Virtual Polytechnic Library

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Virtual Polytechnic Library: From "Home-Grown" Document Delivery Concept to a National Collaborative Platform for Resource Sharing

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Abstract

The Czech Virtual Polytechnic Library (VPK) began in 2000 as the "virtual resource sharing alliance" by the leading Czech STM libraries as their response to the rapidly changing landscape of STM publishing and acquisitions, resource sharing, access policies, and technologies. VPK utilizes and enhances the INVIK document delivery management system developed in 1996-1997 by a team of developers from the then-State Technical Library (STK; from 2009 on, NTK—National Library of Technology), with STK as its logistical "service center." After its launch, the VPK alliance soon grew to also include non-STM libraries and became the Czech Republic's most efficient and reliable national interlibrary resource sharing platform. VPK's technological infrastructure and the logistical service center at NTK have adapted in an agile manner to changes in scholarly publishing over the past fifteen years and to the demands and needs of its participating members, who contribute data and resources to the sharing system.

The VPK platform is now being considered as a resource sharing platform for the Central Portal for Czech Libraries (CPL), which would serve (starting in 2020) public libraries in addition to academic institutions and which would have more robust end-user functionality. The presenters will discuss this unique collaboration solution, which shows how a "grassroots" initiative—developed and managed by its participating members in direct response to their changing needs and circumstances through time—can prove to be an inspirational, flexible and viable solution, even at the national level.

Keywords: resource sharing, document delivery, Czech Republic, interlibrary loan

Introduction

In this paper, we provide an overview of the recent history of resource sharing in the Czech Republic, analyzing its conception in the Internet era as represented by the State Technical Library's (STK) INVIK system, its evolution in the form of the VPK alliance, and its present status in relation to broader plans for future resource sharing at a national level.

A Brief History of Post-1989 Resource Sharing in the Czech Republic

CASLIN
Resource sharing between libraries in our current understanding of the term did not emerge in the Czech Republic until after 1989. While libraries did offer print interlibrary loan services through the centralized national public library network (one of the densest in the world),[i] holdings records did not exist in a standardized format and many had not been digitized. This changed in the early 1990s with the CASLIN (Czech and Slovak Library Information Network) initiative, supported by the Andrew W. Mellon

Foundation. Mellon had been funding selected projects prior to 1989 in the region, but the intensity of change across Central and Eastern Europe in the early 1990s provided Mellon the opportunity to underwrite new initiatives, including modernization of existing, heterogeneous library infrastructures and standardization of formats of communication channels and bibliographic records (Quandt 2002). The intention was "to build up strong fundaments for a nation-wide library network offering both the domestic and foreign users a fast and user-friendly access to the information stored in the libraries and information centers" (National Library 1991).

The project was led by four prominent libraries—two Czech and two Slovak (Krčmařová and Trtíková 2004). The project's key goal was the creation of a robust, flexible, multifunctional, and open national union catalog as a platform for the future collaborations and shared operations and services, including automated acquisitions, shared records management, automated circulation, resource sharing, etc. (Krčmařová 1997).

While CASLIN succeeded in many areas, when its Mellon funding expired, the Czech national government did not "pick up the tab" for continuation of a national (or international, including the Slovak Republic) library cooperative program extending beyond a union catalog.[ii] This resulted in segmentation in library community activities at the national level into those serving public libraries, led by the National Library and the Ministry of Culture, and those serving academics, funded by the Ministry of Education (Lass 1997). The National Library continued hosting the national electronic catalog and related digitization efforts, but academic libraries—though still contributing to the national union catalog efforts—went down a separate path for meeting their interlibrary loan and document delivery needs, one focused on the institutional necessities research universities were facing in a rapidly-changing technological environment.

STK and INVIK
Prior to 1989, the Czech State Technical Library played a unique role in the Czech library landscape, being the specialized hub for acquisition and distribution of international and national science and technology literature. During the early 1990s, the library came under the auspices of the Ministry of Education and its collections and services were made more open to the general public, particularly to academia.

Because of its unique, STM-oriented international collection, STK faced high demand for its materials (most of them journals) as the Czech economy and universities opened to the world. Out of necessity, it became an early national leader in library systems automation and the digitization of services (some under the auspices of CASLIN, but mostly beyond it), becoming in 1996 the first Czech library to launch a fully-automated catalog, including a home-made circulation module. This, coupled with its expertise in purchasing, borrowing and sharing STM materials, resulted in STK becoming the first Czech provider of electronic document delivery services in 1997 (Planková 2004).

