národní
úložiště
šedé
literatury

National Technical Library – Library of Technical Universities

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2009

Dostupný z http://www.nusl.cz/ntk/nusl-113876

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Datum stažení: 19.04.2024

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Národní technická knihovna

National Technical Library

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National Technical Library – Library of Technical Universities

Martin Svoboda

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Synopsis

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- History, the “before”
- Project
  - Vision
  - Goals
  - Dates
  - Facts & Figures
  - Lessons learned
  - Pictures
- Conclusion

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History

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- **1718** – Former military engineer **Willenberg** gets Imperial accreditation to teach „Ingenieurkunst“ and gets 300 florins to buy books, models and instruments
- **1831** – The founder of Royal Czech Estates School F. J. Gerstner charges later professor of fermentation chemistry and rector of the Polytechnic **K. J. N. Balling** with the concentration of books to an indexed, subject arranged collection – advent of the library
- **1869** – after the split of the school to the Czech and German ones, the Library remains a common one, financed from the Country budget
- **1935** – an up-to-date library is built for the Library of Technical Universities (Czech and German) in the eastern wing of Clementinum
- **1960** – Library separated from Technical Universities
- **1991** – back under aegis of Ministry of Education
- **2009** – back to Technical Universities to the Dejvice campus

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History of the project

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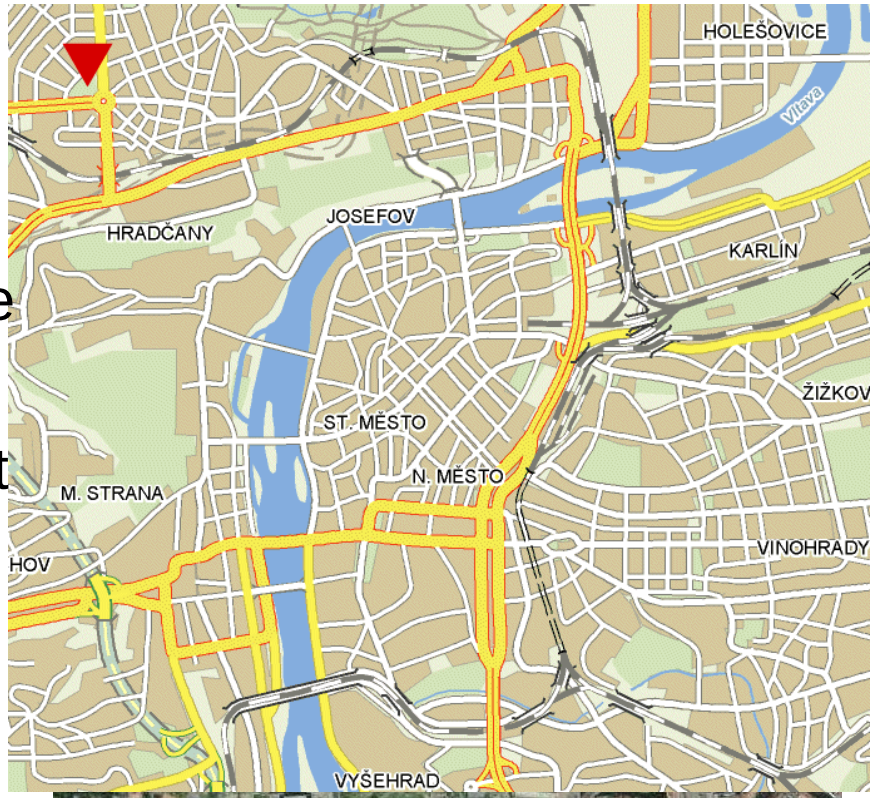
- 1963 Maniny
- 1974 head of Nusle bridge
- 1992 Rohanský isle
- 1995 Dejvice – Vítězné square
- 1999 heart of the Dejvice

campus – Technická street



campus
library

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Vision of the new library

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- transparent, permeable, understandable, flexible
- open, friendly, affable, inviting
- low energy and low operating costs house
- moderate use of hi-tech
- interior design – part of the overall building design
- materialised textbook of contemporary architecture, civil engineering and technology

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Project goals

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- Modern central common library serving universities, R&D and public in the technology and applied science area
  - national information infrastructure node for technology and related disciplines (e-resources licensing, national repository of grey literature, digitisation, EDD, ISSN centre, …)
  - R&D laboratory of network technologies for library and information services
  - transform the library back to universities
  - release space in Clementinum for the National Library

