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TECHNOLOGY IN A WAR CRIMES TRIBUNAL: RECENT EXPERIENCE AT THE ICTY

David Pimentel*

INTRODUCTION

The International Criminal Tribunal for the former Yugoslavia (ICTY) is a court that upon its creation in 1993 was virtually unique in the world.[1] Not surprisingly, it faced and continues to face challenges that are particular to its idiosyncratic structure and mission. The experience of the ICTY in addressing those challenges, however, has significance for other courts and judicial systems. The ICTY is no longer unique, as other international war crimes tribunals have been created in a variety of locations.[2] The ICTY's experience is certainly relevant for those courts, but more generally, the lessons learned there can have application far beyond the crucible that produced them.[3]

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[1] S.C. Res. 827, U.N. SCOR, 3217th mtg., U.N. Doc. s/RES/827 (1993) (establishing the ICTY through a resolution passed on May 25, 1993 in the face of serious violations of international humanitarian law committed in the territory of the former Yugoslavia since 1991, and as a response to the threat to international peace and security posed by those serious violations).

[2] Rome Statute of the International Criminal Court, U.N. Doc. A/CONF.183/9 (1998) (creating the International Criminal Court (ICC) on July 1, 2002); S.C. RES 1315, U.N. SCOR, 4186th mtg., U.N. Doc. S/RES/1315 (2000) (creating the Special Court for Sierra Leone (SCSL) ultimately through an agreement between the United Nations and the government of Sierra Leone on the establishment of the SCSL on January 16, 2002); S.C. Res. 955, U.N. SCOR, 3453d mtg., U.N. Doc. S/RES/955 (1994) (creating the International Criminal Tribunal for Rwanda (ICTR)). A tribunal for Cambodia, to try the members of the Khmer Rouge that were responsible for the killing two million Cambodians during their time in power, has been discussed between the UN and the government of Prime Minister Hun Sen. On March 17, 2003, Cambodian and UN officials agreed on a draft framework for a tribunal, and are now awaiting approval by the United Nations. LAWYERS COMM. FOR HUMAN RIGHTS, A COURT FOR CAMBODIA? (2003), *available at* http://www.lchr.org/international_justice/w_context/w_cont_05.htm.

[3] The extremes of litigation before the ICTY may make it an ideal test case for certain approaches and reforms in court management and operation. At least some reforms, if implemented in the ICTY, can certainly work in more conventional courts.

Of particular interest is how technology has been utilized both in and out of the courtroom to address some of the particular difficulties posed by war crimes cases. This Article will briefly summarize a few of the special challenges faced by the ICTY, and then detail how technology has been employed, or is being employed, to address those challenges. The purpose is not to explain the various projects' technical specifications, but rather their impact and use.

I. GENERAL BACKGROUND ON THE TRIBUNAL

The International Criminal Tribunal for the former Yugoslavia was the first international judicial body created to hear war crimes cases since the Nuremburg and Tokyo trials.[4] Specifically, it has jurisdiction over serious violations of international law committed in the former Yugoslavia since 1991. Although international media coverage has focused primarily on the trial of Slobodan Miloševič, which commenced on February 12, 2002 and continues to this day, the Tribunal has heard and adjudicated the cases of at least thirty-five other accused persons.[5]

II. SPECIAL CHALLENGES

A. Challenge 1: Inaccessibility of the Tribunal's Jurisprudence to Lawyers and Judges

Because there were no international war crimes tribunals between 1949 and 1993, there was, at the outset of this Tribunal, relatively little case law upon which the judges and chambers staff of the ICTY could rely. As is always the case with international law, the legal research poses a particular challenge, but with international criminal prosecution this problem is acute.[6] Much of the relevant law

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[4] *See* J. Louise Arbour, *The Prosecution of International Crimes: Prospects and Pitfalls*, 1 WASH. U. J.L. & POL'Y 13, 23 n.48 (1999).

[5] *See Tenth Annual Report of the ICTY for the Prosecution of Persons Responsible for Serious Violations of Int'l Humanitarian Law Committed in the Territory of the Former Yugoslavia Since 1991*, U.N. SCOR, 58th Sess., Part VI, Annex 1 (listing twenty-three completed cases although several have been completed since this report), *available at* http://www.un.org/icty/rappannu-e/2003/index.htm [hereinafter *Report*] (last visited Jan. 5, 2004).