The arrival of the Internet in the early 1990s spurred innovation in order to deal with the shift to electronic formats. At STK, a team consisting of two of this article's authors and Ms. Zuzana Švastová developed a homegrown platform and request management system for meeting the demands of STK's day-to-day lending realities while leveraging the power of the networked environment (Heicl, Švastová, and Skenderija 1997).
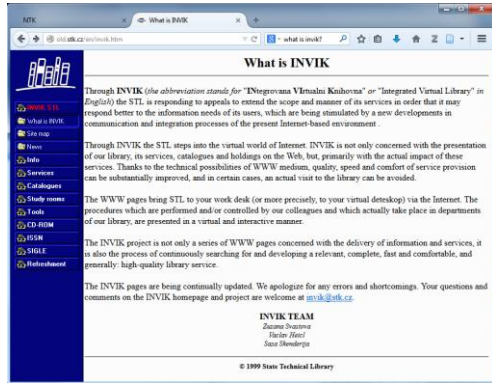
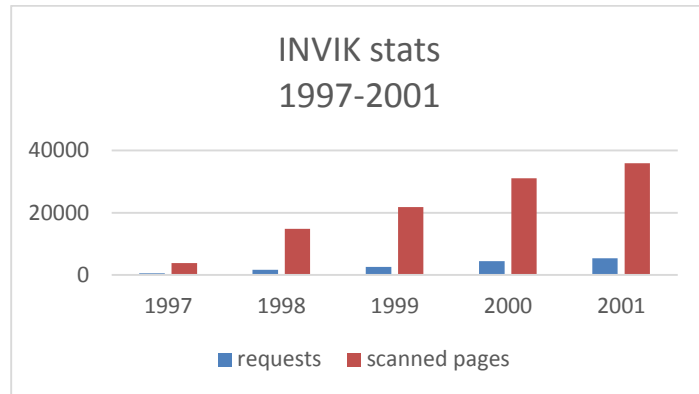Figure 1. What is INVIK – the original web page.   Figure 2. INVIK stats.

The Integrated Virtual Library (INVIK) was designed from the very beginning to be a decentralized, pluralistic, and open resource sharing and services platform, one which would not require a centralized authority for its operation and existence. INVIK launched its lending, digitization-on-demand, and document delivery service in 1997. INVIK's eDD functionality, in its essence, matched and complemented—on the back-user side—similar eDD platforms at that time (JASON, TU Delft, SUBITO, BLDSC, LIBRIS, etc.) and also encompassed in its long-term conception many aspects of modern resource sharing, including federated contribution and maintenance workflows while anticipating future online services, including informational services provision and coordinated acquisitions. [iii] The INVIK request management system could also be distributed to others and did not require a central service center in a manner similar to LOCKKSS boxes, but only two clones were eventually employed, eDDo at the National Library and AIP Safe at the National Pedagogical Library (Štyndlová 2008). STK also actively pursued changes to national copyright legislation, ensuring eDD services were protected in the Czech Copyright Law enacted in the year 2000. In its first years of operation, INVIK provided eDD services not only to individual STK members, but also to other libraries and non-profit institutions registered as "institutional INVIK-STK members."

VPK Alliance
In 1999, STK made preparations for creating a "virtual resource sharing alliance" of key INVIK institutional users, eight leading Czech technology research libraries.[iv] The alliance was formally declared in 2000, and the resulting Czech Virtual Polytechnic Library (VPK) began operating in 2001 as a joint platform for coordinated acquisitions, resource sharing, access policies, and technologies. From the outset, VPK utilized INVIK's workflows and its request management system, enhancing and upgrading it for new tools and functionalities (such as the virtual Union VPK Catalog of Journals, a clearinghouse module for prepaid user accounts, a scanning and request processing plug-in and dashboard, and international library loan processing). STK itself became the VPK logistical "service center," hosting the system, virtual catalog, payment processing, and coordinated acquisitions administrative role. The virtual VPK Union Catalog of the participating libraries' journal holdings has more specific scope and broader functionality than the Union Catalog of the Czech Republic, including automated request form filling and processing, electronic resource holdings information contributed to and updated by both the STK service center and the alliance members, a special utility for indicating license agreement restrictions for alliance partners, and a utility for coordinated acquisitions ("acquisition-intention checkbox"). The alliance operates on a pre-pay service basis, with each alliance member and individual user contributing to the system based on anticipated usage levels—both borrowing and lending (Švastová and Bužgová 2000).