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Project dates

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2000/07 – Gov't Resolution - Project NTL approved

2001/01 – Architectural contest - Projektil

2001/07 – Memorandum of Agreement ČVUT-STK-VŠCHT

2004/02 – Gov't Resolution - budget

2004/10 – project design started

2006/06 – permits acquired, supplier tender

SEKYRA GROUP

2006/10 – the first dig

2008/12 – take-over

09/09/09 – opening of NTK to public

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Costs

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Overall project cost	76.17 mio £
out of it	
building – carcass	38.75 mio £
technologies except IT	17.73 mio £
IT	4.20 mio £
interior – mobiliary	4.16 mio £
project management	2.37 mio £
project documentation	2.50 mio £
engineering supervision	3.87 mio £
financial services	5.98 mio £

exchange rate as of 6 Sept 2009

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Library spaces, volumes

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1 322 study seats, mostly w/ network access + WiFi ubiquitous

562 relaxation seats

29 individual study rooms (of it 2 for physically disabled and 2 multimedia study rooms suitable for visually impaired)

18 group study rooms for 8-10 people

4 computer study rooms (1*30, 3*50 seats)

1 night / complementary reading room

1 journals reading room, >2000 journals + 15000 e-journals

34 OPAC terminals + user PCs throughout the building

>350 000 volumes in open stacks arranged by LCC

+ ~ 150 e-textbooks

+ 1.2 million volumes capacity in closed stacks underground

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Other functions

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- social functions for the campus in the ground-floor:
  - conference hall 230 seats
  - exhibition hall 370+410 m^2 (90+50 seats)
  - café/restaurant 150 seats
  - municipal library branch Praha 6 (32 seats, 25 000 vol's)
  - university bookstore; IT store &accessories
- training centre @ 30 seats in variable setup
- drink and snack machines on each storey
- baby changing boards
- ✚ first-aid room in the basement
- 300 parking places, 200 bike stands
- 900 000 clients/year

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Building

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53 820 sq ft	**building plot area**, of it
44 280 sq ft	built-up area
6 083 234 cu ft	**total building volume**, of it
4 055 501 cu ft	above ground
2 027 733 cu ft	under ground
416 143 sq ft	**useful area** of all storeys
9	storeys, of it 6 above ground, 3 under ground
6	elevators and 5 staircases throughout the whole building
8,025.36 Mbtu	expected **annual energy consumption**, of it
4,292.47 Mbtu	heating
3,732.88 Mbtu	cooling

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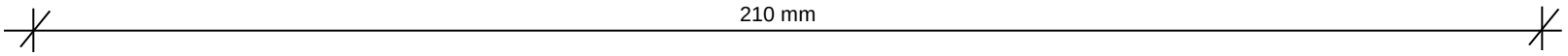
Construction



1 743 838 cu ft	of earth excavated
55 711 t	weight of load-bearing structure, of it
102 t	steel structures
38 t	steel roof of the atrium
51 628 t	concrete without armature
400 t	tendons
25 mi	pre-stressing channels
600 t	pre-fabricated stair wings
5 399 sq ft	outer shell – glass form-pieces
6 320 sq ft	outer shell – sheet glass

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„Guiness book“ figures

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118 mi	light-current cabling
1,100,000	cable clips
1346	automated combustion gas detectors
256	acoustic motion detectors
117	cameras
28.6 mi	heating/cooling piping in floor slabs
38 750 sq ft	floor heating in ground floor
233 254 sq ft	rubber flooring
44 401 sq ft	bituterazzo in the ground floor
27 986 sq ft	sound absorbing lining
12.43 mi	pipes of high pressure extinguishing system
4 110	nozzles of high pressure extinguishing system
1 345 ft	automatic smoke & heat screens

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Lessons learned

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- **P**lot – fundamental, otherwise risky business
- **P**ecunia – not just the volume, the certainty is what counts
- **P**artnership – in-house, governing body, architects, designers, contractor, …
- **P**erspective – design for the [unknown] future
- **P**hlexibility – both in project and in decisions

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People

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Everything described above, that is the idea, the design and a construction of the new building, in parallel with the working “old library” shaping up for the reincarnation in the new environment; this all starting with authors of the initial idea, through archeologists, architects, artists, assemblymen, building team, businessmen, designers, developers, draughtsman, economists, gate-keepers, IT people, lawyers, librarians, managers, organisers, suppliers, quantity & quality surveyors, trustees, etc. is a result of a collaboration of tens and tens of people.

