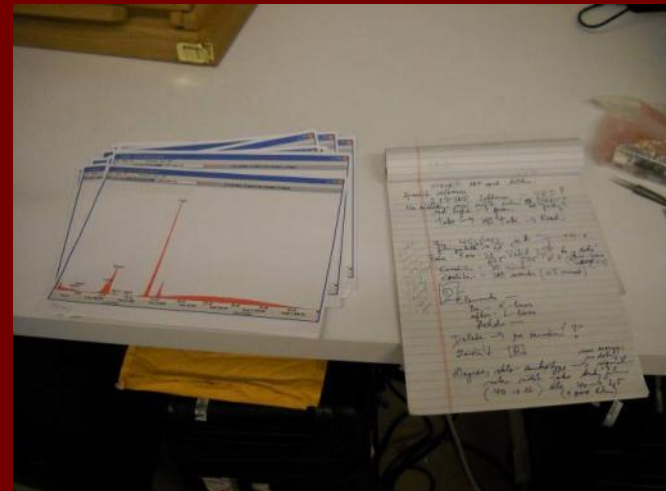
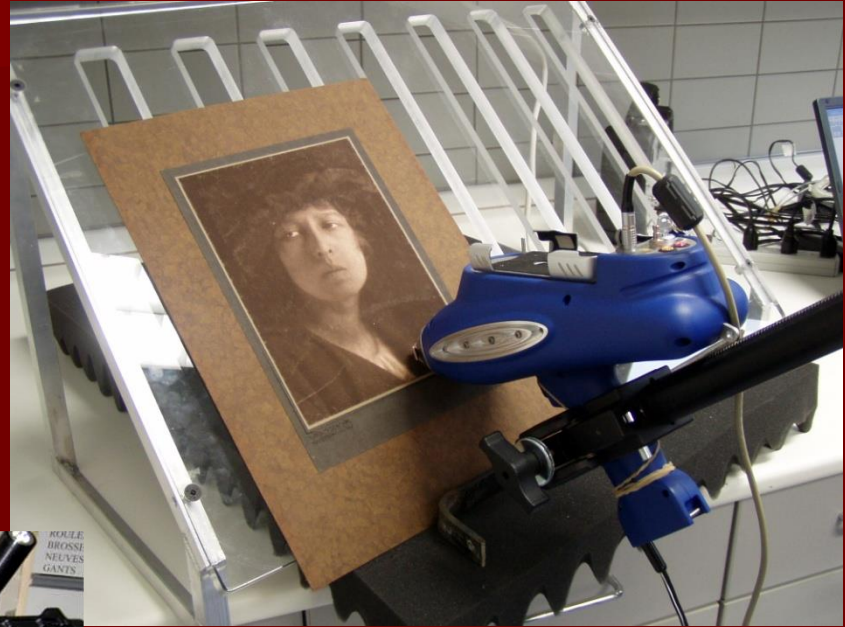
- XRF analysis
- FTIR analysis
- ...