After its launch, the VPK alliance soon grew to also include non-STM libraries and non-commercial institutional members and became the Czech Republic's most efficient and reliable interlibrary resource sharing platform. By 2003, VPK alliance had thirty participating library members sharing their resources mostly via eDD (including the Czech Academy of Sciences and the National Medical Library, who also through VPK facilitate their international interlibrary loans). By 2006 their number stabilized at around forty.
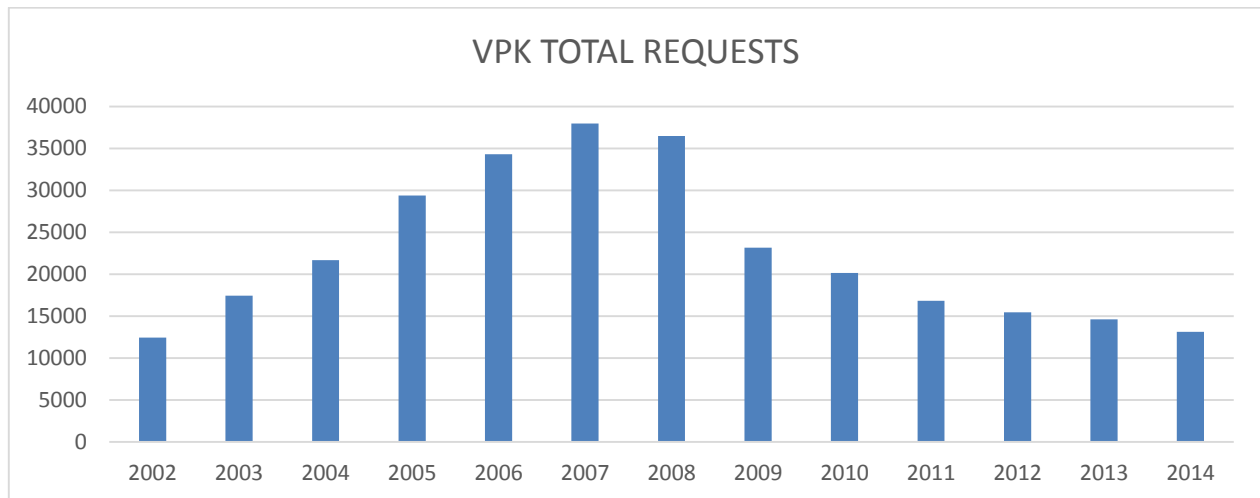

Figure 3: VPK request totals, 2002-2014.

During the first years of its existence, the VPK alliance initiated the first Czech STM licensing consortium for purchasing online collections, which became the model for a future similar consortium. When STK launched an STM portal in 2003 (prior to the availability of discovery tools), VPK became its document sharing and resource access coordination platform.

