

Video-mediated interpreting: an overview of current practice and research

1 Introduction

This chapter reports on one of the outcomes of the AVIDICUS Project. Against the backdrop of recent developments in Europe, especially the promotion of the use of videoconferencing in criminal proceedings, for example in the European E-Justice Action plan,¹ the AVIDICUS Project set out to evaluate the quality of video-mediated interpreting in criminal proceedings and its viability from an interpreting point of view. To achieve this overarching aim, the project had three specific objectives:

- (1) To identify situations in the criminal justice sphere where video-mediated interpreting would be most useful and specify a set of relevant situations;
- (2) To assess the reliability of video-mediated interpreting in these situations from an interpreting perspective through a series of comparative case studies and formulate a set of recommendations for EU criminal justice services on the use of video-mediated interpreting in criminal proceedings;
- (3) To devise and pilot three training modules on video-mediated interpreting based on the findings from (2): one for legal practitioners, including the police; one for interpreters working in the legal services; and one for interpreting students.

The first of these objectives included a review of current practice of video-mediated interpreting, especially in legal proceedings, which will be discussed in this chapter, and two European surveys, one among legal practitioners, and the other among legal interpreters, which will be presented in the following chapter.

Current practice was assessed through an analysis of the small body of research and reports on existing projects and studies. The aim of this information-gathering exercise was to sketch out as broad an initial picture of video-mediated interpreting use as possible, to draw together practical and academic views and to identify possible benefits and real or potential problem areas.

This was complemented by an expert meeting in the initial phase of the project, which included representatives of European and national institutions who had gathered experience in video-mediated interpreting, videoconferencing experts, representatives from the legal professions and the police, interpreters, interpreting researchers and interpreter trainers.

Furthermore, all members of the AVIDICUS consortium engaged in field observation of current practice, i.e. observation of use of live video links, both with and without interpreting, in judicial settings, e.g. in the court rooms of their respective countries. They

¹ European E-Justice Action Plan of the European Council (OJ No. C 75/01, 31-03-2009). Available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:075:0001:0012:EN:PDF>. See also van der Vlis (in this volume).

also held numerous informal consultations with legal interpreters, legal practitioners and police personnel.

The aggregate findings from the above tasks helped shape the AVIDICUS comparative studies, which are discussed later in this volume. The review of current practice ensured that these studies were conducted in relevant settings and would lead to relevant and valid recommendations.

The review confirms that what is described here as ‘video-mediated interpreting’ is in fact a blanket term for a variety of forms of interpreting. A broad distinction will be made in this chapter and throughout this volume between *videoconference interpreting* (VCI) and *remote interpreting* (RI). Videoconference interpreting is the form of interpreting that is used when the proceedings take place at two video-linked locations (e.g. court and prison), with the interpreter being situated at either end of the link. Remote interpreting (RI) is the form of interpreting that is used when the proceedings take place at a single location (e.g. a courtroom), with the interpreter working via video link from a remote location (e.g. another courthouse).

Section 2 of this chapter will outline the context in which the discussion of VCI and RI in criminal proceedings is embedded and will also give more comprehensive definitions for both forms. Section 3 will give an overview of current practice and research. This is mainly based on the review of reports on other projects and initiatives but also informed by the outcomes of the AVIDICUS expert meeting, the informal consultations and field work. Section 4 draws conclusions with regard to the current and projected pictures of VCI and RI use in criminal proceedings.

2 Background

A survey conducted by the European Council Working Party on Legal Data Processing (e-Law) in 2008 shows that videoconferencing (VC) is increasingly used in **national and cross-border criminal proceedings** to speed up co-operation, reduce costs or increase security.² The survey also asked whether the respondents had experience in using videoconferencing for translation or interpretation.

Austria, Bulgaria, the Czech Republic, France, Ireland, Italy, Latvia, Luxembourg and Malta replied that they had no such experience. Denmark reported that remote interpreting (RI) had been used in a trial. Hungary, Romania and Sweden stated that they had limited experience in using VC equipment and interpreting. Estonia, Germany, Slovenia and Spain reported occasional or frequent use of simultaneous interpreting in video links in court. Poland reported carrying out moot court trials involving interpreters to test RI via phone and video link. The Netherlands replied that interpreters participate frequently in video links between courts and prisons and that they are located either in court or in the prison. Finland responded that interpreters were involved in video links between Finnish district courts and Swedish prisons, with one interpreter in the prison and another interpreter in court. The UK reported that England and Wales used video links between police custody suites and courts, and interpreters, when involved, were located in court. In Scotland, however, interpreters involved in videoconferences would generally be seated next to the witness.

² European Council Working Party on Legal Data Processing (2008), *Questionnaire on videoconferencing – Compilation of responses*, 6709/08 JURINFO 19. Brussels: European Commission.

These responses point to a wide range of different forms of video-mediated interpreting, with primary interlocutors and interpreters being positioned in different locations. This chapter focuses on the details of the various situations in which videoconferencing and interpreting coincide.

2.1 Context

The European Union has promoted the use of videoconference technology in legal proceedings³ for a number of reasons. VC technology is seen as being capable of:

- supporting co-operation and mutual assistance in criminal (and other legal) proceedings,
- speeding up legal proceedings,
- saving costs in legal proceedings, especially in cross-border proceedings,
- helping to resolve security concerns and avoiding the transport of detained persons,
- giving access to interpreting services.

Because greater migration and mobility rates have entailed an increase in the number of bi- and multilingual proceedings both at national level and in cross-border cases, gaining access to legal interpreters has become a critical issue in Europe. Timely access to qualified legal interpreters for a wide range of languages, including 'rare', 'lesser taught' and hardly ever taught languages, is therefore crucial, and videoconference technology is seen by judicial services and the European e-Justice initiative as having the potential to ensure this timely access is achieved.

As the use of videoconferencing in legal proceedings (administrative, criminal and immigration) has become more frequent, it has also become the subject of academic debate. Current academic thinking posits that videoconference technology should be used with utmost care and that further research on its effects is required before it can be used more widely (e.g. Poulin 2004, Federman 2006, Haas 2006, Wiggins 2006, Sossin & Yetnikoff 2007, Harvard Law School 2009).

Referring to criminal justice, Poulin has argued, for example, "that courts should not extend their reliance on videoconferencing further and instead must undertake studies to explore the impact of the technology in criminal proceedings" (2003: 1089). With regard to VC use in immigration proceedings and based on extensive reference to experimental research on the differences between face-to-face and videoconference communication, the Harvard Law Review has recently warned that VC use in this setting may result in a system "in which individuals gain speedier entrance [to an immigration court] but fewer receive the opportunity to be heard in a meaningful manner" (2009: 1193). At the same time, the Review does acknowledge the practical requirements of, and pressures on, immigration courts. It concedes that "improving the technology used, limiting use to preliminary hearings, and requiring the respondent's consent could help balance the efficiency videoconferencing purportedly provides with the substantive requirements of the immigration court system" (2009: 1192).

³ Especially through the European e-Justice initiative launched by the DG Justice and the ensuing Multi-Annual European e-Justice Action Plan 2008-13 (Council of the European Union (2008), *European e-Justice Action Plan*, 15315/08 JURINFO 71. Brussels: European Union.)

Some project initiatives report positive results, although empirical evidence for the positive conclusions is not always provided. However, recent projects which have aimed or are aiming to gather empirical evidence for their conclusions range from the 'Gateways to Justice' project in Australia⁴ project (2007-10), to prison-court video links in Canada,⁵ which are embedded in the Criminal justice reform/bail reform in British Columbia launched in 2007, or a videoconferencing project in the London Probation services in 2006.⁶

One issue that the Harvard Review does not address is the growing number of European initiatives that focus on such aspects as improving technology and the audiovisual environment in which videoconferencing takes place. The work on legal videoconferencing undertaken by the Dutch Ministry of Justice,⁷ for example, has been concerned with the conditions under which videoconference technology may be used both in immigration and criminal justice. This work has taken into account the specifics of legal communication and can serve as a starting point for the consideration of videoconference (and remote) interpreting:

A courtroom is an area where communication between different parties in proceedings is of primary importance and where certain legal, traditional and ceremonial aspects also play an important role. Like a courtroom, the chambers of an examining magistrate, a witness room and the interrogation room in a penitentiary institution are no ordinary workplaces. The special feature of such rooms is that each of the participants has a fixed role, as a result of which they may or may not sit (or stand) opposite or next to one another, often in a specific place in the room. Considerable importance is moreover attached to ensuring that each participant can see and hear all the other participants clearly and observe both verbal and non-verbal reactions. The use of videoconferencing in alien and criminal law proceedings as a means of hearing aliens, suspects, witnesses and experts at a distance therefore imposes such stringent requirements on equipment components and the composition, positioning and adjustment thereof that the audiovisual solution may generally be regarded as a tailor-made solution.⁸

The work conducted in the Netherlands has resulted in a set of recommendations for the use of videoconferencing in legal proceedings and a publically available handbook on videoconferencing,⁹ which in turn has become a basis for the handbook on videoconferencing developed by the European Council Working Party on Legal Data Processing, available through the e-Justice portal.¹⁰

Criticism at a deeper level in relation to legal videoconferencing and video-mediated interpreting in criminal proceedings has been voiced by the Law Societies in Europe. The main argument is that irrespective of the quality the technology, the use of VC links as a replacement for the physical presence of a defendant in court, for example, is inconsistent

⁴ Available at <http://www.justiceenvironments.edu.au/attachments/progress-report-2-nov-v3.pdf>

⁵ http://www.criminaljusticereform.gov.bc.ca/en/justice_reform_projects/bail_reform/index.html

⁶ Unpublished report

⁷ <http://www.rijksoverheid.nl/onderwerpen/videoconferentie>

⁸ SN 1759/08, February 2008, p.2.

⁹ http://www.justitie.nl/onderwerpen/recht_en_rechtsbijstand/videoconferentie/

¹⁰ https://e-justice.europa.eu/attachments/vc_booklet_en.pdf; <http://bit.ly/IQY6MA>

with human rights.¹¹ The criticism is, however, targeted at the use of videoconferencing as such and does not arise from concerns over the quality of video-mediated interpreting, which has been the focus of the AVIDICUS project. The debate as to whether or not the use of videoconferencing in criminal proceedings is appropriate from a legal point of view is outside the scope of the AVIDICUS project.