[6] *See* Curtis A. Bradley, *The Costs of Human Rights Litigation*, 2 CHI. J. INT'L L. 457, 467 (2001) ("Because of their unfamiliarity with international law and the relative difficulty of doing direct research on international law questions, judges rely heavily on secondary sources [(e.g., the Restatement (Third) of Foreign Relations Law; written and oral testimony of academic experts)] in [international human rights] cases."); *see also* Mathieu Deflem, *International Criminal Justice on the Internet*, INTER-SECTION, Summer 1998, *available at*

of the Tribunal had only rarely, if ever, been applied in practice over the past fifty years, and a modern interpretation had to be developed at the Tribunal itself in the course of the cases.[7] Now, after ten years of operation, the very best source of relevant case law is the Tribunal's own precedent and that of the International Criminal Tribunal for Rwanda (ICTR), its sister institution with which it shares an appeals chamber.[8]

Judges, chambers staff, prosecutors, and defence lawyers found themselves creating their own compilations of ICTY decisions because no general research tool for Tribunal jurisprudence was available to either the Tribunal staff or the lawyers appearing before it.[9] This has hampered the efficiency of the work in and before the Tribunal, thus handicapping lawyers and judges in their preparation of quality briefs and written decisions.

B. Challenge 2: Complexity of the Cases

The fact that the prosecution of the Miloševič case took nearly two years to present — and it is far too early to estimate the length of the defence case — is surprising to some, but not to those who have studied the facts and the law of these cases. While the Miloševič case may represent an extreme, many of the cases tried at the ICTY are exceedingly complex and difficult, and at least two more are projected to last two years or longer.[10] While a few are straightforward crime-based cases, where the evidence must show: both that a crime occurred and that the accused was present and/or somehow responsible, such simple cases are the exception. Indeed, the simple crime-based cases are the ones that the ICTY is least likely to bring to trial, as they could be prosecuted effectively elsewhere.[11] In the

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http://www.cla.sc.edu/socy/faculty/deflem/ZINTCJ.htm (newsletter of the international section of the Academy of Criminal Justice Sciences) (last modified Jan. 10, 2001).

[7] Interview with Yvonne Featherstone, Senior Legal Officer, ICTY (Dec. 18, 2003).

[8] *Id.*

[9] From the beginning, Chambers maintained its own collection of orders, decisions, and judgments, but these were only available within Chambers and could not be easily searched. The Office of the Prosecutor (OTP) created its own reference system, which was only available within the OTP network. The ICTY Public Information Services provided summaries of court documents and court decisions, but these were never considered authoritative sources as they were tailored to a broad audience and were not comprehensive.

[10] The cases of Vojislav Šešelj and Momčilo Krajišnik are leadership cases dealing with the principle of joint criminal enterprise — given the complexity of such cases and the experience of the Tribunal thus far, these cases can be expected to take at least two years to finish. *See* ICTY Indictment and Proceedings, *at* http://www.un.org/icty/cases/indictindex-e.htm (last visited Jan. 23, 2004).

[11] The "completion strategy" of the ICTY, by which it anticipates to complete its trials by the end of 2008 and its appeals by 2010, will necessitate transferring a number of cases back to "the region" for prosecution by local authorities. There simply is not time to try all

limited time available to the Tribunal, the priority is to prosecute the cases involving those in leadership positions, the cases that are inherently the most difficult.[12] In addition, the Tribunal has a duty to try those cases that most require a supranational body to hear them.

The reason for the complexity of the leadership cases follows from what the Office of the Prosecutor must prove, and the largely circumstantial evidence available to prove the case. Obviously, the fact that crimes occurred must be proven, and for the high-level cases there are many crime bases.[13] Government, military, and political leaders are being prosecuted for their leadership role in a wide array of crimes that occurred throughout the duration of the war in Bosnia, and also several years later during the conflicts in Kosovo.

But even more difficult than the crime bases is the proof of responsibility for such crimes. In order to convict government or military leaders, it is not enough to show that people died as the result of actions committed by those leaders. The crimes charged, which include genocide, murder, violations of the laws and customs of war, torture, and crimes against humanity, among others,[14] all require specific

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the cases that the Office of the Prosecutor (OTP) has investigated and is investigating. Indeed, there is not time to try even all the individuals that the OTP has already indicted, much less the new indictments it expects to issue. *See* J. Theodor Meron, President of the ICTY, Address to the UN Security Council at The Hague (Oct. 9, 2003), *at* http://www.un.org/icty/latest/index.htm.

[12] *See id.*

[13] For example, Enver Hadžihasanović, whose trial began in December 2003 is charged, on the basis of superior criminal responsibility, with violations of the laws or customs of war that include: (1) murder, (2) cruel treatment, (3) wanton destruction of cities, towns or villages, not justified by military necessity, (4) plunder of public or private property, and (5) destruction or willful damage done to institutions dedicated to religion. There are twenty-five separate crime bases referenced in the indictment. *See* Court Documents Case Information Sheet on Hadžihasanović, *at* http://www.un.org/icty/latest/index.htm (last visited Apr. 6, 2004).

