

# Parcel Boundaries in the Czech Republic

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## 1. Definition of a parcel

A parcel in the CR is understood to be a part of the Earth's surface represented in a cadastral map and separated from the neighbouring parts with:

- administration boundaries or
- boundaries of a cadastral area or
- proprietary boundaries or
- possessory boundaries or
- boundaries of use of the land or
- boundaries of the type of the land (nowadays – arable land, hop gardens, vineyards, gardens, orchards, grass growth, forest areas, water areas, built-up areas and courtyards, other areas)

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## Special attributes of parcel boundaries

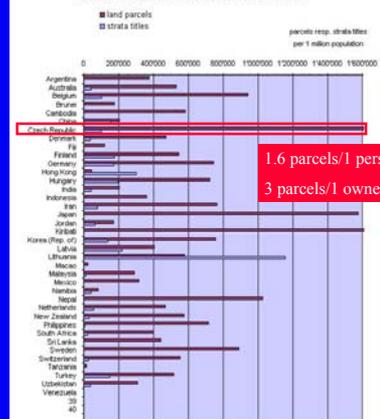
- parcel boundary with normal attribute
- boundary invisible as seen from above
- unstable and moving boundary
- boundary taken over from former registers
- disputable boundary

Further boundaries – don't represent a separate parcel

- boundary of the range of the material encumbrance (in digital cadastral map)
- boundary of the protected area

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No. of Land Parcels and Strata Titles



1.6 parcels/1 person

3 parcels/1 owner

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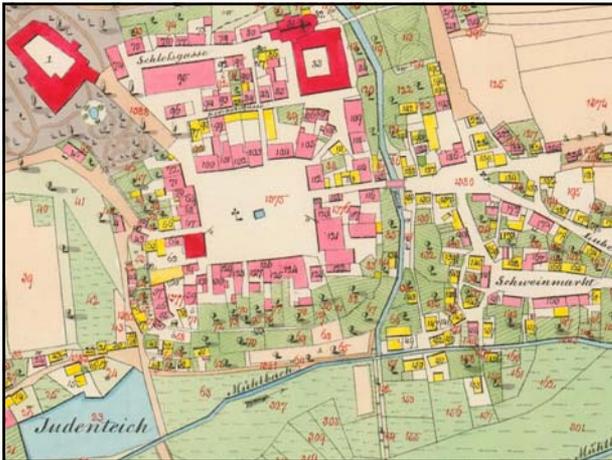
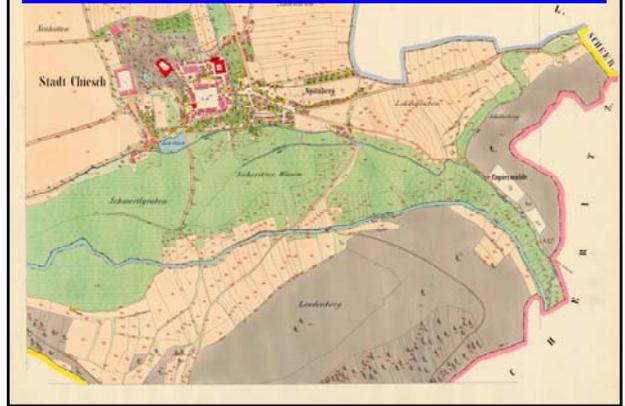
## 2. Cadastral map works

- **Stable Cadastre (1827 – 1879)**

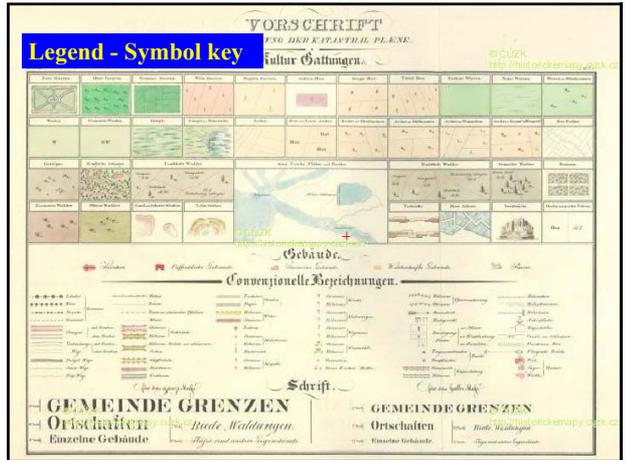
- surveyed in 1827-1843
- covered the whole territory of the CR
- island maps
- method of the survey table – graphic intersection of 3 lines from 3 stations
- scale 1:2,880 (derived from the length of Vienna fathom)