Visual observation, optical microscope, digital microscope

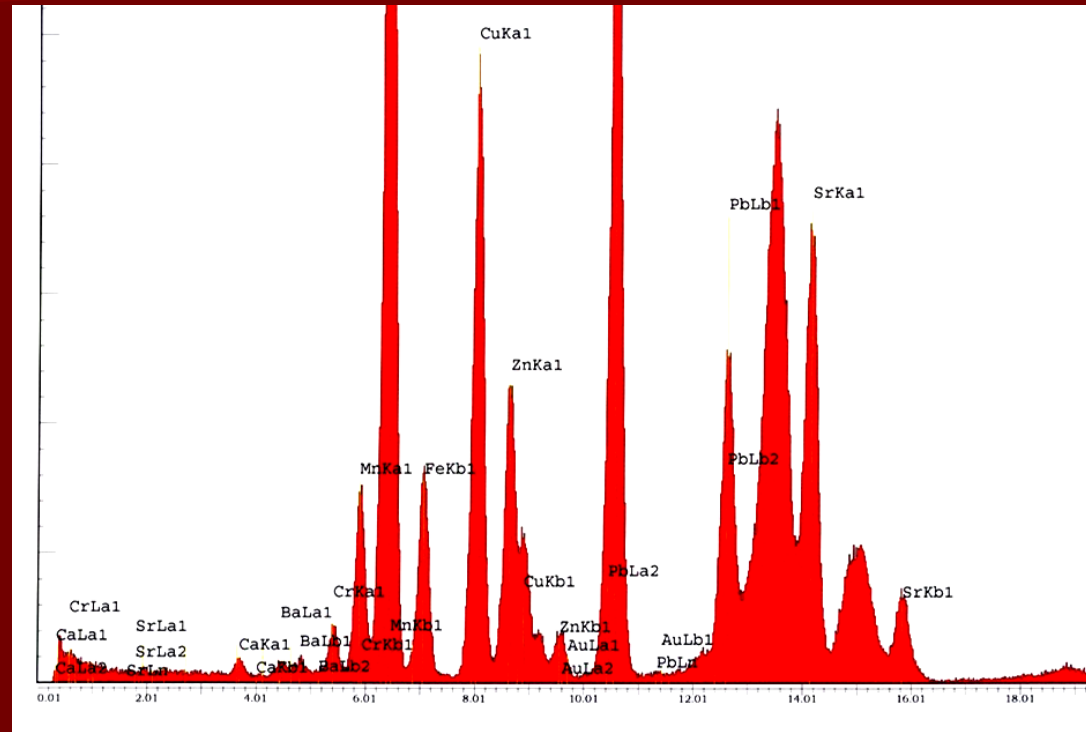


Röntgenfluorescence analysis (XRF spectrometry)

- Identification of materials, elements
- Non-destructive method



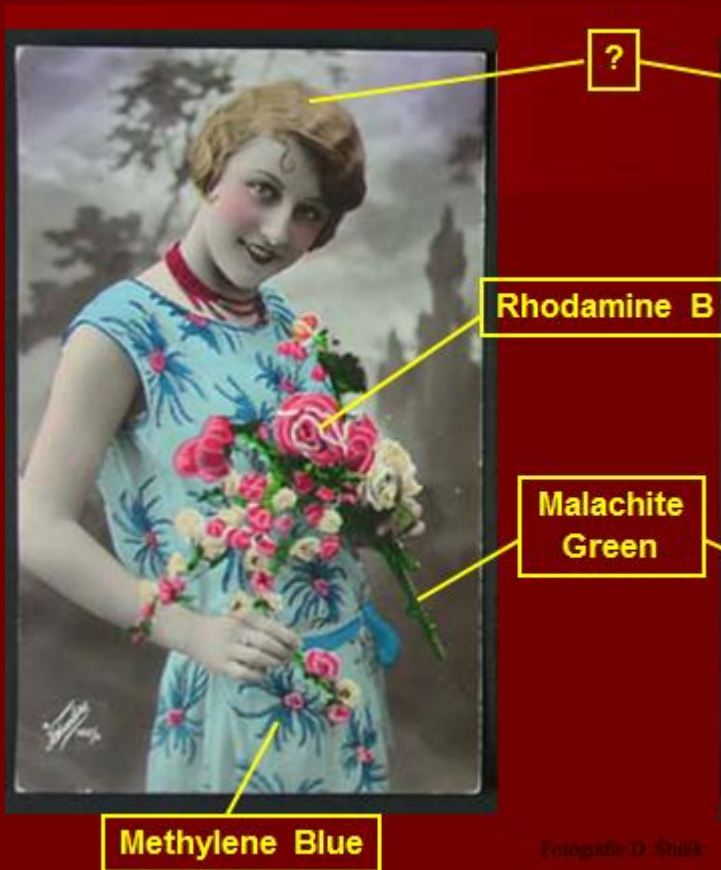
Röntgenfluorescence analysis (XRF spectrometry)