I would like to thank all who endeavoured to accomplish this Gesamtkunstwerk.

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Some pictures

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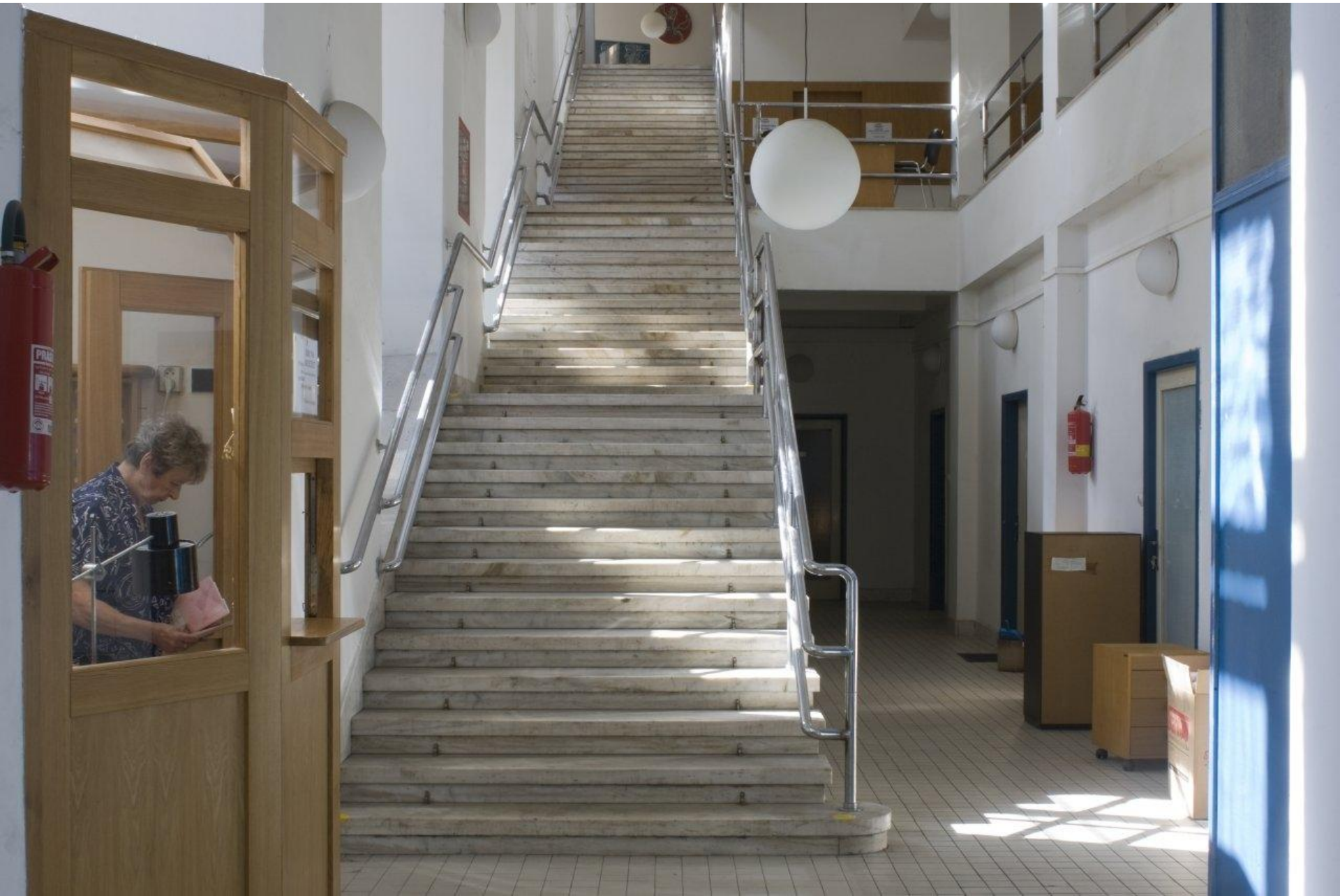

MODULSI TELEFONY

Jan 2007

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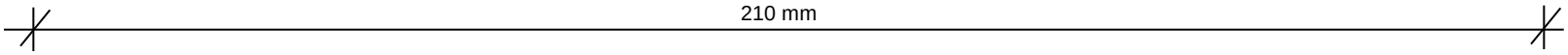

Thank you for your attention

Martin Svoboda

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Sir Tim Berners-Lee

for Nobel prize !