[14] The crimes for which the accused are being brought before the Tribunal include the following: murder; cruel treatment; wanton destruction of cities, towns or villages, not justified by military necessity; plunder of public or private property; destruction or willful damage done to institutions dedicated to religion; genocide and complicity in genocide; willful killing; unlawful confinement; torture; willfully causing great suffering; unlawful deportation or transfer; extensive destruction and appropriation of property, not justified by military necessity and carried out unlawfully and wantonly; persecutions on political, racial or religious grounds; extermination; imprisonment; violations of the laws or customs of war involving *inter alia* attacks on civilians. *See* Statute of the Int'l Crim. Tribunal for former Yugoslavia (as amended May 19, 2003), Articles 2–5, *available at* http://www.un.org/icty/legaldoc/index.htm (last visited Mar. 30, 2004); *see also* Case Information Sheets, *at* http:/www.un.org/icty/glance/index.htm (last visited Mar. 30, 2004) (listing the specific charges in each case).

Many of the above crimes are derived from the 1949 Geneva Conventions, but the assignment of either individual criminal responsibility or superior criminal responsibility,

elements to be proved that can be difficult to establish against a backdrop of armed conflict.[15]

It is a daunting task to demonstrate that a high-level government or military leader, for example, was aware of the crime, but failed to take any action to stop it, or failed to punish those who carried out the crime.[16] Yet this must be shown not just once but for each of the crime bases. Typically, the OTP finds it necessary to call expert witnesses on the military, government, and/or political hierarchy in the

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depending on the level of direct participation of the accused in the crime, was pioneered by the ICTY OTP due to the unique nature of these crimes. The Prosecutor needed to have a legal framework for attributing criminal responsibility to the leaders who may not have pulled the trigger, but may still be responsible for the crime. Interview with Michael Johnson, Chief of Prosecutions, ICTY (Dec. 10, 2003).

[15] An example of the complicated elements of the crime bases can be seen in Persecution as a Crime Against Humanity, Article 5(h), Statute of the International Tribunal (adopted May 25, 1993), as applied by the opinion of the Tadič Trial Chamber:

> The elements of the crime of persecution are the occurrence of a persecutory act or omission and a discriminatory basis for that act or omission on one of the listed grounds, specifically race, religion or politics. . . . [T]he persecutory act must be intended to cause, and result in, an infringement on an individual's enjoyment of a basic or fundamental right. The notion of persecutory act provides broad coverage, including acts mentioned elsewhere in the Statute as well as acts which, although not in and of themselves inhumane, are considered inhumane because of the discriminatory grounds on which they are taken.
>
> The requirements for the crime of persecution are additional to the conditions of applicability for crimes against humanity, which must also be satisfied. The requirements for crimes against humanity under the Statute are, apart from the existence of an armed conflict, that the acts be taken against a civilian population on a widespread or systematic basis in furtherance of a policy to commit these acts and that the perpetrator has knowledge of the wider context in which his act occurs. Additionally, because of the interpretation of Article 5 proffered by the Secretary-General as well as several members of the Security Council, the Trial Chamber has incorporated the additional element that the act must be taken on discriminatory grounds. Whereas under the conditions of applicability for crimes against humanity as they stand under customary international law, inhumane acts that are committed with discriminatory intent incur a basis for culpability in addition to other crimes charged under the Statute, the inclusion of the requirement of discriminatory intent for all crimes against humanity negates this additional basis. As such the Trial Chamber, in making its determination of the accused's guilt or innocence of the crime of persecution, will not consider acts for which the accused is elsewhere in this Opinion and judgment held culpable.

Prosecutor v. Duško Tadič, No. IT-94-1-T, Int'l Crim. Trib. for former Yugoslavia 271 (1997), (May 7, 1997), *available at* http://www.un.org/icty/tadic/trialcz/judgement/tad-tsj70507JT2-e.pdf.