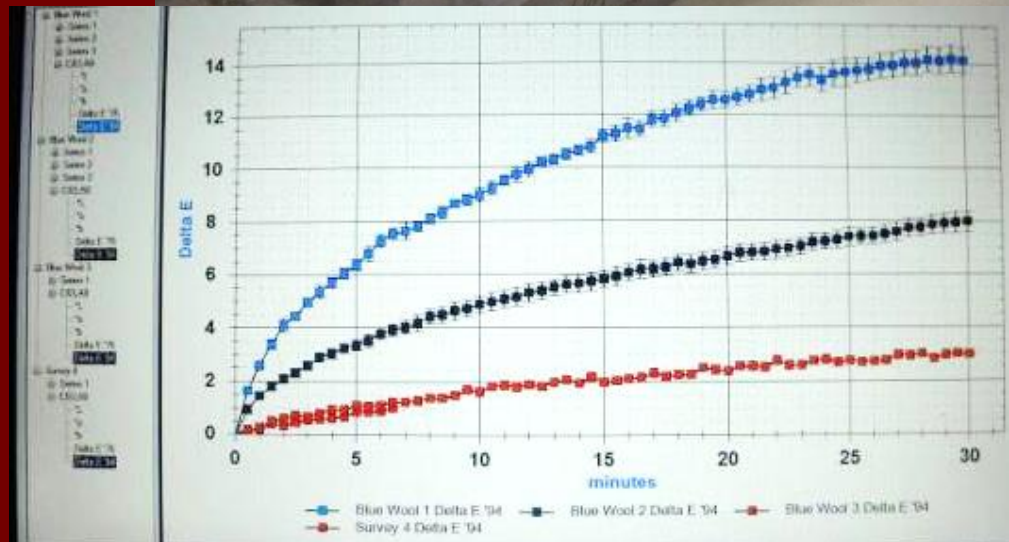
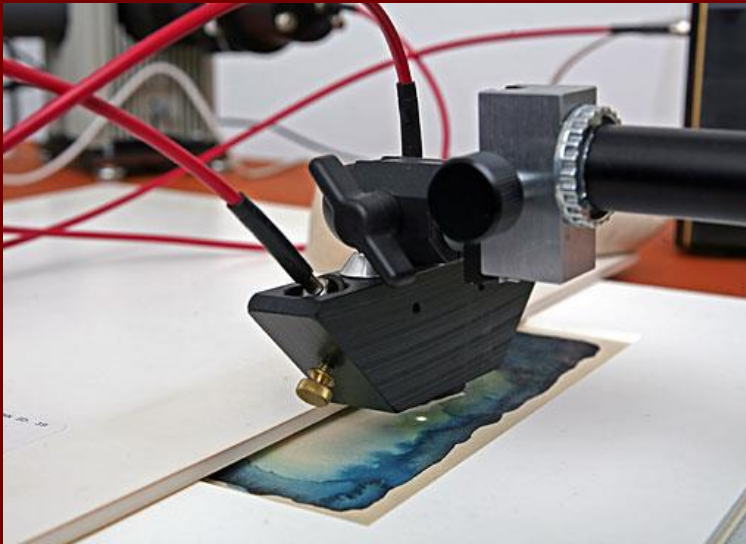
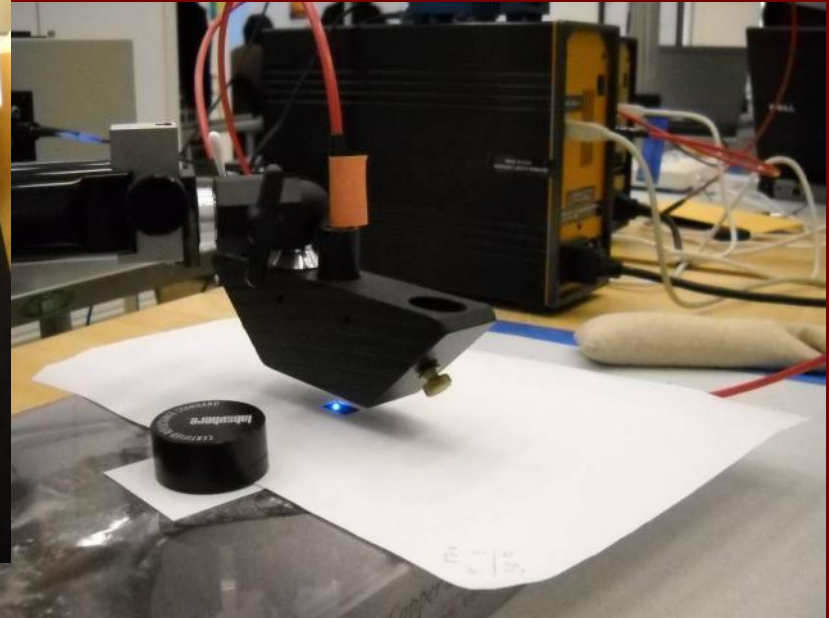
- Niton XLT XRF spectrometer
(Thermo scientific)