In reality, the growing use of videoconferencing in legal proceedings has also increased the demand for interpreting in videoconference situations. The above examples from bail hearings, probation and court settings could easily be imagined with the involvement of an interpreter – as often happens in practice.

Furthermore, the increasing mobility and migration in Europe and the new legal framework (especially the new EU Directive on strengthening the rights to interpretation and translation in criminal proceedings)¹² are likely to lead to a higher demand for legal interpreting. This also demands a cost-effective solution for the provision of interpreting, especially at a time when the economic climate puts pressure on public services and interpreting service providers alike, jeopardizing quality standards and fair access to justice for all European citizens.

It does not come as a surprise, therefore, that public service providers and interpreting agencies look towards videoconferencing technology as a potential solution for gaining cost-effective and timely access to qualified legal interpreters and thus for improving access to justice.

However, some of the many issues arising include how the technological mediation through videoconference link affects the quality of interpreting; how this is related to the actual videoconference setting and the locations of participants and interpreter; and ultimately whether the emerging forms of videoconference and remote interpreting are

¹¹ In a declaration published by the Law Societies Joint Brussels Office in June 2009, the office states the following with reference to the AVIDICUS expert meeting in June 2009 and the issue of legal videoconferencing and video-mediated interpreting:

On 4 June 2009 the Law Societies Joint Brussels Office participated in an experts meeting on an EU sponsored study on the Assessment of Videoconference Interpreting in the Criminal Justice Services. We emphasised the importance of the right to a fair trial and the right to be brought promptly before a judge. We drew attention to the Council of Europe European Committee for the Prevention of Torture and Inhuman or Degrading Treatment or Punishment (CPT) report to the UK Government published on 1 October 2008.

In relation to extensions of pre-charge detention by video-link it emphasises that the physical presence of a detainee should be seen as an obligation, not as an option open to the judicial authority. We emphasised that a person charged with a criminal offence should, as a general principle based on the notion of a fair trial, be entitled to be present at his hearing. We would also emphasise that videoconferencing must not be used as a means to water down the right to interpretation.

We are very concerned that virtual courts piloted in the UK are being billed as good practice. [...]. This fails to consider or even acknowledge the disadvantages including in terms of inconsistency with human rights. (The Law Societies Joint Brussels Office 2009: 36-37)

¹² Directive 2010/64/EU of the European Parliament and of the Council on the right to interpretation and translation in criminal proceedings. Available at <http://www.europarl.europa.eu/oeil/file.jsp?id=5840482>.

sufficiently reliable for achieving the specific goals of legal communication such as evidence and information gathering, decision-making and delivering justice.

Much like videoconference communication *per se*, the viability of video-mediated interpreting has thus become the subject of much debate. While some see these forms of interpreting as ways of speeding up communication processes and providing timely access to qualified interpreters, others are concerned that they will have adverse affects on the interpreters' working conditions and the quality of interpreting.

Given the strongly opposing views in this area and the scarcity of systematic research, it was considered vital in the AVIDICUS project that a better overview of the situation be obtained before attempting to answer questions regarding the viability and quality of video-mediated interpreting. This chapter thus summarises the current extent of video-mediated interpreting. Whilst the focus is on criminal justice, reference will also be made to other areas of relevance that provide insight into the method of video-mediated interpreting.

One point that has become clear is that the notion of videoconferencing and interpreting covers a range of configurations. The next section will provide definitions of the prototypical configurations.

2.2 Videoconferencing and interpreting: definitions

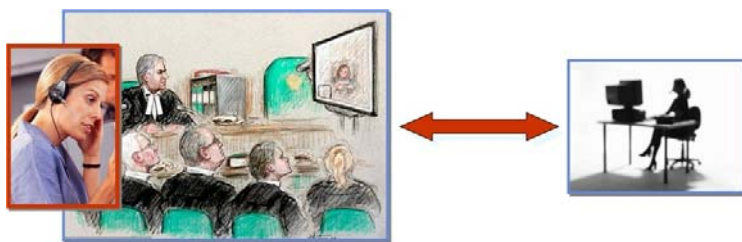
What has been termed 'video-mediated interpreting' thus far is in fact a host of different settings in which interpreting is delivered via video link or in a videoconference. The AVIDICUS project from the outset made a distinction between two basic forms of video-mediated interpreting in criminal proceedings: videoconference interpreting and remote interpreting. In practice, these have variations, outlined as follows:

1. Videoconference interpreting

Videoconference interpreting (VCI) is the form of interpreting that arises when the proceedings take place at two different locations that are video-linked and an interpreter is required to facilitate the communication. This includes, for example, links between a courtroom in one country and a remote witness in another country, links between courts and police custody suites (e.g. for first hearings) or links between courts and prisons (e.g. for remand extension hearings).

When the proceedings are bilingual, requiring the services of an interpreter, there are two ways of integrating an interpreter in the videoconference situation, leading to two variants of videoconference interpreting, as shown below. On the one hand, the interpreter can be with the participants in the main room, e.g. the court room (videoconference interpreting A). On the other hand, the interpreter can be co-located with the other-language speaker in a custody suite, prison or in another court house (videoconference interpreting B).¹³

¹³ In a cross-border setting, the co-presence of the interpreter with a witness, suspect or prisoner in another country raises a number of logistical questions, e.g. who is responsible for sourcing, booking, vetting, briefing and paying the interpreter.



Videoconference interpreting (A): interpreter present in the main room



Videoconference interpreting (B): interpreter located with the other language-speaker

Current national legislation varies in terms of what is permissible, and the location of the interpreter varies. Examples of this are given in the following chapter of this volume.

2. Remote interpreting

Remote interpreting (RI) is the form of interpreting used when the proceedings take place at a single location (e.g. a courtroom), with the interpreter working via video link from a remote location (e.g. another courthouse or a central interpreting hub).



Remote interpreting: interpreter in a different location

The major difference between 'remote interpreting' and 'videoconference interpreting' in legal proceedings is that the former uses videoconference technology for the sole purpose of linking a legal interpreter to the proceedings, whilst 'videoconference interpreting' uses a video link to enable legal proceedings to take place across a distance, i.e. to connect primary participants who are not at the same location.

VCI and RI have different motivations. RI has become attractive to the judicial services to gain timely access to qualified legal interpreters but also to save interpreter travel costs and cut down on waiting times for interpreters, whilst VCI is simply a consequence of having bilingual proceedings take place via videoconference link.

3. Videoconference interpreting + Remote interpreting

The two settings can, of course, be combined. This happens when the proceedings take place at two different locations and the interpreter is stationed at a further location.



Videoconference and remote interpreting combined

This setting may look complex at first sight, but it may help to overcome some of the drawbacks of videoconference interpreting with the interpreter being located at one of the two sites. However, at present, this setting does not seem to play a significant role in video-mediated criminal proceedings.

3 Current practice

This section will focus on the analysis of ongoing and recently completed project initiatives that use videoconference technology to facilitate or enable interpreting services. The focus is on projects in legal contexts. However, brief reference will be made to other contexts (e.g. supranational organisations, healthcare) where such initiatives help to create a broader picture (section 3.1). Section 3.2 will cover VCI and RI in legal proceedings, including immigration and criminal justice settings. In accordance with the focus of the AVIDICUS project, the overview takes account of spoken-language interpreting only. There are also projects under way in video-mediated sign-language interpreting. For an overview, see e.g. Napier (in this volume).

3.1 Videoconference and remote interpreting outside the judicial system

Most of the insights into video-mediated interpreting outside the judicial system come from conference interpreting. Experiments with remote interpreting began as early as the 1970s and triggered a body of experimental research that has, over time, generated an interesting pattern, namely a discrepancy between 'objective' measures for the performance of the interpreters in RI and their 'subjective' perceptions of their performance, well-being and satisfaction with this method of interpreting. Another area in which remote interpreting has been applied for a number of years is healthcare, but very little reliable information and empirical research is available in this area. One experimental study has been conducted in relation to VCI and RI in business settings.

3.1.1 Conference interpreting in supra-national institutions

Supra-national organisations have experimented with the use of remote (simultaneous) conference interpreting via video link since the 1970s (see overviews in Andres & Falk

2009, Böcker & Anderson 1993, Mouzourakis 1996, 2003, 2006, Moser-Mercer 2003, Roziner & Shlesinger 2010). From the 1990s onwards, one of the driving forces behind these efforts was the linguistic and logistical challenge entailed by the expansion of the European Union, and in particular the anticipated shortfall of interpreting booths in the European institutions after the EU expansion (Mouzourakis 2003). The aim was to set up interpreters in other rooms – i.e. in a centralised interpreter hub – with video screens providing them with the audio and video images from the actual meeting room.

Early experiments incurred extremely negative reactions from conference interpreters (Mouzourakis 2003). A variety of factors may have contributed to this, ranging from shortcomings of early (ISDN-based) videoconference technology, with limitations especially in sound quality, to resistance to change. However, when the experiments were repeated under different technical conditions and in different institutions, the picture did not change much. Mouzourakis notes:

It has become clear that interpreter complaints were not only due to the inferior technological conditions, but also the result of a number of physiological (sore eyes, back and neck pain, headaches, nausea) and psychological complaints (loss of concentration and motivation, feeling of alienation) stemming from the remote interpreting conditions. These complaints resurfaced in subsequent experiments, conducted in a variety of technical conditions and by a number of multilingual organisations; it would thus be difficult to attribute them solely to a particular technical setup or even to the working conditions provided by a particular organisation. (Mouzourakis 2006: 52)

Two experimental studies deserve particular attention. A study conducted for the ITU in 1999 (Moser-Mercer 2003) included 12 conference interpreters. Six of them worked from English into French. Their performance was sampled over several days of traditional and remote interpreting. The subsequent analysis focused on errors. One of the recent studies conducted for the Interpreting Service of the European Parliament in 2004 (Mertes-Hoffman 2005,¹⁴ Roziner & Shlesinger 2010) included 36 interpreters working in several language combinations. Their performance in traditional and remote interpreting was sampled over a period of two weeks.