[16] This is a real-world example of the classical philosophical challenge to "prove a negative."

former Yugoslavia at the time, as well as witnesses to the day-to-day operation of such things. While it is easy for an observer to conclude that these things could not have happened without the approval of the general or of the president, it is quite another thing to prove that proposition in a court of law, particularly as there is usually nothing but circumstantial evidence available. These "command responsibility" cases are, therefore, among the most complex and difficult.[17]

It is common for new legal staff, arriving at the ICTY with experience in other legal systems around the world to be taken aback by the enormity of the facts and complexity of the issues in the Tribunal's cases; it is often far beyond anything they have seen in their home systems. New staff in chambers, on defence teams, and in the OTP must learn to focus on a subset of the overall case; it is virtually beyond human capacity to visualize the whole case at once.[18]

These cases also tend to be document-intensive, with exhibits being introduced during trial by the thousands.[19] When a party wishes to reference an exhibit that has been previously introduced, it can prompt an actual delay in the proceedings while the exhibit is located within dozens of binders, and while the exhibit, once located, is produced and laid — one page at a time — on the projection unit for viewing on the courtroom's video screens.

C. Challenge 3: Sheer Volume of Investigative Materials

Related to the concept of complexity is the logistical difficulty of working with the voluminous bodies of investigative material. As of June 2003, the OTP holds over 4.2 million pages of written material, and over 6,400 video and audio tapes[20] that it must attempt to (1) manage, (2) index, (3) translate, and (4) evaluate. Rules 66 and 68 of the ICTY require the Prosecutor to disclose to the Defence a significant amount of these materials, particularly anything that is "potentially exculpatory."[21] The challenge of combing through such a body of documents, looking for potentially exculpatory material, is staggering. Presently there are dozens of lawyers and support staff in the OTP doing nothing but searching for potentially exculpatory material; and much of their work is speculative guess-work because they do not know what the defence strategy is likely to be. Defence counsel will ask for certain types of materials, but the defence will be purposefully vague in such requests to avoid revealing too much of their strategy to the prosecution.

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[17] Joint criminal enterprise cases — also common at this Tribunal — are difficult for the same reasons.

[18] Interview with Anonymous Staff Member, ICTY (Sept. 11, 2003).

[19] Interview with Michael Johnson, *supra* note 14. In the Milošević case, the number of exhibits is expected to approach 20,000.

[20] U.N. Doc. A/58/297-S/2003/829; *Report*, *supra* note 5, Part IVB(5)(c).

[21] ICTY R.P. & EVID. 66, 68 (amended 2003).

The upshot is that ICTY Evidence Rules 66 and 68 "disclosure" continues, in an ongoing series of discrete deliveries, over a period of years. During the trial and even after the closing arguments, and during appeal, the prosecution continues to disclose potentially exculpatory material. The problem for the defence in receiving such material is two-fold: (1) they do not necessarily get what they need when they need it, and (2) the sheer volume of what is disclosed to them — sometimes tens of thousands of pages at a time[22] — is simply too much for a small defence team to review and digest in the time available.

The OTP finds itself in a difficult situation, of course, speculating on what the defence might deem exculpatory. If it errs on the side of disclosure, it may flood the defence with documents of only marginal value making the important documents all the harder to find. If it discloses only the most directly relevant documents, it runs the risk of failing to meet its obligation and of depriving defence counsel of what they may need to make their chosen defence.

D. Challenge 4: Making the Work of the Tribunal Available to the Rest of the World

There is a collective consciousness at the ICTY that its purpose is not limited to carrying out individual justice in the cases brought before it. The institution is filled with idealistic individuals motivated by being part of something historic and symbolic — a message to the world that such atrocities will not go unpunished. A collective condemnation of such crimes, carried out not in a spirit of vengeance but in one of law and order, is important to healing the region and increasing the deterrent pressure on the rest of the world.[23] The world needs assurances that there are consequences for such crimes, and that they will be meted out fairly and justly.

As a consequence of this recognition, the ICTY has dedicated considerable attention to openness and transparency in its proceedings. It has welcomed press attention and has provided video feeds of proceedings to television stations. Through the Internet, the ICTY has made its proceedings available by live video stream and has posted all public decisions, including redacted transcripts, for public viewing.[24]

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[22] For example, in the final few weeks before trial began in the Hadžihasanovič case, the OTP granted the defence teams access to the "Vitez Collection," consisting of over 80,000 pages of documents. Transcript of Proceedings at 210–11, Prosecutor v. Hadžihasanovič, No. IT-01-47-PT, Int'l Crim. Trib. for former Yugoslavia (2003), *available at* http://www.un.org/icty/transe47/031106SC.htm.

[23] *See First Annual Report of the Int'l Trib. for the Prosecution of Persons for Serious Violations of Int'l Humanitan Law Committed in the Territory of the Former Yugoslavia Since 1991*, SCOR, 49th Sess., Part II B, *available at* http://www.un.org/icty/rappannue/1994/index.htm; *see also Report*, *supra* note 5, Part VI.