Infrared microspectrometer (FTIR)

- Information about chemical structure – organic compounds
- Non-destructive method



Mikrofadeometry



Toning with uranium



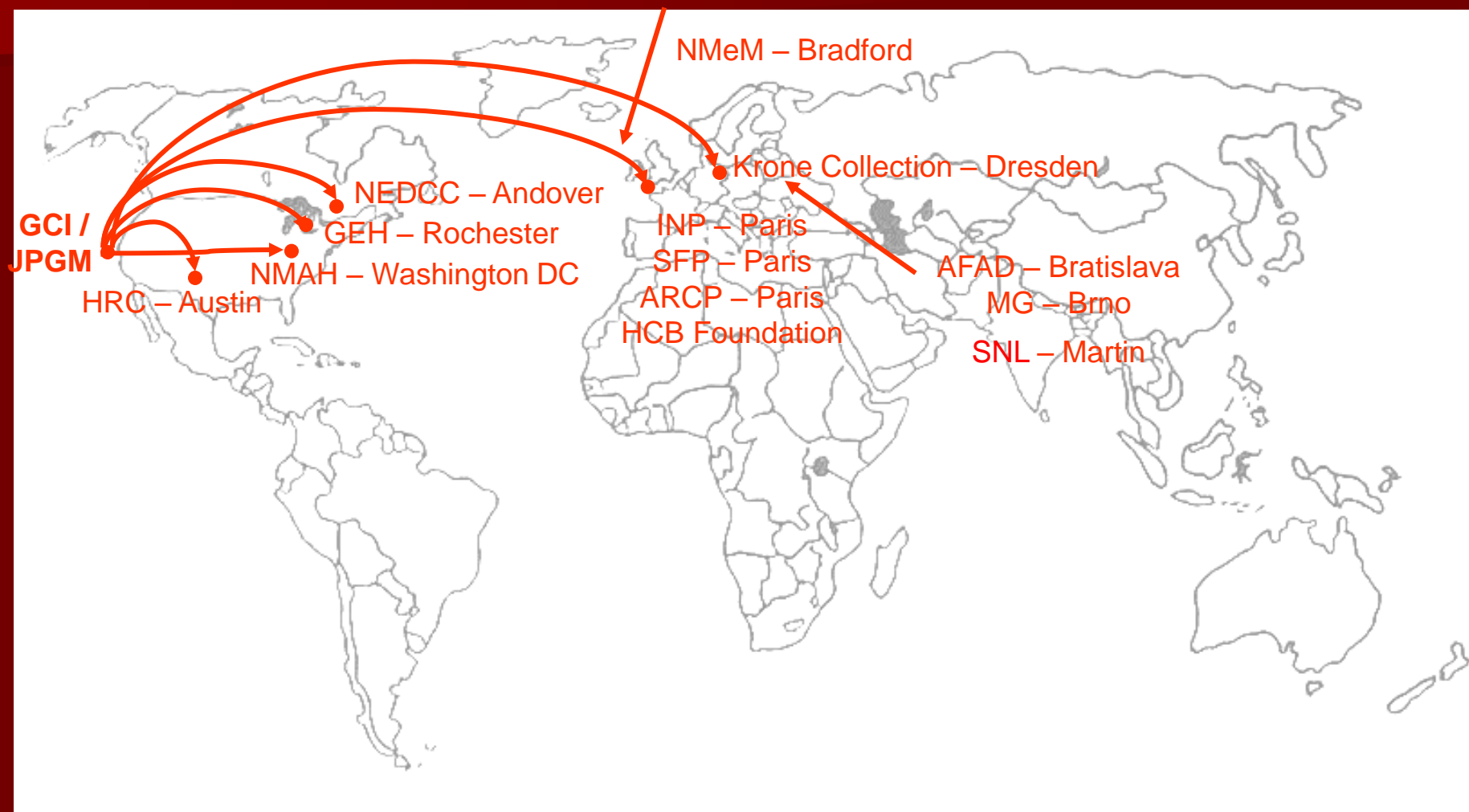
Getty Conservation Institute (GCI), USA

- portable laboratory



Fotografie D. Štulík

Trips – portable lab 2002 – 2012



Conservation plan

■ Prioritize the collection:

- Example, which is the oldest, largest, smallest, most valuable as a collectible (add other descriptions as you think appropriate).
- 10 photographs, which are the most at risk and why
- 10 photographs, if only 10 could be saved, which are the most important artifacts and records of your family history?

Conservation report

- identification of photographic processes, materials, layers,
- description of steps, methods and materials for preserving of negatives,
- re-housing the objects with proper materials and storage - PAT test,
- documentation - digitalization - future dissemination,
- conservation treatment - methods, materials,
- recommendation of stable climate conditions for longterm storage and quality of storage materials,
...

Conservation treatment

Surface cleaning with appropriate methods:

- dry cleaning (brushes, vinyl eraser, etc.),
- solvents cleaning (water, alcohol)

Reparation of mechanical destruction with proper methods and materials:

- create a support to the broken corners by Japanese tissue with using Klucel G or rice starch paste, etc.
- fixing on new support glass with Japanese paper and rice starch paste,
- repair original case with proper method and appropriate adhesives etc.

Methods to flatter some of objects etc.

Adding some missing parts with proper methods and materials, etc.