As well as investigating the interpreters' performance, the two studies also surveyed subjective factors, such as the interpreters' emotional responses to RI, and measured 'objective indices' ranging from stress indicators (such as blood pressure, heart rate and cortisol levels of the interpreters) to aspects of the working environment (temperature, lighting etc). The main results can be summarised as follows:

- **Stress**

According to the ITU study, "repeated psychological self-assessment by interpreters during the experiment indicated that they found working under remote conditions more stressful, although these results did not reach statistical significance" (Moser-Mercer 2003: 11). Similarly, stress hormone values in the interpreters who participated in the ITU experiment were found to be higher for RI compared to traditional on-site

¹⁴ Mertens-Hoffman Management Consultants Ltd. (2005). Final report on the December 2004 remote interpreting test at the European Parliament. Unpublished. Executive summary: http://www.euractiv.com/31/images/EPremoteinterpretingreportexecutive_summery_tcm31-151942.pdf

interpreting, but this difference did not reach statistical significance (Moser-Mercer 2003:12).

The European Parliament (EP) study comes to a partially different conclusion, conceding that “the RI condition was perceived as significantly more stressful than on-site. The experience of high workload and high tension remained nearly unchanged during the various activities in the RI workday. [...]. These subjective ratings of stress are in sharp dissonance with objective measures of stress [...] where no such differences were found” (Roziner & Shlesinger 2010: 235).

- ***Sense of discomfort and self-ratings of performance***

Despite the lack of statistical significance in the self-ratings, the ITU study – like previous studies – discerned a sense of discomfort among the interpreters.

Roziner and Shlesinger confirm this view: “In most of the studies based on subjective measures of performance, interpreters rated their own performance during RI as inferior to that of on-site interpreting” (2010: 238). They concede, however, that “the interpreters’ low self-ratings could have stemmed from their initial objection to RI” (2010: 238).

- ***Aspects of the working environment***

Most aspects were found to be similar between RI and traditional interpreting, leading Roziner and Shlesinger to the conclusion that “the slight variations that did occur could not, in themselves, account for the interpreters’ sense of discomfort” (2010: 242).

- ***Performance rating (error analysis)***

In the relatively small ITU study, the interpreters’ RI performance declined faster than their on-site performance, and this was explained by an earlier onset of fatigue in RI: “Interpreters tire significantly more quickly, as evidenced by a faster decline in quality of performance over a 30-minute turn” (Moser-Mercer 2003: 1).

In the larger-scale EP study, a direct comparison of the interpreters’ performance in the two conditions resulted in slightly lower rates for RI but the difference failed to reach statistical significance. A more refined analysis, using multiple linear regression analysis, still yielded similar results but the difference became statistically significant. However, Roziner and Shlesinger believe that the difference “may be regarded as rather minor in practical terms” (2010: 241).

The most striking result of these studies, then, seems to be the discrepancy between objective findings and subjective perception. Roziner and Shlesinger conclude for the EP study that “[w]hereas the interpreters themselves were significantly less satisfied with their own performance in RI, the objective judgments of a panel of judges (two for each excerpt), based on 1,059 different judgments, point to almost no decline in quality, with a possible acceleration in the rate of decline, compared with the rate in on-site interpreting” (2010: 242).

A different, more technically oriented approach was taken by the Interpreting Service of the European Commission (SCIC) in 2010. The aim of a study conducted by the Fraunhofer Institute for the SCIC was to define the minimum quality of digital video and audio sources required to provide on-site and remote simultaneous interpretation. A total of 36 conference interpreters underwent a series of tests in which they rated, for example, different audio and video qualities, albeit without performing any actual interpreting task. The so-called ‘human factors’, which were found to be important in other studies

(see above) were not included in this study. The findings resulted in a comprehensive list of technological recommendations for video and audio transmission (see Esteban Causo in this volume). Whether the use of the equipment recommended in this study will improve the interpreters' subjective perception of RI during their interpreting task remains to be seen.

3.1.2 Healthcare settings

In healthcare settings, remote interpreting seems to have increased over the past decade, but empirical studies of interpreter performance, accuracy etc. are largely absent.

Settings of remote interpreting in healthcare include both RI via video link and RI via audio link.¹⁵ Video-mediated settings include solutions for doctor-patient conversations at GP surgeries, communication in hospitals,¹⁶ pharmacies¹⁷ and other settings.

Research conducted before 2005 mostly relies on survey data, i.e. participant perceptions, and is summarised in Azarmina & Wallace (2005). As Azarmina and Wallace note, "[t]he findings of the selected studies suggest that remote interpretation is at least as acceptable as physically present interpretation to patients, doctors and (to a lesser extent) interpreters themselves" (2005: 44). In spite of the conspicuous absence of any rating of interpreter performance,¹⁸ the authors conclude: "Remote interpretation appears to be associated with levels of accuracy at least as good as those found in physically present interpretation (2005: 44).¹⁹

A more recent study on RI in healthcare using internet-based videoconferencing technology conducted by the Belgian Ministry of Health is ongoing. In contrast to earlier studies, which mostly focused on potential or real cost savings through the use of RI, this pilot takes account of the features of interpreted interaction and intercultural mediation, and makes recommendations for the behaviour in such video links (Verrept 2011).

Based on initial results from the pilot, which was conducted in four Belgian hospitals, the study has recently concluded that the healthcare interpreters involved in the study "needed supplementary training to make adequate use of the equipment" and that RI in this setting "is more complex than face-to-face interpreting: important aspects are procedures to check sound and image quality at the beginning of the intervention, the moderate use of gestures, note taking and the management of turn taking". However, as the study also concedes, "the main issue seems to be to make health care providers

¹⁵ The latter is sometimes referred to as telephone interpreting. However, in line with the terminology used here for video-mediated interpreting, a difference should be made between 'telephone interpreting', which involves a telephone conversation between two parties with the help of an interpreter, and 'remote interpreting via audio link', which is the audio-based counterpart of remote interpreting via video link.

¹⁶ E.g. <http://www.post-gazette.com/pg/11067/1130381-28.stm>, http://www.fortmorgantimes.com/ci_17065663

¹⁷ E.g. <http://www.prnewswire.co.uk/cgi/news/release?id=173514>

¹⁸ There is no performance rating in any of the studies on RI by video link. However, Azarmina & Wallace also included studies on RI by audio link, in particular a study conducted by Hornberger *et al.* (1996) in which the performance of remote simultaneous interpreting in doctor-patient conversations was compared to traditional on-site consecutive interpreting in such situations and was interestingly found to be more accurate. In addition, doctors and patients preferred the remote simultaneous mode to on-site consecutive interpretation, whilst interpreters felt the opposite.

¹⁹ See also Braun (2006)

familiar with the system and to make them rely on it when they encounter a linguistic or socio-cultural barrier that makes the intervention of the mediator necessary” (Verrept 2011).²⁰

The review of mainly remote interpreting in healthcare settings suggests strongly that research and practice in this area have some way to go before it will be possible to ascertain where remote interpreting can be a means of support and how it would have to be done.

3.1.3 Business settings

Braun (2004, 2006, 2007) analysed the performance of interpreters in a combination of videoconference and remote interpreting scenarios. The data for this study were gathered in a collaborative videoconferencing project (ViKiS – Videoconferencing with Integrated Simultaneous Interpretation) funded by the German government in the 1990s. At that time, the advent of ISDN- and desktop-based VC solutions had brought the cost of videoconferencing down considerably and had made VC technology an attractive communication solution for smaller companies, allowing them to communicate globally.

Recognising the language barriers that smaller companies in particular face in the global marketplace, the point of departure of the ViKiS project was that the appeal of VC technology for smaller companies could be further improved if it were possible to integrate an interpreter into the VC situation. The project created a prototype of a VC-based interpreter workstation which could connect to two VC sites. According to the definitions given in section 2.2, the setting falls into the fourth category, videoconference interpreting combined with remote interpreting. The illustration of this setting is repeated below. However, in contrast to an ordinary three-point videoconference, which would only allow consecutive interpretation, the ViKiS interpreter workstation manipulated the sound channels to enable bi-directional simultaneous interpretation between the two sites.



Videoconference and remote interpreting combined

The empirical work in ViKiS focused on the viability of interpreting using the ViKiS station. In contrast to the settings of remote conference interpreting described in section 3.1.1, the focus was on small-group business communication with a maximum of two to three participants at each of the two sites connected through the interpreter workstation. Whilst it might have been hypothesised that the small-group setting would make the interpreter’s work easier than in remote conference interpreting, ViKiS started from the assumption that each interpreting situation comes with its own difficulties and that the

²⁰ <http://tisp2011.tucongreso.es/ti2011/files/book-abstracts.pdf>

combined complexity of interpreting and videoconferencing would make interpreting a difficult task in any setting. The aim of the study was to investigate the extent to which the interpreters would be able to adapt to the novel situation.

The study was based on 11 simultaneously interpreted bilingual VC sessions (English<>German and French<>German), involving four interpreters, in which job interviews and information-gathering conversations about job opportunities were simulated. The primary interlocutors acted in roles that were similar to their real-life jobs (e.g. human resources managers). The interpreters were trained (conference) interpreters who – with one exception – had many years of experience. The sessions were recorded and played back to the informants, who were asked to verbalise everything they could remember from their interpretation (retrospective ‘thinking aloud’). Both the VC sessions and the think-aloud protocols were transcribed and analysed with regard to interpreting problems and adaptation strategies.

As in other studies, the data revealed a number of problems. Firstly, in spite of the dyadic and interactive nature of the communication in small groups, both the primary interlocutors and the interpreters reported that the communication via VC was more fatiguing than traditional face-to-face communication and that it was more difficult to establish a rapport with the other participants. Secondly, due to the low sound quality of the ISDN connections, the sound quality was problematic for the interpreters. The interpreters’ task was further complicated by the fact that the lack of rapport frequently led the primary interlocutors to produce long-winded, repetitive and incoherent utterances which were difficult to comprehend. Finally, because of the interlocutors’ inability to solve interaction problems in the VC situation, the interpreters were required to adopt the role of a moderator, which posed a number of ethical and other problems.