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### Emperor print of the map of the Stable Cadastre (1841)



### Legend - Symbol key

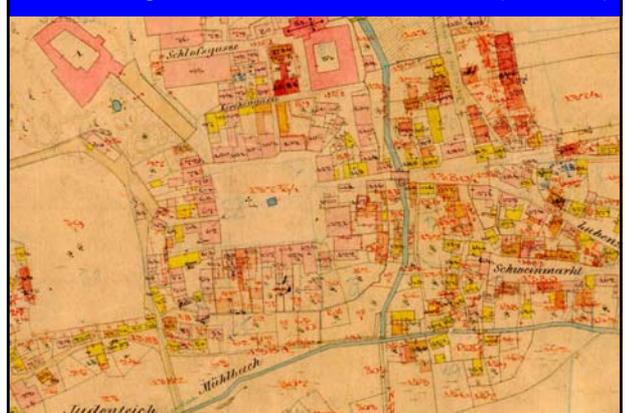


- **Former Cadastre of Lands (1879 - 1950)**

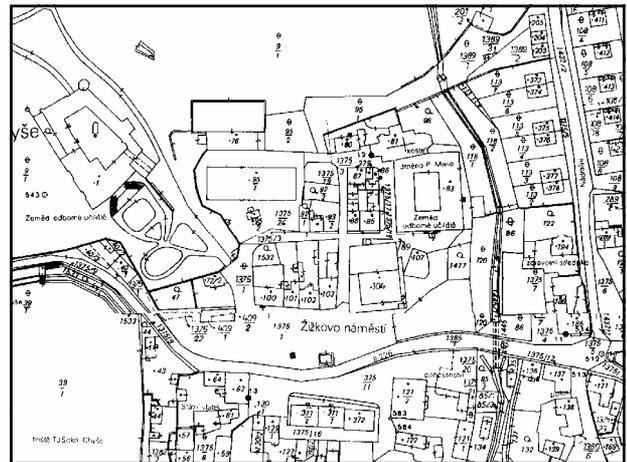
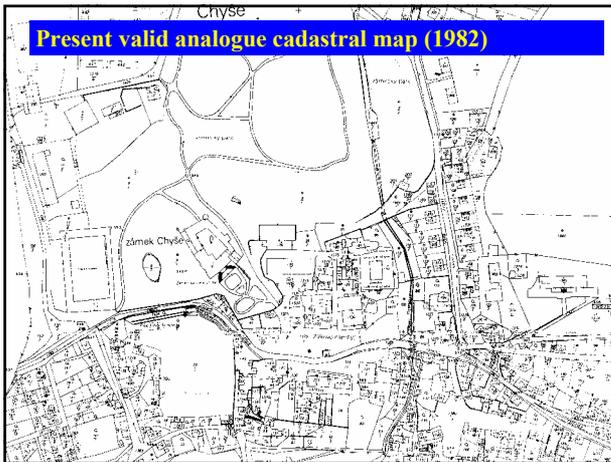
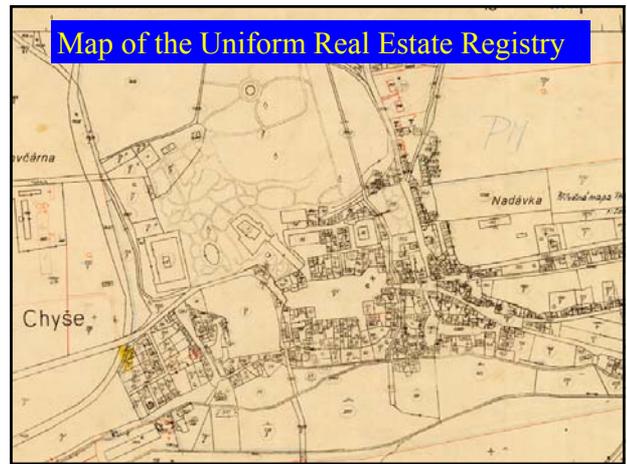
- scale 1:2,880
- revision of the Stable Cadastre (at the end of 19th century)
- new surveying methods :
  - traversing
  - orthogonal (for detailed survey points)