VPK continued to grow both in terms of volume of requests and document deliveries until 2009, when a new agreement between Czech copyright clearance center DILIA and the Czech National Library was signed, multiplying the existing royalty fees for digital copies processing.[v] As in other countries, increased access to licensed electronic resources (including those purchased at the national level by a time-limited purchasing group funded by the Ministry of Education, with its service center based in NTK) have likely also contributed to the overall decline (Seefeldt et al. 2011, Jong and Frederiksen 2015). Since the initial 2009 drop, however, volume averages have stabilized somewhat (NTK 2013).
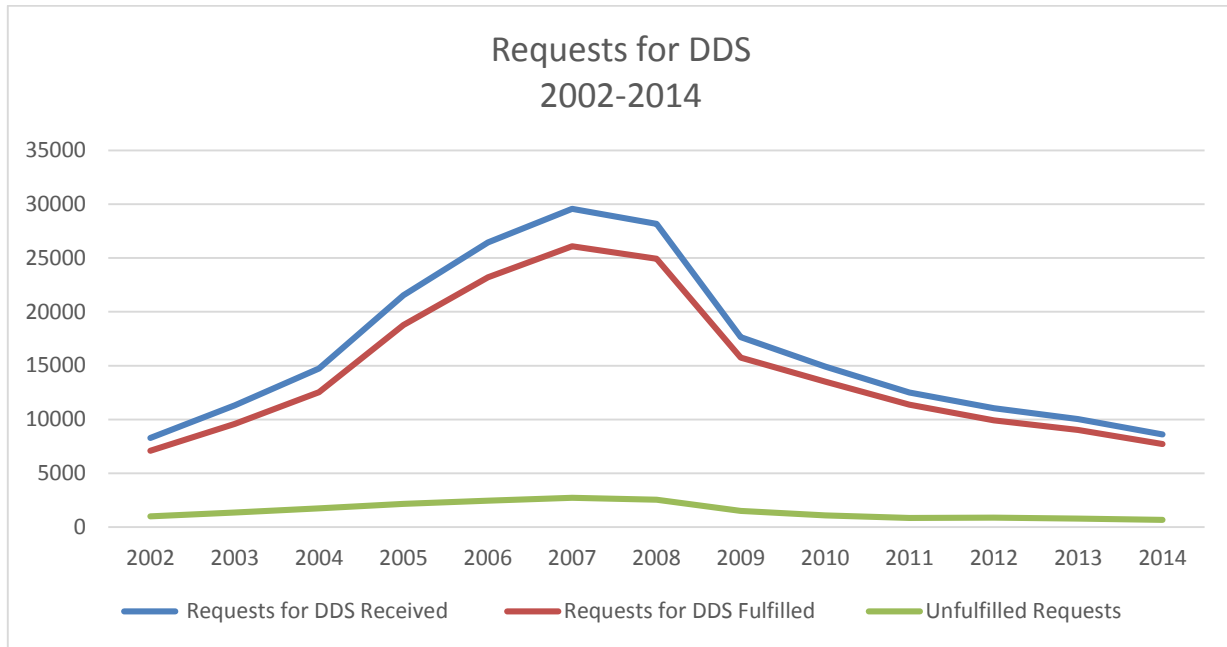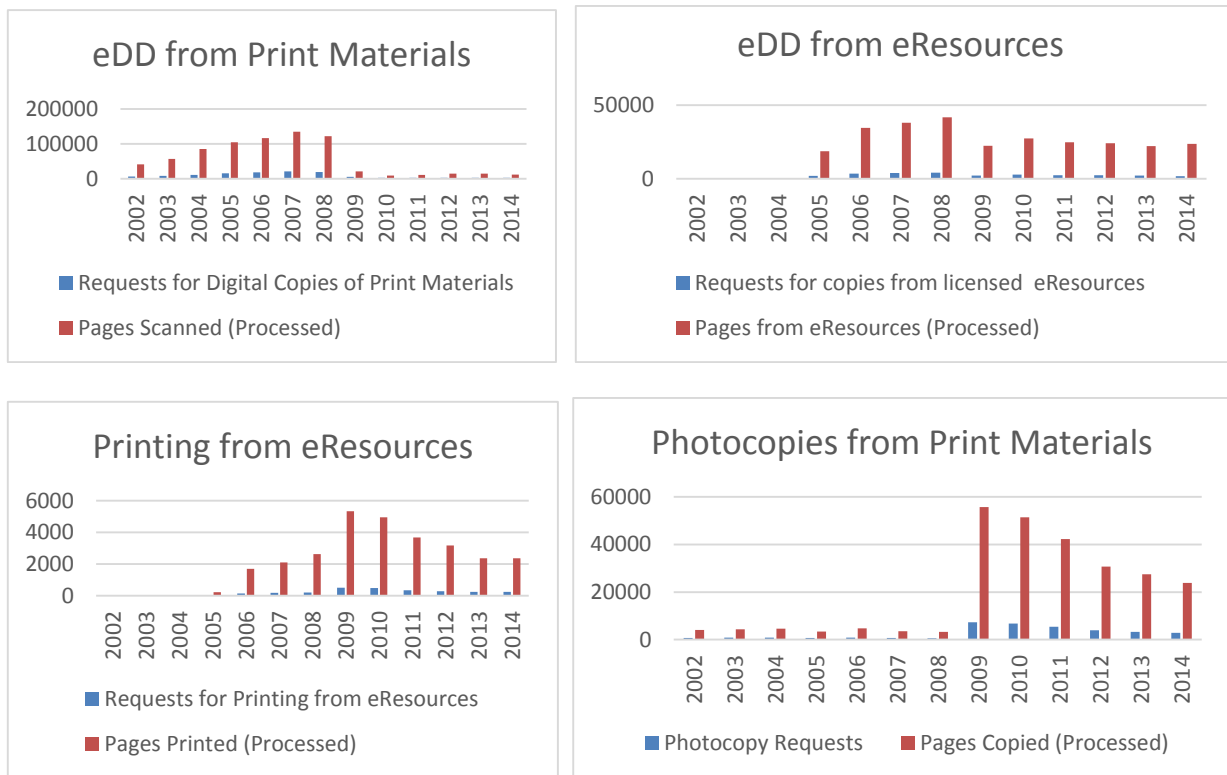
Figure 4. VPK efficiency graph (2002-2014).

Figure 5. The impact of the 2009 copyright clearance agreement.