In spite of these problems, however, the interpreters believed that interpreting in this setting was feasible in principle, especially if the sound quality could be improved. This impression is corroborated by the interpreters’ ability to adapt to the VC setting. Three stages of adaptation were observed, both within one VC and across several VCs (see especially Braun 2006). The initial stage was one of problem discovery and awareness raising. At this stage, an initial *reduction of the interpreters’ performance* and the use of *ad hoc and local problem-solving strategies* dominated. The second stage was characterised by an intense reflection on how to deal with the problems encountered (manifest in the retrospective think-aloud protocols) and by experimenting with ‘new’ strategies (manifest in the VC sessions themselves). As a result, more *global problem-solving strategies* were used. However, these still mainly served to *repair* problems which had already occurred. A third stage began with the use of *global avoidance and preventive strategies* to prevent problems that are difficult to repair from occurring altogether.

Whilst the quality of the interpretation was not the focus of the study, the data reveal a number of problems with the quality of the interpretation. Not all of the numerous listening comprehension problems could be resolved by activating additional mental resources and background knowledge to bridge the comprehension gap, which resulted in omissions, generalisations and inaccuracies. Moreover, the interpreters’ focus on source text comprehension led to problems with their output, which was often uneven and full of hesitations and pauses. The adaptation was more successful in the area of interaction. The interpreters were able to develop appropriate strategies for communication management to avoid overlapping speech and other turn-taking problems.

What remains to be investigated is whether improved sound quality and the use of the consecutive mode of interpreting, which enables the interpreter to intervene for clarification, will help overcome problems and make a combination of VCI and RI possible without compromising the accuracy and completeness of the interpretation.

3.2 Videoconference and remote interpreting legal proceedings

As a consequence of increased VC use in legal settings, the use of video-mediated interpreting in legal proceedings is also increasing. It is now frequent in many different types of legal proceeding throughout Europe and beyond (see also section 2 and Braun & Taylor's report about the AVIDICUS surveys in this volume), with VCI (settings A and B) being most common. Meanwhile, reports on practice are scarce and only refer to selected immigration and criminal justice settings. For the most part, the available material (mainly reports of pilot studies) indicates that there are still many unknowns when videoconferencing technology and interpreting are combined to provide access to justice.

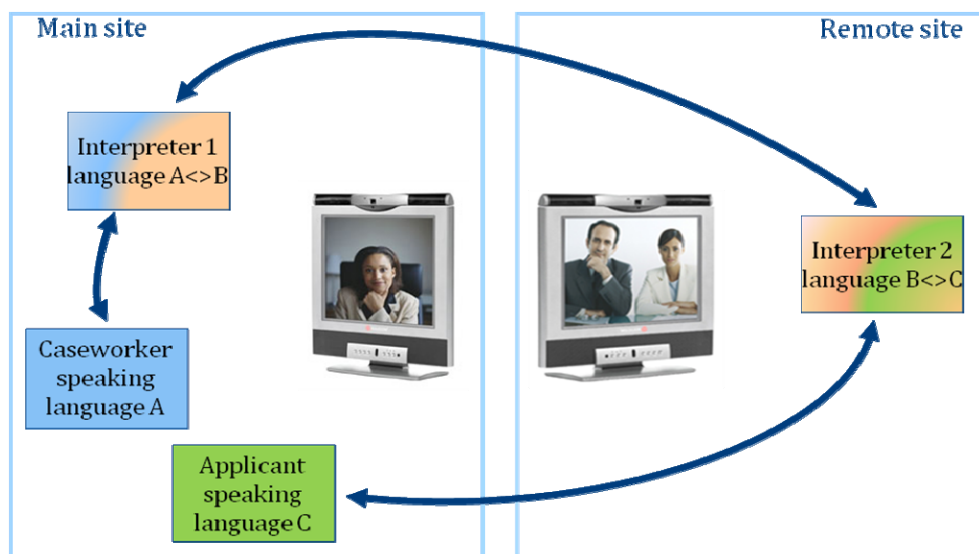
3.2.1 Immigration settings

With regard to the application of videoconferencing and interpreting in immigration settings, reports are available in relation to asylum interviews, immigration hearings before an immigration court/tribunal and immigration bail hearings. The first of these reports, addressing asylum interviews, also shows that the practical solutions are at times less straightforward than the four configurations described in section 2.2 imply.

Videoconference and remote interpreting in asylum interviews

An initiative concerned with the use of VC technology to provide interpreters in asylum interviews is the GDISC project.²¹ This initiative, which is partly funded by the European Commission and led by the immigration services in the Netherlands, aims to provide a solution for asylum interviews for which no qualified interpreter is available in a particular country (and language combination). Participating immigration services have access to the interpreter services used by the immigration services of other participating Member States by means of a videoconference link. The method of interpretation used is 'relay interpretation', which entails the use of two interpreters who use a pivot language, in combination with a video link. The mode of interpreting is consecutive. The interpreter who speaks the immigration case worker's language is co-located at the main site, together with the case worker and the applicant. The second interpreter, who speaks the language of the applicant, is located at a remote site, in another country that participates in the pool project.

²¹ <http://www.gdisc.org/index.php?id=548>



GDISC project (Source: Adapted from Dutch Ministry of Justice)

The project has produced some operational guidelines as well as detailed specifications for the videoconference equipment, which are largely in line with the appeal made by researchers and practitioners that the best possible equipment should be used.²² According to GDISC, mainly African and Oriental languages, e.g. Tamil, Punjabi, Bengali, Somali and Efefe, have been requested to date. Furthermore, the initiative has been described by GDISC as being “very successful” and the evaluation has been “very positive”.²³ However, this is an administrative assessment that is not underpinned by empirical research on e.g. the quality of the interpretation and other crucial aspects of the communication taking place in this setting.²⁴

In 2008 Bulgaria, one of the beneficiary countries in the GDISC project, requested feedback on the project. Responses were obtained from 18 countries, revealing opposing views:²⁵

²² The Tandberg 2000 MXP is recommended, because of ‘its ability to provide the required level of encryption, the possibility to use pre-sets and to move the camera in both countries.’ Additional technical requirements include, but are not limited to, the following: LCD screen: 23” wide view angle screen, XGA resolution, auto or manual brightness; Bandwidth: H.320 up to 512 kbps, H.323 up to 2 mbps; Video standards: H.261, H.263, H.263+, H.263++ (Natural Video), H.264; Video inputs: 1xSXGA (PC input - DVI-I), PC using VNC (Soft Presenter); SXGA input: input 640x480 - 1280x1024, Extended Display Identification Data (EDID), VESA Monitor Power Management; CD-quality 20 KHz mono and stereo; Telephone add-on via MultiSite; Two separate echo cancellers; Audio mixer; Automatic noise reduction; Two microphones, 24V phantom powered, XLR connector. - GDISC Interpreters’ Pool Project (2007), *Project Operational Guidelines*.

²³ <http://www.gdisc.org/index.php?id=548>

²⁴ “Successful” appears to mean simply having access an interpreter in the first place (personal communication with the project managers).

²⁵ http://irm.gov.hu/i/irm.gov.hu/files//downloads/Fooldal/Europai_Unios_palyazatok/Europai_Migracios_Halozat/EMH_eredmenyek/summary_of_gdisc_interpreters_pool-recognition_of_interviews.doc

Czech Republic: 'we have no practical experience with it so far. We were able to find a proper interpreter in our country in all cases we have dealt with. [...] There is no legal regulation of remote interpretation, so we might imagine two problems in the court. First, the asylum seeker could challenge reliability of dual interpretation per se as this way a shift in content can happen. Second, with remote interpretation, the original signature of the interpreter, which is required, could not be provided.

Netherlands: 'The experiences within this project with video conferencing are very encouraging. Experience shows that the project is an adequate solution to combat the shortage of interpreters in the new as well as the candidate member states of the EU. The project also fits very well into the goals of GDISC, which is to stimulate and where possible facilitate practical cooperation among immigration services.'

Videoconference interpreting in immigration hearings

In 2004, the Canadian Immigration and Refugee Board (IRB) commissioned a feasibility study on the use of videoconference links in refugee hearings. The study related to hearings which involved an interpreter (Ellis 2004).²⁶ The study notes that of approximately 23,000 refugee hearings completed in Canada between September 2003 and August 2004, approximately 1,000 were held via video link between offices of the Canadian Refugee Protection Division (RPD) in Toronto and RPD offices in other Canadian cities. The immigration judge, the refugee protection officer and the interpreter were together in the Toronto office, whilst the refugee and his/her lawyer were in one of the other cities. The method of interpreting was thus what was defined in section 2.2 as videoconference interpreting setting (A). The mode was consecutive.

To assess the viability of such videoconferences, the study conducted interviews with 14 immigration lawyers, and obtained questionnaire responses from 25 immigration judges, 16 refugee protection officers and 17 interpreters, all with comparable experience of immigration hearings including hearings via VC. In addition, three academics (a media expert, a social psychologist and a sociologist, but no interpreting researcher) were asked to provide background information.

The broad conclusion of the study is that the immigration lawyers were mostly sceptical about the suitability of VC, whilst the other three groups were generally more positive. There are, however, some critical voices too. For example, the report notes that when the informants were asked for suggestions on how to improve VC-based hearings, "[t]here was a general reluctance to buy into this question because the respondents generally were not comfortable with the premise" and that one of the interpreters "declined to offer any suggestion because he (or she) didn't like to even think of videoconferencing as a long-term proposition" (Ellis 2004: online).

One of the major problems reported was that the interpreter was not located with the refugee, and a number of different dimensions of this problem were identified. Firstly, the personal rapport between the interpreter and the refugee was found to be weak, although the comment that there was "no opportunity, while waiting for the hearing to commence or during breaks, for the claimant and interpreter to talk together" (*ibid*) raises some questions with regard to interpreter ethics, given that current codes of conduct would not endorse such practice. The report emphasises, however, that in the view of the respondent interpreters such conversations with the refugee "have traditionally

²⁶ Ellis (2004) <http://www.irb-cisr.gc.ca/eng/disdiv/proeva/revs/video/Pages/index.aspx>

contributed importantly to a claimant's comfort both with the interpreter and with the hearing environment generally" (*ibid*).

Secondly, the co-ordination of the communication was found to be more difficult. According to the study, "[w]ith the interpreter sitting beside the claimant - or other witnesses - in an in-person hearing, a touch on the arm will quietly signal the need for the claimant to pause and wait for the translation. When the interpreter is located in the member's room, similar non-intrusive control is not possible" (*ibid*). Thirdly, the translation of documents presented by the refugee was a problem due to the interpreter's location at the other site. Finally, some judges highlighted that the interpreter's physical separation from the refugee made it impossible to use whispered interpreting. They felt that consecutive interpreting was disruptive especially when they delivered their final submissions.