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### Cadastral map of the Former Cadastre of Lands (1879-1955)



- Uniform Real Estate Registry (1956 – 1964)
  - priority was given to use relationships to land
  - new boundaries were plotted on without investigating owner's relationships
  - insufficient and imperfect surveying
  - "island maps" were redrawn to the continuous projection



## Current cadastral map fund – highly various

- analogue cadastral maps of scale 1:2,880 redrawn from previous map works (62%)
- cadastral maps of scale 1:2,880 in a digital form (8%)
- analogue cadastral maps of scale 1:1,000 and 1:2,000 (exceptionally 1:5,000) created on cadastral mapping between 1964-1992 (5%)
- digital cadastral maps – created on a new cadastral mapping from the period 1992-up to now or reworked numerical maps 1:1,000 or 1:2,000 (25%)

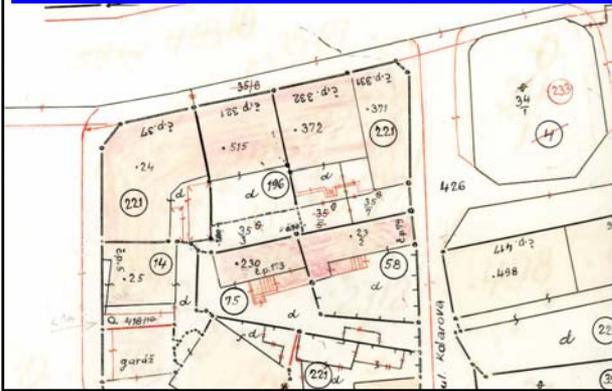
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## 3. Cadastral mapping

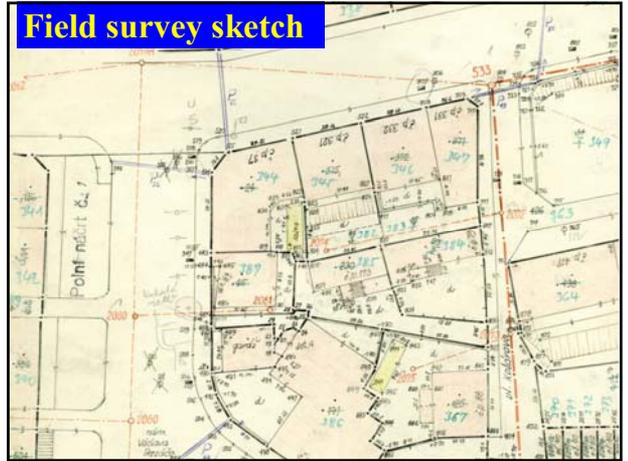
- carried out by Cadastral Offices
- main stages:
  - 1) local examination of the boundaries in terms of ownerships and use in cooperation with the affected persons and other national authorities and organisations (obligatory marking of estates' boundaries),
  - 2) detailed surveying, coordinates, vector projection
  - 3) proceeding about owner's objections (min. 10 days)
  - 4) announcing about coming into effect
  - 5) updating of the cadastral database

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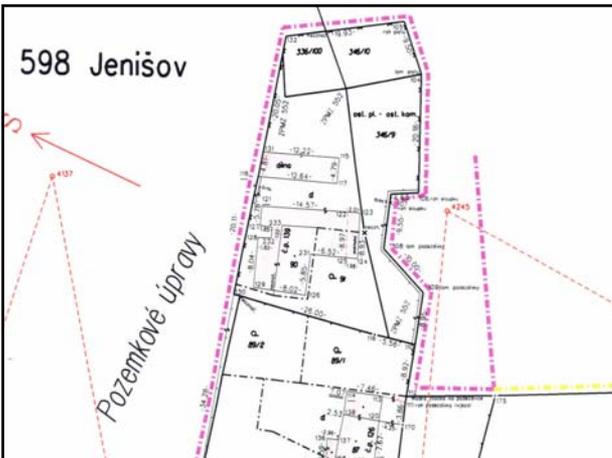
### Sketch of the local examination of the estates' boundaries



### Field survey sketch



598 Jenišov



## 4. Geometric plan (1/6)

- elementary surveyor's activity for the cadastral purposes
- basic tool for updating cadastral maps
- made by authorised individual surveyors or private survey companies
- base for drawing up of the deed
- is inseparable from this deed