[24] Information including redacted public transcripts, public decisions, and live video

But to date, the ICTY has not made its jurisprudence easily accessible to the rest of the world. The decisions themselves can be downloaded and printed from the ICTY Web site, but they cannot be effectively searched on that site, and the Tribunal has not compiled or indexed them to facilitate research.[25] A member of the academic community recently complained about how inaccessible the jurisprudence is,[26] and even the ICTY's sister court — the International Criminal Tribunal for Rwanda (ICTR) — has had difficulty mining the ICTY's jurisprudence for precedent.[27] The ICTY's jurisprudence is of importance not just to the ICTR and the academic community. The jurisprudence and experience of this tribunal will be studied closely in creating future legal models for the prosecution of such cases. As courts in Bosnia and Herzegovina, Croatia, Serbia and Montenegro, or elsewhere, take on war crimes cases,[28] they will look to the experience of the ICTY in determining applicable standards of international law.[29]

III. TECHNOLOGY INNOVATIONS TO ADDRESS THESE CHALLENGES

A. The ICTY's Judicial Database Project

In 2001, there was recognition within the ICTY Registry[30] that upgrading to an electronic case file, as has been done in many other courts, would be of considerable assistance in the management of court documents, particularly given the document-intensive nature of the cases before the court. Internal evaluation

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streams of public hearings are available through the ICTY Web site at http://www.un.org/icty/latest/index.htm.

[25] Westlaw has an ICTY database than can be searched via Boolean search terms, but many international lawyers have neither access to nor training for this type of U.S.-based subscription-only research tool. In addition, ICTY publishes a "Compilation of Judicial Supplements" on a periodic basis, that substantively categorizes decisions of the Trial and Appeals Chambers; these compilations, available from ICTY's Web site, do provide a starting point for researching ICTY jurisprudence. *See* Judicial Supplements, *at* http://www.un.org/icty/publications/index.htm (last visited Apr. 6, 2004).

[26] Interview with Francis S.L. Wang, Senior Counsel, U.C. Berkeley War Crimes Studies Center (Sept. 10, 2003).

[27] Interview with Jamie Williamson, ICTR Registry (Dec. 15, 2003) (commenting on the difficulty of obtaining access to ICTY decisions and disseminating them for use within the ICTR).

[28] Due to the completion strategy, courts in the former Yugoslavia will have to take on cases that the ICTY cannot. *See supra* note 11.

[29] Vesna Teršelič, Civil Society and the Importance of Public Dialogue About War Crimes, Lecture at The Hague (Nov. 3, 2003).

[30] The ICTY Registry is the administrative section of the Tribunal that performs a wide range of functions. *See* Statute of the Int'l. Crim. Tribunal for Former Yugoslavia (as amended May 19, 2003), Article 17, *at* http://www.un.org/icty/legaldoc/index.htm (last visited Mar. 30, 2004).

established that the circumstances of the ICTY were sufficiently unique that a home-grown, custom-designed application would be required to meet the Tribunal's needs.[31]

As the project progressed, under the direction of a working group that included representatives of the ICTY Registry, Chambers and the OTP, it became apparent that a complete, accessible, and full-text searchable electronic case-file system could fill the acute need for an effective research tool within the Tribunal. The priority shifted somewhat in that direction, and the judicial database (JDB) was born with a research-oriented purpose as its primary focus. Electronic filing was still a part of it, that is, it was essential that filing parties file an electronic copy of their submission (be it a motion, a brief, or even a Chambers decision) for inclusion in the database. But the result, and indeed the priority, was not so much to streamline the filing process as to build this research database.

In November 2002, new guidelines were adopted requiring parties — OTP, Defence, and Chambers — to submit their filings not only in hard copy, as before, but in electronic form as well.[32] For the most part, this consists of simply attaching the electronic copy to an e-mail message. The Court Records Assistant who accepts the paper filing, then puts the electronic version into the JDB, and "links" the document to the appropriate case file,[33] so that the document can be found in an appropriate place in the database.

In order to make the database complete, however, there was a backlog of filings and decisions built up during the years that the ICTY had operated only with hard copy files. These needed to be scanned into the database. Accordingly, in late 2002, a "scanning project" was commenced at the Tribunal. The Tribunal brought in fifteen temporary staff under a project director to go through its complete case files and judicial archives and scan them all into electronic form.[34] In addition to the scanning, the essential and more challenging task of linking the documents also had to be done. The temporary staff worked under the close direction of Registry staff and information technology staff to ensure that the linking was accurately accomplished.

On June 2, 2003, the JDB was officially opened to all Tribunal staff, even though the scanning and linking were not yet complete. The bulk of the database became available, fully searchable and usable. User comments and suggestions have been collected, and the system has been tweaked in response, to ensure that it

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[31] Interview with Michael Blaxill, Project Director, JDB Scanning (Dec. 16, 2003).