The VC-based hearings tended to be longer and were considered to be more fatiguing than comparable face-to-face hearings. One judge furthermore wondered whether the physical separation of the refugee would "impact on the way they give their evidence" and whether the refugees "feel justice is being done" (*ibid*). The lawyers had similar concerns. One of the interpreters claimed, however, "that people sometimes may feel intimidated by having their hearing through video-conference but in my opinion you can make someone feel comfortable and relaxed to testify through a camera as well as in person" (*ibid*).

The interpreters were concerned that body language and emotions were not transmitted as efficiently in the VC as they were face-to-face and that this might undermine the refugee's credibility. The interpreters also felt that the VC communication involved more repetition and overlapping speech, which was difficult to resolve and impeded accurate interpretation. This coincides with the findings of Braun (2004, 2007) in her study on video-mediated interpreting in business settings (see section 3.1.3). In spite of the concerns and problems, some of the interpreters also highlighted positive aspects of the VC situation. One of them found, for example, "that video conferencing is good. You are clearly able to see the expressions on the claimant's face and it is possible to hold the hearing in a fair, expeditious manner if everybody is in agreement with the process" (Ellis 2004: online).

Some of the informants requested training and one interpreter suggested that the equipment should briefly be explained to the refugee at the beginning of the hearing.

In contrast to some of the positive views expressed by those who participated in the immigration hearings, one of the academics who commented on the study claimed that "the mediation effects created through videoconferencing introduces the significant possibility of inconsistency, inaccuracy, and altered judgement" (*ibid*). The second researcher came to the conclusion that "the current literature does not speak in favor of interpersonal interactions through videoconferencing versus face-to-face interactions" (*ibid*). The third researcher also referred to the findings of prior research on the psychological impact of VC communication and claimed on the basis of these studies that "where sensitive and highly emotional information has to be transmitted, we can conclude that videoconferencing might not be the most efficient and comfortable way to communicate for the refugee / asylum seekers" (*ibid*).

However, the report emphasises that the researchers did not want "to rule out the use of videoconferencing without first attempting such a study" and that in one researcher's view it would not be "impossible that a well thought out use of videoconferencing in a refugee hearing context might present advantages" (*ibid*). One of the main conclusions of

the researchers was that a final decision on the appropriateness of using VC technology in refugee hearings should not be made “without further and more sophisticated trials and investigation” and that after the study it would be too early to say whether the problems “could not be solved with some felicitous adjustments in the protocol, procedures and technical facilities, at least perhaps for a significant proportion of cases” (*ibid*).

The investigator who conducted the study made several recommendations. Most importantly, he recommended that “cases involving allegations of physical or sexual abuse or torture should be removed from the videoconferencing regime immediately” (*ibid*). Furthermore he highlighted the importance of ensuring that the refugee understands the VC conditions and of finding a solution for the spontaneous interpretation of documents presented at the refugee’s location. With regard to technical problems (which seem to have occurred), the report points out that it would be “unseemly to leave these Board responsibilities on the shoulders of counsel or interpreters” (*ibid*).

The investigator also recommended that a substantial pilot study should be undertaken. This should be a comparative study of VC-based and face-to-face hearings during which the VC should be set up in the best possible way. He recommended that such a comparative study “ought to be done by academics” with appropriate qualifications. Federman (2006: 450) states that the IRB rejected Ellis’ recommendation for a pilot study.

Whilst the study did not attempt to measure any ‘objective’ factors, such as the interpreters’ performance or the refugees’ and the judges’ reception of the communication, it made some highly interesting observations about the setting, the location of the interpreter and the perceptions of those involved in the hearings. It is arguably one of the most comprehensive studies on legal videoconferencing with interpreting conducted prior to the AVIDICUS project. Some of the perceptions reported in the IRB study corroborate the findings of the studies conducted in the area of remote conference interpreting (see section 3.1.1) and video-mediated business interpreting (see section 3.1.3).

Videoconference interpreting in immigration bail hearings

In 2008, two British charities – Bail for Immigration Detainees (BID) and the British Refugee Council – conducted a study on immigration bail hearings via video link (BID 2008),²⁷ which aimed at gauging the views of bail applicants. Of the 16 hearings analysed, 11 required an interpreter. In these hearings, videoconference interpreting (A) setting was used, i.e. the interpreter was located in the courtroom together with the immigration judge, legal representative, sureties and Home Office representative, while the bail applicant was in a detention centre. Of the 11 applicants who had an interpreter, 3 stated (in the questionnaire used for the study) that they had difficulty following what happened in the courtroom and that only the questions directed towards them and their answers were interpreted; 5, stated that everything said in the courtroom was interpreted; and 3 applicants did not give details about this. Three applicants also had technological difficulties: they had problems seeing and hearing what was happening in the courtroom.

The study comes to the conclusion that:

²⁷ http://www.refugeecouncil.org.uk/policy/position/2008/bail_hearings

Whilst video link bail hearings may well work for some detainees (particularly those who have previously been let down by escort failures), BID and the Refugee Council believe video hearings must only be used where detainees are consulted about their impact, informed about the process and given a meaningful choice between a video link and an in-court hearing. This monitoring exercise presents evidence, albeit based on a limited sample size, of how bail applicants are being affected by video link bail hearings and recommends action from the AIT [Asylum and Immigration Tribunal], the Home Office and the Legal Services Commission.²⁸

BID and the British Refugee Council make recommendations to various groups involved in the running of the bail hearings process. To the Asylum and Immigration Tribunal, it was recommended, inter alia, that the roll-out of video hearings should be closely monitored to evaluate the impact on bail applicants, and until this is done, the roll-out should be suspended. The fact that bail applicants can request an in-court hearing, and how this should be carried out, should be clearly explained to them. In addition, video hearings in prisons 'must not arbitrarily end after 45 minutes because of the commercial requirements of a private contractor.'²⁹ It was also stated that, where an interpreter is used, judges should ensure that everything said in court is interpreted for the bail applicant.

As was the case in the study commissioned by the Canadian immigration services,³⁰ the BID study highlights some of the tensions and pressures immigration services face. It demonstrates that if video-mediated communication is to be used in such sensitive settings, the initiatives mentioned at the beginning of section 3.2.1, which aim to specify minimum quality standards for legal videoconferencing, are as urgently needed as informed guidance for the use (and non-use) of video-mediated interpreting (see Braun in this volume).

3.2.2 Criminal proceedings – outside the European Union

Anecdotal evidence suggests that VCI and RI are used in many countries around the world. Videoconferencing per se has been used in legal criminal proceedings in many English-speaking countries – e.g. Australia, Canada, New Zealand, South Africa and the US – since the late 1990s, mainly for bail and remand hearings but also for first hearings and hearings of a remote witness, with the effect that VC equipment was mostly installed in court houses and prisons but also in some police stations.³¹ The introduction was normally preceded by feasibility studies, which in some cases engaged with the advantages and disadvantages of VC technology. A study conducted in South Africa in 2003, for example, considered the advantages of VC in terms of time and cost savings and security, but also the psychological effects and the possible scope of VC use in criminal proceedings.³² In contrast to the conclusions drawn by academics who conducted research into VC communication, the conclusion in the feasibility studies was normally

²⁸ 'Immigration bail hearings by video link: a monitoring exercise by Bail for Immigration Detainees and the Refugee Council,' March 2008, p.5.

²⁹ Immigration Bail Hearings by video link: monitoring exercise report, p.3.

³⁰ The observations made in the BID report suggest that the authors of this report were not aware of the findings from the study commissioned by the Canadian immigration services in 2004.

³¹ See overview in <http://www.justice.ie/en/JELR/VIDEOen.pdf/Files/VIDEOen.pdf>.

³² http://www.justice.gov.za/salrc/reports/r_prj113_2003jul.pdf

that VC can be used in criminal proceedings under certain circumstances, especially in pre-trial hearings, that pilots should be conducted, and *grosso modo*, the 2000s saw a worldwide spread of VC technology in criminal proceedings. Other non-EU countries using VC include, for example, Norway,³³ Israel,³⁴ and Kenya.³⁵

Videoconference interpreting

Given the multicultural nature of all of the countries named above, the use of VC in criminal proceedings is likely to involve various forms of ‘videoconference interpreting’ (VCI) as well. However, references to interpreters in VC-based proceedings are scarce. Some practical references to the integration of interpreters can be found in the VC guidelines issued by some courts. The guidelines of the Supreme Court of Tasmania for court-prison video links state, for example, that if an interpreter is required, s/he can be located either in court or in prison (a provision that has, however, been disputed in immigration settings, see section 3.2.1). The procedure that should be followed when the interpreter is in prison is described:

Where, for any reason, a third party (i.e. prison officer, technical assistant, interpreter at a remote point) is present in the room from where the video conference is being transmitted then that person should, at the start of the proceedings, be introduced (by prosecutor or counsel as appropriate) and their purpose for being present explained to the Court.³⁶

Whilst it is good to see that the interpreter is mentioned in these guidelines (albeit only twice), it seems that everything which happens after the introductions is considered to be ‘business as usual’ for an interpreter working in a VC. Such assumptions are in contrast with the findings of studies in immigration settings (see section 3.2.1) and also contradict the personal perceptions of many interpreters (see Braun & Taylor’s report about the AVIDICUS surveys in this volume).

The only other point in these guidelines that indirectly concerns the interpreter is the guidance for the beginning of VC-based proceedings, which make a clear statement regarding the responsibilities for the technology:

Commencement of proceedings: At the commencement of a video conference the judicial officer/court clerk/video co-ordinator will check that the link has been established. The presiding judicial officer should confirm that the witness/person at the remote point can be seen and heard clearly and similarly that the witness at the remote point can clearly see and hear the judicial officer.³⁷

³³ http://www.ccbe.org/fileadmin/user_upload/document/E-Justice_Portal/17-18_02_2009/Abstracts/23_abstract_Videoconferencing_Norway.pdf;

http://www.ccbe.org/fileadmin/user_upload/document/E-Justice_Portal/17-18_02_2009/Presentations/23_Videoconferencing_in_Norwegian_courts.pdf

³⁴ <http://www.haaretz.co.il/hasite/spages/808333.html>

³⁵ http://www.lantech.co.ke/index.php?option=com_content&view=article&id=57&Itemid=74

³⁶ http://www.supremecourt.tas.gov.au/about_us/courtroom_technology/video_conferencing_guidelines

³⁷ http://www.supremecourt.tas.gov.au/about_us/courtroom_technology/video_conferencing_guidelines

Other than this example, available reports on video-mediated interpreting in criminal proceedings focus on 'remote interpreting' (RI). Such reports are mostly from the United States. Therefore, the remainder of this section is based on information available from the US, where both VCI and RI are widely used.