New Frontiers, New Opportunities
At the National Level: CPL and CzechELib
The well tested concept of VPK is now being considered as a resource sharing platform for the Central Portal for Czech Libraries (CPL), a government-financed project, which would serve (starting in 2020) public libraries in addition to academic institutions and which would have more robust end-user functionality. Its vision is reminiscent of the CASLIN legacy of the 1990s: to provide any document in any format, anywhere and anytime, to all citizens of the Czech Republic. If successful, CPL would finally re-unite the public and academic library communities as originally envisioned by the CASLIN project, with both communities contributing and sharing resources across the national system (Central Portal of Czech Libraries 2011).

Integrating VPK's decentralized, pluralistic, and open platform formally into the national project would provide CPL with a mechanism for ensuring operations of and contributions to the portal without requiring long-term oversight by a traditional hierarchical administrative coordinating unit; these functions could continue to be performed by the current VPK service center team based at NTK (Žabička, Žabičková, and Stoklasová 2015).

The first successful move in that direction was the recent (2015) virtual merging and interlinking with the Union Catalog of the Czech Republic with the VPK Union Catalog. It was the first step towards the planned integration of the National Library's eDD-based services (with a broad network of regional and municipal libraries tied to the National Library) into the VPK system (Ouzká and Košťálová 2014).

Additionally, VPK anticipates continuing to provide essential logistical services to the recently planned Czech national purchasing consortium, CzechELib (an extension of the current time-limited purchasing consortium administrated by NTK for important national STM resources funded by the Ministry of Education until 2017), including providing data about acquisitions trends and joint holdings for future cost-efficient electronic resources purchasing decisionmaking at the national level (Svoboda 2014).

At the Institutional Level
Regardless of future developments at the national level, VPK's team is currently working to enable aspects of the original INVIK and VPK mission which have not yet been fully developed and implemented, including tighter integration with other NTK service offerings and seamless, rapid "self-service" (Mak 2011) and "remote circulation" of all types and formats of documents, within and beyond NTK holdings, utilizing not only NTK's discovery tools but also other commercial and noncommercial information search and finding platforms (i.e., Google Scholar, the Union Catalogue of Czech Republic, the Tech Portal, etc.). Because of the devoted, experienced, and skillful VPK team and staff at NTK as well as the flexible, upgradable, and time-proven request management system, making this process more seamless and achieving the vision of a "one-stop information shop" (Atkins, Greenwood, and Whaley 2014) should be a matter of adjusting existing library regulations and workflows, system software and interface upgrades—and last, but not least, of clarifying certain legal issues, including re-negotiating document delivery terms in some license agreements with commercial electronic resources publishers and working with the national copyright clearance center to come to a more favorable agreement about electronic copy pricing.

Conclusion
CASLIN, INVIK, and VPK all contributed to providing a reliable resource sharing infrastructure to the Czech Republic through times of rapid political and technological change. The authors would argue that one of the reasons for this is the collaborative and open approach which functions without the need for

centralized oversight or administration. VPK, being developed "in-house" at NTK, continues to be cost-efficient and flexible and has provided the Czech resource sharing community with a reliable platform and tool for over fifteen years. If the future national developments do unfold, it may finally be possible to—with decentralized collaborative mechanisms—unite the heterogeneous Czech library community with shared goals, based on providing excellent service rather than on divided purpose: getting information to citizens as quickly and cheaply as possible, at their point of need.

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Appendix: Excel file "vpk-stats-2002-2014-eng"

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[i] In 1997, for example, there were over 6,000 public libraries in the Czech Republic compared to 6,313 in Germany ("Libraries and museums - Germany" 2015).

[ii] "The CASLIN project is not just a project of libraries automation, but a project of changing of the organization of librarianship by using new technologies"—Andy Lass in Krčmařová (1997).

[iii] "For the sake of the best service to its user, INVIK is open to all forms and means of purposeful co-operation with local, international and global library and information institutions, structures and bodies. The concept of INVIK aims at supporting the establishment of a co-operative library information environment which is open, pluralistic, flexible and decentralized and where the quality of user-oriented services provided by any co-operating library is based on an efficient utilization of the most powerful procedures available in participating libraries" (Skenderija 1998).

[iv] The "evolution" of INVIK into VPK corresponds with the late 1997 appointment of Mr. Martin Svoboda, a CASLIN project leader and a manager, as the new STK director.

[v] Paradoxically, that was the year when STK (now NTK) moved to a new building in the heart of the Prague-Dejvice science and engineering campus.