[32] *See* Memorandum of the Registrar, Nov. 1, 2002 (on file with the *William & Mary Bill of Rights Journal* staff).

[33] Given the complicated case history, with joinders and severances of cases, and histories of interlocutory appeals, "linking" the documents to the appropriate case file often requires difficult judgment calls.

[34] Interview with Michael Blaxill, *supra* note 31.

meets the needs of everyone who uses it. The scanning and linking project was completed in December 2003.[35] Defence counsel now has access to the public documents on the JDB, via the ICTY's intranet, which they can access on the Tribunal premises in the library and in a separate "defence counsel room" in the ICTY's Main Building. Access to the confidential documents in the database is more closely controlled; such access is granted on an individual basis, and only to those who already have access to the confidential hard copies.

B. The Future of the JDB — Opening Access

Efforts are now underway to give Defence counsel Internet access to the JDB from their home computers, and to give them access to the confidential documents *in their own cases*. Opening the JDB, particularly the confidential portion, to the Internet is a more sensitive enterprise, carrying significant security implications.

In the long term, it is contemplated that the public portion of the JDB will be opened up to the general public via the Internet.[36] This will answer the needs of academics and other judicial bodies — such as the ICTR, SCSL, and the ICC[37] — to conduct research in the Tribunal's case law. The JDB also has the potential to serve as a permanent research archive for the United Nations, making the full history of the Tribunal's work available to historians and researchers for generations to come.

C. Case Management — Organizing Complex Cases

The complexity of the cases before the ICTY has been the catalyst for the introduction of technologies that can ease the burden on all aspects of the court process. However, it was the OTP that first adopted the off-the-shelf software programs CaseMap and Sanction for this purpose. LiveNote, a program that allows instant access to the transcript while in court, was introduced to the Tribunal by its contracted court-reporting service. New off-the-shelf software solutions are being considered, but the OTP's software programs and LiveNote already offer tremendous potential to address the particular challenges posed by the cases before the Tribunal.

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[35] The backlog project has scanned and linked 38,480 formally filed documents and 22,790 exhibits. The original project plan estimated an average of eight pages per document, meaning a scanning total of approximately 277,840 pages for jurisprudence alone. Exhibits vary widely from expert materials numbering 600 pages to single maps, photos and correspondence. Estimating low at three pages per exhibit, that amounts to about 68,370 pages, for a total of over 344,000 pages of material in the JDB. *Id.*

[36] This will be expensive, however. The ICTY is actively seeking assistance from outside donors to make it possible.

[37] Arbour, *supra* note 4.

1. Knowledge Management

The OTP identified a need to create uniform, central repositories for case knowledge for each prosecution.[38] The knowledge each trial team had gained through its investigation and legal analysis did not neatly fit into any singular system, and as a result the best repository for case knowledge was typically in the head of the Senior Trial Attorney. The OTP selected CaseMap software, produced by CaseSoft,[39] to manage its case knowledge. CaseMap allows a complex case to be outlined with all factual and legal issues identified, and with hyperlinks to the source documents. The program does not change what an attorney must do in preparation of a case, but rather gives each attorney a place to save his or her intellectual thought processes. A tool such as CaseMap not only allows attorneys to be more efficient, but also gives other team members access to their work product.[40] Both pretrial and trial outlines can be prepared in several different degrees of detail. Thus, the software allows a person to get an overview of the case, or to break it down to the different issues and arguments. A useful feature is that the attorney can very quickly go to a list of the issues in the case, and then check off which ones a particular piece of evidence helps counsel to prove or disprove. Both Sanction and LiveNote, discussed in more detail below, can be easily integrated into CaseMap.

Although the CaseMap/Sanction/LiveNote suite was pioneered by the OTP for its own purposes, the Tribunal is now contracting to provide licenses to defence counsel as well. Chambers staff have also expressed interest in using CaseMap to organize the cases for the ultimate drafting of the judgment. Once a case is complete, the parties can use their CaseMap outlines to prepare their post trial briefs. The judges and Chambers staff, if they have used the software, should have a similar outline prepared for use in drafting the judgment.[41]

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[38] Interview with Michael Johnson, *supra* note 14.

[39] CaseSoft, 5000 Sawgrass Village Circle, Ponte Vedra Beach, FL 32082. The reader should be aware that this is in no way an endorsement of this product. Undoubtedly other commercial products can be equally useful for case organization and presentation.

[40] David Akerson, Uses of Sanction, LiveNote, and CaseMap Within the ICTY, Lecture at Kurhaus Hotel, The Hague (Oct. 24, 2003).