Video-based interpreting in US courts

A general assessment of video-based interpreting in US criminal courts was given in 2009 by the United States' National Center for State Courts:

States that have integrated videoconferencing into the courtroom report the advantage of expediency in providing language services when no interpreter is available on-site, and when they use credentialed in-state interpreters, there is no question about the quality of the service. In addition, most of the systems available are portable, mobile, wireless, and fairly simple to incorporate into the existing courtroom network. This method is already being successfully used by courts for arraignments and jail interviews, and the possibilities of additional areas of use are limitless. (Green & Romberger 2009: 2)³⁸

The authors imply a potentially wide range of settings of both videoconference and remote interpreting but do not give a description of the details, e.g. the effect of having the interpreter at different locations, nor is it clear from whose point of view this method of interpreting is "successful".

As previously shown, such statements are not unknown in relation to video-based interpreting (see GDISC project in section 3.2.1), but they clash with some of the research findings in relation to legal videoconferencing, VCI in legal proceedings and remote conference interpreting. Yet, as in immigration, the appeals by researchers (and some legal professionals) for caution have not stopped the use of VC in legal proceedings (with or without an interpreter) nor the use of VC technology for remote interpreting. The examples below show that RI is common practice in US court rooms. In many cases, the interpretation is delivered in simultaneous mode.

Remote interpreting in the Circuit Courts in Florida, USA

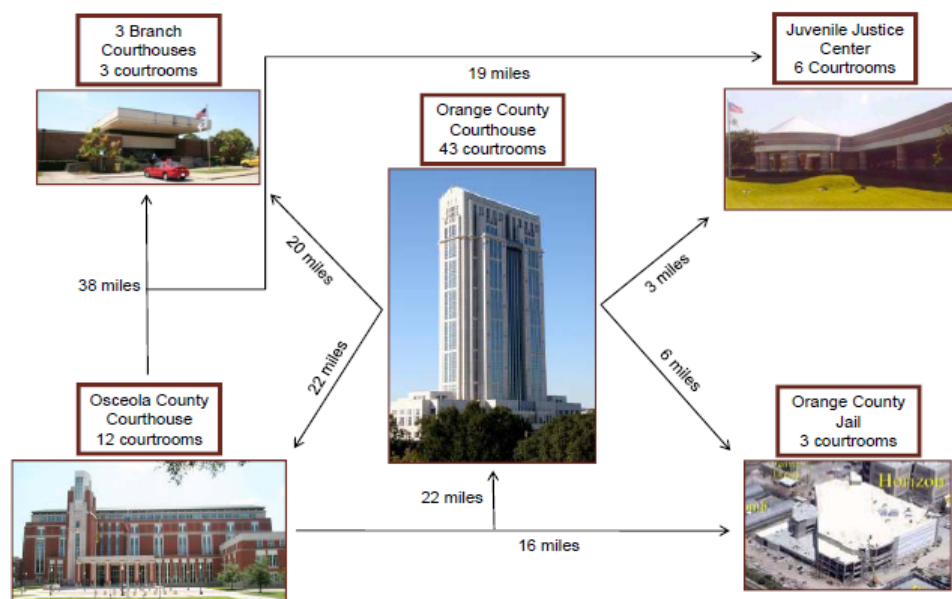
A prominent example of the use of remote interpreting is the Ninth Circuit Court in Florida, which introduced a central interpreter hub in 2007 to address the challenge of having to interpreters for over 25,000 court hearings each year with only eight employed interpreters and a reduced budget for hiring freelance interpreters. The situation was exacerbated by the fact that the Ninth Judicial Circuit covers sixty-seven courtrooms spread over more than 2,000 square miles, entailing high travel costs for interpreters.³⁹ In other words, the introduction of this hub was mainly a cost-cutting exercise.

The interpreter hub serves all judicial locations that fall under the jurisdiction of the Ninth Judicial Circuit from a single point (one of the court houses). The interpreters'

³⁸ http://contentdm.ncsconline.org/cdm4/item_viewer.php?CISOROOT=/accessfair&CISOPTR=184&CISOBOX=1&REC=1

³⁹ <http://www.ninthcircuit.org/programs-services/court-interpreter/downloads/CentralizedInterpretingPresentation.pdf>

workstations are configured to provide remote *simultaneous* interpreting.⁴⁰ A demo video is available at the court website.⁴¹



Source: Ninth Judicial Circuit Court, Florida, USA

A study of the interpreters' workload appears to have taken place, but it is not clear how the figures were gathered (for example, with regard to the savings made by using remote interpreting). In any case, the results of the study are mainly couched in financial terms. For the most part, the need for freelance interpreters (as opposed to the staff interpreters, who are directly employed), has diminished, due in part to the fact that a single staff interpreter now provides remote services to several locations. Travel time for staff interpreters has also been reduced. Since January 2008, there has reportedly been a 16% reduction in spending on staff interpreter services.⁴²

In the meantime, other circuit courts followed, and a report published by the Commission on Trial Court Performance & Accountability of the Supreme Court of Florida in 2010 states that "13 circuits report using some remote audio or audio/video technology to provide court interpreting services".⁴³ The report provides some guidelines for the use of RI via video link, similar to the guidelines developed by other courts in the

⁴⁰ The interpreters' workstations are equipped with Pentium Dual Core computers, audio and visual network connectivity, dual 17"-19" monitors, and analogue touch-tone telephones. The courtroom is fitted out with an audio-mixer-biamp flex (12 microphone units, telephone interface card with two inputs), a video camera (security camera on network), and headphones (3 per courtroom). - <http://www.ninthcircuit.org/programs-services/court-interpreter/downloads/CentralizedInterpretingPresentation.pdf>

⁴¹ <http://www.ninthcircuit.org/programs-services/court-interpreter/centralized-interpreting/>

⁴² <http://www.ninthcircuit.org/programs-services/court-interpreter/downloads/CentralizedInterpretingPresentation.pdf>

⁴³ Recommendations for the Provision of Court Interpreting Services in Florida's Trial Courts; http://www.remoteinterpreting.com/media/PDFs/TCP&A_Full_Recommend.pdf, p. 51.

US (see Wisconsin example below), and also highlights some of the shortcomings of remote interpreting via telephone, which have entailed that some courts “choose not to use the services”.⁴⁴

Remote interpreting in Arizona Municipal Court, Mesa

The Arizona Municipal Court in Mesa (US) introduced new videoconference equipment in 2009, mainly to cater for video links between courts and prisons (Webster 2009).⁴⁵ The feasibility was evaluated by the National Centre for State Courts. The evaluation report touches on the issue of the interpretation:

[A] critical issue is the role of the interpreter. The interpreter may be needed during conversations with the financial officer, public defender, prosecutor, and clerk. The interpreter also is needed during the court hearing. Finally, an interpreter may be required by the victim or witnesses. Careful choreography is required to ensure that the interpreter is available at the right time in each of these areas. The use of interpreters adds a layer of complexity to the design of a videoconferencing solution. (Webster 2009: 5)

No comment is offered on other potential issues with the interpretation. However, the report makes some interesting technical observations:

Control over the audio-video environment is essential. At present, the court has a panel of button presets for various arrangements of speakers, interpreters, etc. In the new videoconferencing environment, this control must include the video feed, as well. (2009: 13)

Full duplex audio is required. Since two videoconferencing signals are recommended, the audio signal for one link can work in one direction, and the audio signal for the second link can function in the other direction. Without full duplex audio, interpreters must change their approach to translation from simultaneous to sequential, which will slow the proceedings. (2009: 14)

This suggests that as in the Florida circuit courts, the interpretation is routinely delivered in the *simultaneous* mode, a situation that is partially different from the situation in most European countries (see Braun & Taylor on the AVIDICUS surveys this volume).

Remote interpreting in the Wisconsin Court Interpreters' Program, US

The Wisconsin Court Interpreter Program is another example of a coordinated effort to use remote interpreting in order to keep costs down and to gain timely access to an interpreter (Wisconsin Court Interpreter Program 2010). The programme has used remote interpreting in *consecutive* mode via both video link and telephone for a number of years and has developed guidelines for the use of remote interpreting in a courtroom setting. These include recommendations for when RI can be used and when it should not be used.

⁴⁴ Recommendations for the Provision of Court Interpreting Services in Florida's Trial Courts; http://www.remoteinterpreting.com/media/PDFs/TCP&A_Full_Recommend.pdf, p. 55.

⁴⁵ http://contentdm.ncsconline.org/cdm4/item_viewer.php?CISOROOT=/tech&CISOPTR=708&REC=5

The recommended uses include interpretation involving rare languages, situations when timely access to an interpreter is required or a certified interpreter is not available locally and when the cost of getting an interpreter on site is “high relative to the length or importance of the court session”.⁴⁶ However, there is no specification of what “high” means and how the “importance” of a court session is measured. According to the recommendations, RI should not be used in trials, in proceedings longer than 15 minutes⁴⁷ or for situations involving many people, intensive cross-examination or ‘emotionally charged situations’. The guidelines furthermore point out that “the interpreter should be allowed to establish communication before the hearing” and that “all participants should speak clearly, slowly, and one at a time.” In terms of technical requirements, the guidelines highlight that the use of high-quality equipment is crucial and that time for testing should be taken (see also Braun in this volume).

It seems that communication among the Wisconsin judiciary and court interpreters is limited. In 2009, an ‘experiment’ was carried out between an interpreter in Madison city and a court in Door county [both in Wisconsin], taking a surprisingly amateurish view on how RI could be implemented and how cost savings could be achieved.⁴⁸ Revealing the plan of using wireless technology and “free trial software from Polycom” for RI, a court administrator commented in the News Magazine of the Wisconsin judiciary that “this was just a test, but had it been the real thing, the state and Door County would have saved hundreds of dollars and the availability of a certified court interpreter for almost any language would have been assured”. No reference was made to Wisconsin’s ambitious Court Interpreter Program, whose rather elaborate guidelines for RI suggest that thought has been given to the challenges of this method of interpreting.