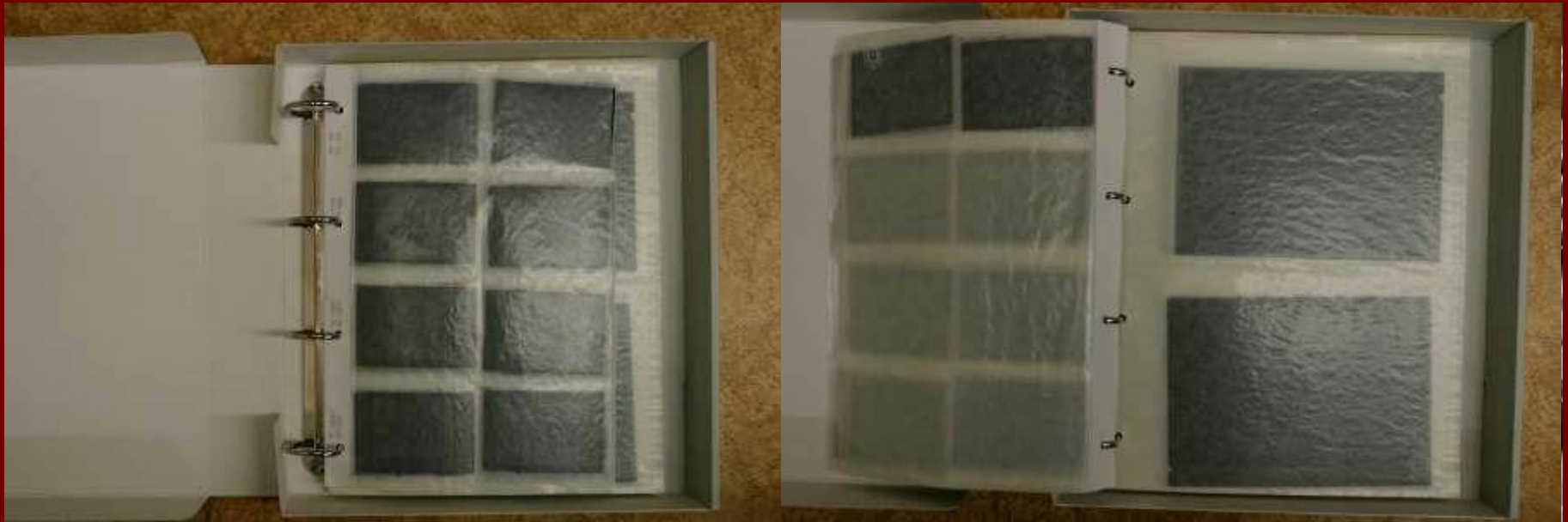
Collection of negatives and slides

- storage systems



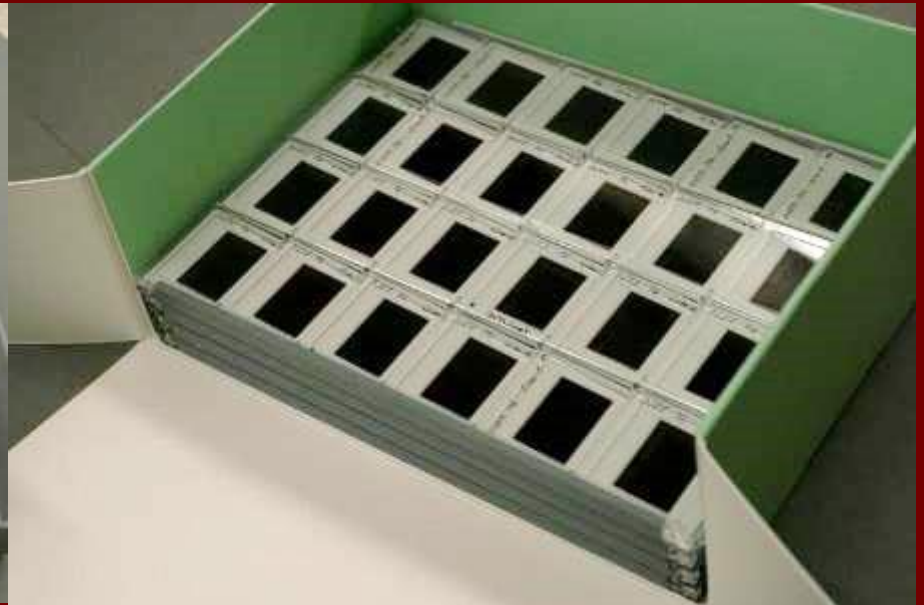
Collection of negatives - storage systems - different possibilities

- Black and white negatives - standard formats (9x13, 10x15, 13x18 cm) - storage in envelopes - made from neutral pH paper with PAT test quality (*Photographic Activity Test*), vertically in archival boxes
- Rolled negatives - standard formats (6x6, 6x9, 9x12, 13x18 cm) - storage in envelopes - made from neutral pH paper with PAT test quality (*Photographic Activity Test*), in archival folders



Collection of negatives - storage systems - different possibilities

- Photographs, slides - systém of british company *Secol Ltd.* - envelopes from polyester foil
- color slides in frames - archival system JOURNAL 24 from german company *Archivtechnik KUNZE GmbH & Co* - boxes from Polystyrol



Production of specific protective boxes in the National library of the Czech republic

- Preventive protection of a book from further damage (with the eventuality of later restoration);
- Permanent storage of the document (with respect to reformatting, making of a microfilm or digital copy);
- Protection for a certain period of time in case of an accident or natural disaster from the effects of fire or water;
- Protection of a book when handled beyond a depository (transportation to a reading room, an exhibition, inter-library loan);
- Alternative, cost-efficient solutions of document saving instead of binding or new binding.

Archival cardboard - cutting plotter



- Production ~ 7000 boxes per year (depending on size and form)



Storage of microfilms and postcards in the National library of the Czech republic



■ Thank you very much for your attention.



The Astronomical Tower which is 68 meters high presents a wonderful view of the historical center of Prague. **The Mirror Chapel** belongs to the most important jewels of Clementinum. It has an inwrought interior with unique built in mirrors that can not be seen anywhere else. There is another baroque pearl above the Mirror Chapel - **The Baroque Library hall** with splendid fresco paintings on the ceiling and a few historically rare big globes. Books with whitened backbone and red marks are dated in the Jesuits time. Generations of famous architects, sculptors and painters participated on the constructions of Clementinum - one of pivotal Prague memory.