[41] Judgment-writing is a particularly time-intensive activity at the ICTY. It can take five to eight months to get a judgment written after the trial is complete. In most cases a new trial cannot begin until the judgment is complete from the previous case. This follows from the system of ad litem judges employed by the Tribunal. Ad litem judges can be appointed to hear a single case, and only a limited number of ad litem judges are authorized. New ad litem judges cannot be appointed to begin a new case until vacancies are created by the departure of previously appointed ad litem judges; the latter cannot depart until their judgment is rendered.

At present, only the OTP is making full use of CaseMap, but as it expands to more general use with the Defence and Chambers, there is potential for further efficiency in trying these cases. There is a possibility that CaseMap outlines could be submitted and even required as part of a pretrial brief, and that a single, uniform CaseMap outline can be negotiated between the parties as a part of the case's pretrial process. What the parties do not stipulate to could be ruled upon by the pretrial judge, thus using the CaseMap outline to frame narrowly the issues for trial, saving precious trial time. Such potential has yet to be explored at the Tribunal.[42]

2. Digital Evidence Presentation

Another commercial product, called Sanction,[43] has also been employed to help organize and control the presentation of evidence in the courtroom. With evidentiary material scanned and saved in Sanction, it is a simple matter to call up the exhibit and project it on the video monitors in the courtroom.[44] This greatly speeds trial proceedings, as there is no longer a need to "go to the binders" for the relevant exhibit every time reference is made to a previously introduced exhibit.[45]

Electronic exhibits in Sanction are easily linked to the issues they apply to in CaseMap. CaseMap is designed to operate with Sanction, as well as LiveNote, which is further discussed below. However, Sanction can be used effectively for evidence presentation regardless of whether CaseMap is also installed and utilized. In fact, Sanction has been used already in the Milošević case, both by the OTP and by Mr. Milošević himself who has requested, during cross-examination, that certain prosecution exhibits be displayed.[46]

All attorneys who have practiced in the courtroom know the drudgery of evidence presentation. The slowness of the process can greatly lessen the impact of the evidence on the arbiter of the facts. By using software to organize his or her case, the attorney gains greater control over the presentation of all evidentiary material whether it be textual, audio, or visual. The OTP, when using Sanction to

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[42] The opportunity to pursue such possibilities is imminent as the Trial Chamber for the upcoming trial of *Prosecutor v. Orić* has directed the defence to prepare its case in CaseMap and has indicated that Chambers will use it as well. The Orić case is expected to go to trial sometime in late 2004.

[43] Sanction is a product of Verdict Systems LLC, 1400 E. Southern Ave., Suite 710, Tempe, Arizona 85282. The reader should be aware that this is in no way an endorsement of this product. Undoubtedly, other commercial products can be equally useful for electronic presentation of evidence.

[44] Judges, members of the defence team, the OTP's trial team, the witnesses, and the legal officers that assist the court all have a video monitor in front of them.

[45] Internal estimates of the OTP are that use of Sanction in a recent case sped trial proceedings by no less than fifteen percent. Interview with Michael Johnson, *supra* note 14.

[46] *Id.*

present its cases, does not have to rely on the court's audio/visual staff to play evidence, or to cue a tape to a particular point. The impact of the evidence is heightened and time is saved. Textual evidence can be presented page-by-page, or counsel can highlight and magnify a sentence that is crucial to the case he or she is presenting. Another interesting function of the software is that it allows counsel to present a transcribed and, where necessary, translated conversation on the monitors while at the same time playing the original audio recording. This is an excellent method of introducing such evidence as it allows crucial intonations to come through.[47] By using the available software, the attorneys improve efficiency as well as the impact of the evidence that they present to the court. With these tools, it is possible to put one's entire case onto a single hard drive in a manner that is well organized, and ready for presentation.[48]

3. Transcript Management

The courtroom also incorporates LiveNote, a commercial program that enables every courtroom participant to view the transcript in realtime.[49] This is important for issues of witness protection and confidentiality, as redactions of the transcript can be done efficiently during the progress of the hearing. LiveNote also works seamlessly with CaseMap, allowing the attorneys in the case to highlight portions of testimony that speak to various issues in the case, and link that excerpt to the CaseMap outline. This can be done easily at the conclusion of each day of trial, or even during court proceedings themselves — as testimony is heard, it can be fed into the CaseMap system.[50]

The ICTY is now piloting the implementation of a product called Ringtail, a new integrated system for transcript and exhibit management, pioneered in the courts of Australia.[51] This is an expansive software solution that should afford even

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[47] In one case before the ICTR, perpetrators were recorded saying, "You need to get more stoned on marijuana . . . the killing will be easier." The audio stream revealed that they were laughing as they said this, creating a strong impression for the court. Lecture by David Akerson, *supra* note 40.