3.2.3 Criminal proceedings – in the European Union

In the EU, Article 9 of the Second Additional Protocol to the European Convention on Mutual Assistance in Criminal Matters⁴⁹ allows for the hearing of evidence via VC, and the increasing number of cross-border proceedings suggests a growing demand for this technology in European courts. This is supported by the E-Justice Action Plan of the European Council,⁵⁰ which focuses on the application of VC and other electronic tools in criminal justice. This development also shapes the demand for, and practice of, video-mediated *interpreting* in criminal proceedings the EU, which at present focuses more on ‘videoconference interpreting’ (VCI) than on ‘remote interpreting’. However, there are indicators that the demand for RI is expanding in the EU (see also Braun & Taylor on the AVIDICUS reports in this volume). The new European Directive on strengthening an accused person’s rights to interpreting and translation in criminal proceedings⁵¹ includes the possibility of remote access to interpretation by videoconference link (and telephone).

Whilst ‘remote interpreting’ is still a rather novel development in criminal proceedings in the EU, the use of video links is well established in the criminal justice

⁴⁶ <http://www.wicourts.gov/services/interpreter/docs/telephoneinterpet.pdf>

⁴⁷ It is interesting to note that the 2006 version of the guidelines recommended 30 minutes as the maximum, whilst the (current) 2010 version reduced this to 15 minutes.

⁴⁸ <http://www.wicourts.gov/news/thirdbranch/docs/spring09.pdf>

⁴⁹ <http://conventions.coe.int/Treaty/en/Treaties/Html/182.htm>

⁵⁰ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:075:0001:0012:EN:PDF>

⁵¹ See FN 12.

systems of some EU member states, and accordingly, there is a considerable amount of experience with the various forms of 'videoconference interpreting', especially in relation to first hearings and remand extension hearings (see also Braun & Taylor on the AVIDICUS reports in this volume).

Videoconference interpreting in remand extension hearings

Although logically not the first stage of criminal proceedings, the area of remand hearings is reported first here, because it seems to be an area of criminal justice in which videoconference technology has been used for more than a decade in some European countries. In the UK, VC technology is used for 'court-prison video links'.⁵² Owing to the age of these video links, the technology is often obsolete, especially in the lower courts (Magistrates Courts). Given that these courts deal with approximately 95% of all criminal cases, the equipment is known to most interpreters and has left a bitter taste about videoconference interpreting (see also Braun & Taylor on the AVIDICUS reports in this volume). Using narrowband ISDN connections and small, low quality screens, this video equipment often makes it difficult to hear properly and to recognise anyone at the remote site.⁵³ Some of the problems arising from this for an interpreter are outlined by Fowler (2007). However, there is some justified hope that this technology will soon be confined to history.

The 2009/10 Annual Report of the Courts Services for England and Wales (Her Majesty's Court Services Annual Report), for example, notes that the Court Services had "completed a further series of upgrades and replacement of video link equipment in the Crown Court and magistrates' courts" during the reporting period.⁵⁴ The British Home Office Resource Accounts Report 2009-10 notes for the same period: "During the past year we renewed our focus on ensuring maximum efficiency and effectiveness in the CJS [Criminal Justice System], particularly in dealing with serious crime through better information technology, use of video links and more efficient processes."⁵⁵ Initiatives such as the bail reform project in Canada (see section 2) also sound more promising in terms of technology.

In other countries, similar practices of using video links for remand hearings are reported to be becoming increasingly frequent. The development in France is particularly interesting. In 2006, eight years after VC use in French courts had been authorised for various purposes, including court-prison links,⁵⁶ an evaluation report identified several technical and logistical problems and concluded that the introduction of VC technology

⁵² See <http://www.hmprisonservice.gov.uk/assets/documents/10000147AnnualReport200appendicespart2.pdf> for England and Wales, and <http://news.bbc.co.uk/1/hi/scotland/3183662.stm> for Scotland, and <http://www.justice.ie/en/JELR/VIDEOen.pdf/Files/VIDEOen.pdf>, pp. 9-11, for England, Wales, Scotland and Northern Ireland.

⁵³ Webster describes what appears to be similar technology in courts in Mesa, Arizona (US): "A small number of initial appearances are conducted via a videoconferencing link with the county jail, but the technology that is used is antiquated and not very effective, and the time allotted by the county to conduct these hearings is inadequate" (2009: 4).

⁵⁴ http://www.hmcourts-service.gov.uk/cms/files/HMCS_Annual_Report2009-2010_web.pdf, p. 25.

⁵⁵ <http://www.homeoffice.gov.uk/publications/about-us/corporate-publications/resource-accounts/resource-accounts-09-10?view=Binary/>, p. 6.

⁵⁶ http://www.unjf.fr/c2i/B5/Module-B5-html/genWebUNJF/co/B5_Uc67.html

had failed to produce the intended uptake.⁵⁷ However, in 2009, the number of remand hearings by video link saw a sharp rise. Up to 5,000 VCs appear to have taken place in the first half of 2009, representing a 400% increase from 2008.⁵⁸ There is no information about the use of interpreters, but it is likely that some of the video links will have involved interpretation.

The Irish Ministry of Justice commissioned a feasibility study for the use of VC to conduct bail and remand hearings in 2003. In contrast to some similar studies, this study examined the situation in Europe and worldwide, making reference, for example, to the feasibility study conducted in South Africa (see 3.2.2), which included a more thorough discussion of potential benefits and problems of VC use than other such studies. As a result, the Irish study recommended “the introduction of a modern videoconferencing system”⁵⁹ and a pilot involving four court rooms and five prisons. In addition to bail and remand hearings, the study suggested that other pre-trial applications be considered during the pilot, including applications to the court, adjournment and appellate proceedings, and consultations between lawyers and prisoners. For this purpose, the installation of soundproof VC booths in prisons and the locations of the lawyers (e.g. the Law Society and solicitor’s offices) was recommended.⁶⁰ As is so often the case, however, no reference was made to the integration of interpreters.

First hearings in Virtual Courts

The other type of pre-trial hearings that the criminal justice services in the EU have focused on are first hearings of defendants, victims and witnesses. As in prison-court links, different practices of interpreting have begun to emerge in such hearings.

In the Netherlands, for example, where videoconferencing has been used in pre-trial hearings since 2007, the prosecutor is normally at one police station and communicates with the defendant in custody at another police station, whilst the interpreter can choose the location, but is normally at the location of the defendant (i.e. ‘videoconference interpreting’ B).⁶¹ This practice seems to be in line with the observations about the interpreter’s location made in immigration settings, especially in the Canadian study (see section 3.2.1). This configuration enables the interpreter to continue using the interpreting modes which are most common in European courts: consecutive interpreting when rendering the non-native speaker’s utterances into Dutch, and whispered interpreting when interpreting from Dutch into the language of the non-native speaker.

In England, 2007 saw the introduction of the ‘Virtual Courts’ for first hearings, i.e. video links between Magistrates Courts and defendants in police custody. According to the British Office for Criminal Justice Reform (OCJR), the intention was to speed up proceedings. A factsheet published by the OCJR notes that the Virtual Court “reduces the

⁵⁷ <http://www.justice.gouv.fr/actualite-du-ministere-10030/lutilisation-de-la-visioconference-dans-les-services-judiciaires-12065.html>; full report: http://www.audits.performance-publique.gouv.fr/bib_res/v3_200606_rapport_rapport-v3-justice-visioconference.pdf

⁵⁸ <http://archives.lesechos.fr/archives/2009/LesEchos/20578-11-ECH.htm>

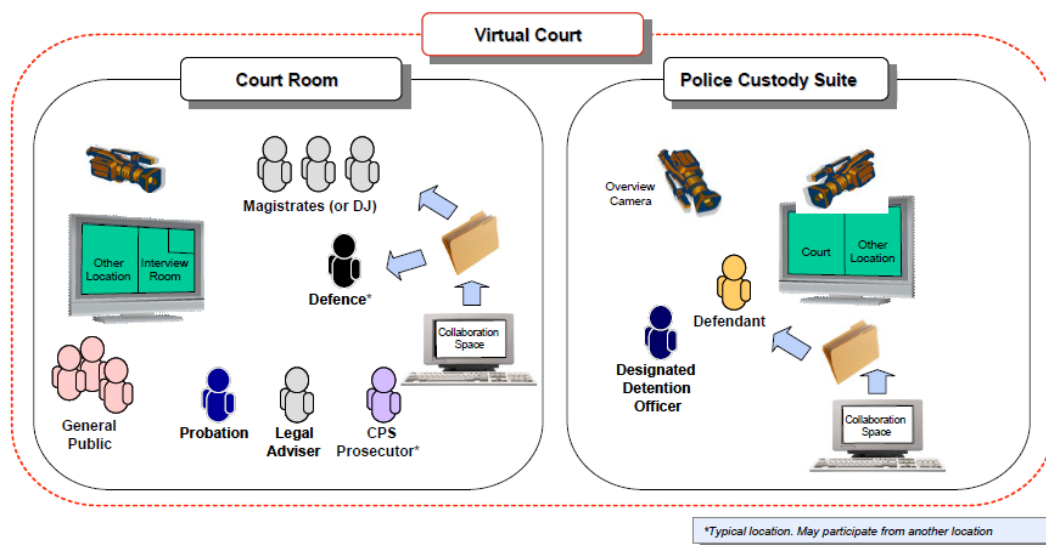
⁵⁹ <http://www.justice.ie/en/JELR/VIDEOen.pdf/Files/VIDEOen.pdf>, p. 49. Parallel technological consultancy projects were under way to identify appropriate technology.

⁶⁰ Curiously, the report notes that the implementation of these booths had begun in 2004, i.e. before the final report of the feasibility study had been submitted (in 2005).