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## 4. Geometric plan (2/6)

is drawn up for purposes as follows:

- change of administrative borders and owner's boundaries
- dividing of an estate
- registration of a building or a change of its perimeter
- determination of the boundaries in the framework of land consolidations
- registration of the range of the material encumbrance
- registration of boundary staked out in the field

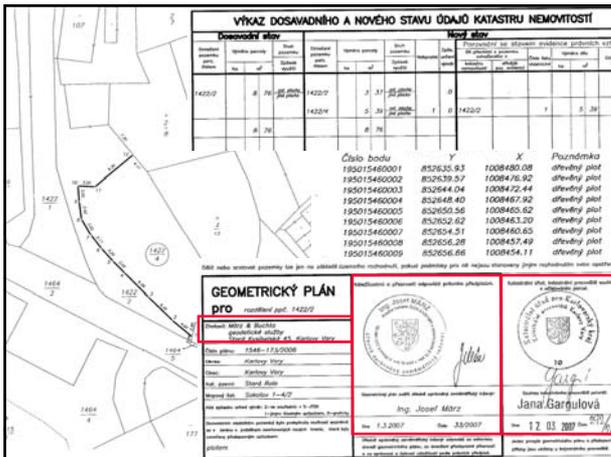
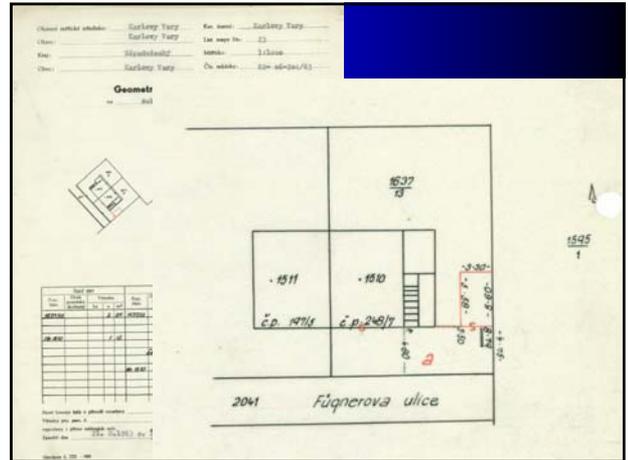
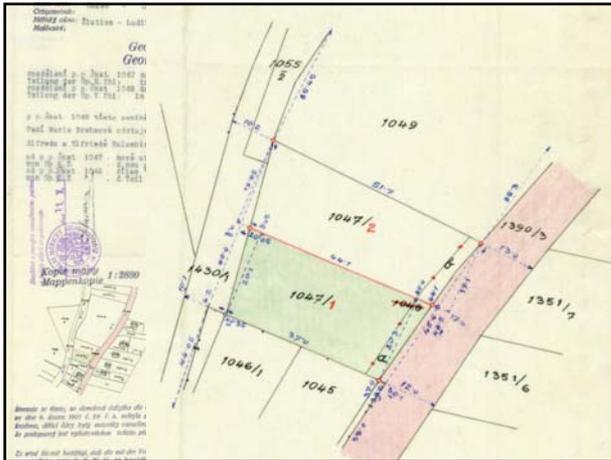
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## 4. Geometric plan (3/6)

### Technical requirements

- all surveys and calculations have to be made in national reference coordinate system
- mean coordinate error – 0.14 m (related to points of the fundamental horizontal control)
- .....

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## 4. Geometric plan (4/6)

### Technical components of GP

- survey sketch
- field-book with all surveyed values
- protocol on calculations, examination of reached precision
- image of the change
- data about acquainting with marking and shape of new boundaries

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## 4. Geometric plan (5/6)

### Individuals and organisations authorised to survey activities

- trade certificate
  - secondary school graduates in the field of surveying and cartography with a minimum of 5 years of work experience or
  - university graduates in the field of surveying and cartography with a minimum of 3 years of work experience

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## 4. Geometric plan (6/6)

### Certifying survey results by officially authorised surveyor

- university graduates only, awarded the degree surveying and cartography engineer
- completing a minimum of 5 years of work experience
- prescribed examinations have to be successfully passed before the state examination committee to obtain the authorisation

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Conclusion

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Thank you for your  
attention

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