[48] *Id.*

[49] LiveNote, Inc., 795 Folsom Street, 1st Floor, San Francisco, CA 94107. The reader should be aware that this is in no way an endorsement of this product. Undoubtedly, other commercial products can be equally useful for transcript management.

[50] While linking LiveNote testimony to CaseMap is possible in the hearing itself, it is better to wait until after proceedings are concluded for the day. This is because the real-time feed is not the official transcript, and the attorneys cannot rely on the line and page numbers of those passages. Courtroom practitioners have found it best to flag important segments of testimony using LiveNote, then process those passages into their CaseMap outline once the official transcript is available.

[51] Ringtail Solutions, Inc., 489 McLaws Circle, Suite 1, Williamsburg, VA 23185. The reader should be aware that this is in no way an endorsement of this product.

greater functionality in the court environment. It would create a single repository for all transcripts and exhibits, readily accessible by all parties — OTP, Defence, Chambers, and Registry — both in the courtroom and in their respective home offices.

D. E-Disclosure

As already discussed, the OTP's disclosure responsibility is a major burden, consuming enormous resources and time. These efforts, in turn, generate volumes of written material for the defence, imposing great burdens on them as well to review the disclosed material for use in their cases.

In order to meet the disclosure responsibility more efficiently and to give the defence more meaningful access to these materials, the OTP has embarked upon an ambitious project referred to internally as "e-disclosure." The initiative has established a Web server that contains most of the prosecution's investigative material. On November 17, 2003, defence counsel were granted access to this database via a password-protected Internet site that features a search engine.

In so doing, the OTP discloses not just what it believes is potentially exculpatory, it discloses everything that is not confidential. Although a significant portion of the prosecution's evidence collection must be kept confidential, most of it can be added to this searchable collection.

While this could shift to the defence some of the burden of determining which portions of the public collection are potentially exculpatory, the ability to search the material should go far in easing that burden. By changing disclosure from a "push" to a "pull" procedure, aided by this technology, the defence can get material that is more relevant — as opposed to the disclosure made after a prosecution search for potentially exculpatory material — and can focus their limited resources more effectively. Indeed the defence *knows* what type of material they are looking for, whereas prosecution staff can only guess at what the defence might find relevant.

The OTP embarked upon this project even before answering the essential jurisprudential question: would granting the defence access to a searchable database satisfy the prosecutor's obligation under the rules to identify and disclose potentially exculpatory evidence to the defence? The project was considered to be worth pursuing even if it were ultimately deemed insufficient to meet the prosecution's disclosure responsibilities. The rationale was that the searchable database would still help defence counsel get what they need, and could ease the prosecution's task of combing these documents for potentially exculpatory material. Even in the prosecution's worst-case scenario — where prosecution staff still has to search their collection for potentially exculpatory material — the existence of the e-disclosure database is a significant step forward.

Amendments to the Rules which would permit the e-disclosure system to satisfy, at least in part, the prosecution's obligations under Rule 68 were adopted in December 2003.[52] The confidential portion of the prosecution's investigation files will still need to be searched by prosecution staff in any case, but as of November 2003, 1.6 million pages of those files were made fully available to defence counsel, with many more pages to be added shortly. So far, the initiative has received a cautious welcome from the defence bar.[53] Clearly its long-term success will depend on the speed, effectiveness, and ease of use of the search engine and database.

IV. CONCLUSION

The ICTY has faced unique challenges including scant historical precedent — both jurisprudential and operational — that have forced court managers, lawyers, and judges to be innovative. Among the tools available to them is the introduction of technology-based solutions. The technological solution may amount to nothing more than the simple utilization of off-the-shelf software, such as CaseMap and Sanction; or it may involve the development of unique applications tailored to the Tribunal's particular needs, such as its database for electronic case files; or, it may use the available technology to actually redefine a long-standing legal concept, such as the prosecutor's duty to disclose potentially exculpatory evidence. As long as the court managers, lawyers, and judges are willing to think "outside the box" and adapt to the evolving technological opportunities, there is great and continuing potential to improve both the efficiency and the quality of operations in any court system. This has certainly been true in the ICTY, where special challenges have called for special solutions.

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[52] Rule 68 governs disclosure of exculpatory evidence and failure to comply. ICTY R.P. & EVID. 68 (amended 2003).

[53] Interview with John Ackerman, Association of Defence Counsel, ICTY (Dec. 17, 2003).