⁶¹ http://www.justitie.nl/onderwerpen/recht_en_rechtsbijstand/videoconferentie/

time from charge to first hearing from days to just a few hours in most instances, which improves the service to victims by disposing of first hearings within hours of charge".⁶² The OCJR also draws attention to the fact that the virtual courts are intended to combine VC technology with "an on-line 'virtual' collaboration space - allowing case files to be shared electronically".⁶³

The 2007 pilot phase linked Camberwell Green magistrates' court to four local police stations.⁶⁴ The second pilot phase in 2009/10 ran in two magistrates' courts in London and North Kent, linking to 15 police stations in London and one in north Kent.⁶⁵ Whilst the initial pilot excluded hearings that require an interpreter,⁶⁶ the second pilot phase, which ran in 2009/10,⁶⁷ included cases in which interpreters were required. Anecdotal evidence suggests that the interpreter is normally - but not always - in court.



The Virtual Court model in England (source: Ministry of Justice, UK)

Both pilot phases were evaluated in terms of the efficiency of the virtual court concept. The final report of the first pilot phase claimed that as a concept it was "a clear success, enabling both custody and bail first hearings to take place in a single day, indeed in an

⁶² Virtual Court Factsheet, OCJR 2008, http://frontline.cjsonline.gov.uk/_includes/downloads/guidance/better-use-of-technology/20081107_Virtual_Court_Factsheet_V5.pdf, p.1.

⁶³ Virtual Court Factsheet, OCJR 2008, http://frontline.cjsonline.gov.uk/_includes/downloads/guidance/better-use-of-technology/20081107_Virtual_Court_Factsheet_V5.pdf, p. 1.

⁶⁴ London ICV Newsletter, Metropolitan Police Authority, July 2007, <http://www.mpa.gov.uk/downloads/partnerships/icv/newsletter/2007-07.pdf>, p.1.

⁶⁵ <http://www.justice.gov.uk/downloads/publications/research-and-analysis/moj-research/virtual-courts.pdf>, p. iii.

⁶⁶ "The virtual court can be used, with the defendant's consent, in all first hearings except those involving multiple defendants, appropriate adults, interpreters, youths or in complex and sensitive cases." London ICV Newsletter, Metropolitan Police Authority, July 2007, p.1, <http://www.mpa.gov.uk/downloads/partnerships/icv/newsletter/2007-07.pdf>

⁶⁷ <http://www.mpa.gov.uk/downloads/partnerships/icv/newsletter/2010-02.pdf>, p. 2.

average time of just three-and-a-half hours".⁶⁸ The final report of the second pilot phase, published in December 2010, produced more mixed findings.⁶⁹ With regard to cases involving an interpreter, the report makes few but insightful observations:

Time delays in the audio link were reported by practitioners as being common, and were witnessed during courtroom observations. While the delays themselves were quite short (a second or less), it was sufficient to cause individuals to repeat themselves on several occasions, and people on opposite ends of the link spoke over one another (similar to some long distance telephone calls). This did not appear to be a problem in the majority of cases, in that it did not result in confusion or delays to the hearing process. However, it did cause some communication problems where a defendant had language difficulties, or where an interpreter was being used.⁷⁰

Some magistrates and District Judges felt that some cases were not suitable to be handled in Virtual Courts due to their complexity and the time that was required to hear them. While opinions varied, this included cases requiring interpreters and cases involving complex bail applications, both of which were more likely than most to need more time or flexibility than was available. Courtroom observations confirm that these cases tended to take longer to be heard than the 15 minutes allowed in the pilot, which caused knock-on delays for other cases heard during the same session.⁷¹

These results are less than surprising. Delays in video-mediated communication have long been documented as a source of disruption (e.g. the various papers in Finn *et al.* 1997), and it is also well-known (and perhaps obvious) that interpreter-mediated communication tends to take longer than monolingual communication. The request that there must be more flexibility in the duration of the video link is one of the points that had also been made in the study on immigration bail hearings conducted by BID in 2008 (see 3.2.1).

4 Conclusions

Videoconference and remote interpreting have become common practice in many areas of criminal justice and in other settings. There are indications that the practice is growing, partially owing to the expansion of videoconferencing per se in criminal proceedings, and partially owing to the criminal justice services' search for solutions to rising costs of interpreting, timely access to an interpreter and other aspects. It may, however, be that some of the recent results, e.g. regarding virtual courts, have dampened the original expectations.

The main outcomes of the review presented here can be summarised as follows.

⁶⁸ Virtual Court Factsheet, OCJR 2008, http://frontline.cjonline.gov.uk/_includes/downloads/guidance/better-use-of-technology/20081107_Virtual_Court_Factsheet_V5.pdf, p.2.

⁶⁹ <http://www.justice.gov.uk/downloads/publications/research-and-analysis/moj-research/virtual-courts.pdf>

⁷⁰ <http://www.justice.gov.uk/downloads/publications/research-and-analysis/moj-research/virtual-courts.pdf>, p. 7.

⁷¹ <http://www.justice.gov.uk/downloads/publications/research-and-analysis/moj-research/virtual-courts.pdf>, p. 22.

Research on legal videoconferencing has identified a number of communication problems in VC communication and has expressed scepticism concerning the adequacy of videoconferencing in legal proceedings.

At the same time, some important initiatives, promoted and partially funded by the European Commission, are under way to improve videoconferencing technology in court rooms and other criminal justice settings. These initiatives have begun to specify minimum standards for videoconferencing technology to be used in criminal proceedings and in connection with remote conference interpreting. The specifications also extend to the audiovisual environment including lighting, seating arrangements, duration of VC use and other aspects.

Judicial institutions or those who conduct pilot and evaluation studies on their behalf are often unaware of prior research, evaluation exercises and pilot studies. In the UK, for example, court-prison video links (used mainly for remand hearings), virtual courts (used for first hearings) and developments in remote interpreting in the police seem to exist in parallel universes without much cross-fertilisation and seemingly without learning lessons from pilot projects in closely related areas (e.g. immigration) in the UK or elsewhere.

Research on video-mediated *interpreting* is scarce, except in the area of remote conference interpreting, and has produced mixed results.

A recurring result from the studies on remote conference interpreting is a discrepancy between 'objective' measures (e.g. of the interpreters' performance, stress levels and other factors) and the interpreters' individual perceptions, i.e. the 'human factor'. This is corroborated by some studies in other areas, e.g. in immigration.

Very little is known, however, about the adaptability of interpreters in video-mediated interpreting. A small-scale study in business settings suggests that interpreters are able to adapt within limits, but that the technological environment, and possibly other factors, play a crucial role in pushing the boundaries of adaptation. Longitudinal studies in this area are absent.

Most importantly, there is very little academic research on VCI/RI in legal proceedings and, to the best of our knowledge, no published research on VCI/RI in criminal proceedings. Available (practice-based) reports on video-mediated interpreting in legal proceedings focus either on immigration settings or – in criminal justice – on courts, court-prison links and court-custody links, whilst other elements of criminal proceedings, including police interviews, prosecution and consultation with a lawyer, have been neglected.

No study has systematically investigated the quality of the interpreters' performance in video-mediated interpreting in criminal proceedings, nor has there been a systematic survey of the parties involved in video-mediated and interpreted events in criminal proceedings.

Against this backdrop, the two surveys conducted in the AVIDICUS project, addressing legal interpreters and legal practitioners to find out about current experience with, and planned uses of, video-mediated interpreting in legal settings, constituted an important step towards a systematic analysis of these forms of interpreting. Another crucial step was the series of empirical studies conducted in AVIDICUS, in which the quality of various forms of video-based interpreting was compared with the quality of traditional interpreting in legal settings. The outcomes of the surveys and the comparative studies will be reported in the following chapters of this volume.

References

- Andres, D. and Falk, S. (2009), 'Remote and Telephone Interpreting'. In: Andres, D. and Pöllabauer, S. (eds.), *Spürst Du wie der Bauch rauf runter? Fachdolmetschen im Gesundheitsbereich/Is everything all topsy turvy in your tummy? Health Care Interpreting*. München: Martin Meidenbauer, 9-27.
- Azarmina, P. and Wallace, P. (2005), 'Remote interpretation in medical encounters: a systematic review', *Journal of Telemedicine and Telecare*, 11, 140-145.
- Böcker, M. and Anderson, B. (1993), 'Remote conference interpreting using ISDN videotelephony: a requirements analysis and feasibility study'. In: *Proceedings of the Human Factors and Ergonomics Society, 37th annual meeting*, 235-239.
- Braun, S. (2004), *Kommunikation unter widrigen Umständen? Fallstudien zu einsprachigen und gedolmetschten Videokonferenzen*. Tübingen: Narr.
- Braun, S. (2006), 'Multimedia communication technologies and their impact on interpreting'. In: Carroll, M., Gerzymisch-Arbogast, H. and Nauert S. (eds.), *Audiovisual Translation Scenarios. Proceedings of the Marie Curie Euroconferences MuTra: Audiovisual Translation Scenarios Copenhagen, May 2006*. Available at http://www.euroconferences.info/proceedings/2006_Proceedings/2006_Braun_Sabine.pdf.
- Braun, S. (2007), 'Interpreting in small-group bilingual videoconferences: challenges and adaptation processes', *Interpreting*, 9 (1), 21-46.
- Council of the European Union (2008), *European E-Justice Action Plan*, 15315/08 JURINFO 71. Brussels: European Union.
- Ellis, S.R. (2004), *Videoconferencing in Refugee Hearings. Ellis Report to the Immigration and Refugee Board*. Ottawa: Immigration and Refugee Board of Canada Audit and Evaluation Committee. Available at <http://www.irbcisr.gc.ca/eng/disdiv/proeva/revs/video/Pages/index.aspx>.
- European Council Working Party on Legal Data Processing (2008), *Questionnaire on videoconferencing - Compilation of responses*, 6709/08 JURINFO 19. Brussels: European Union.
- Federman, M. (2006), 'On the Media effects of immigration and refugee board hearings via videoconference', *Journal of Refugee Studies*, 19 (4), 433-452.
- Finn, K., Sellen, A. and Wilbur, S. (eds.) (1997), *Video-mediated communication*. Mahwah, NJ: Erlbaum.
- Fowler, Y. (2007), 'Interpreting into the ether: interpreting for prison/court video link hearings', *Proceedings of the Critical Link 5 conference, Sydney, 11-15/04/2007*. Available at <http://www.criticallink.org/files/CL5Fowler.pdf>.
- GDISC Interpreters' Pool Project (2007), *Project Operational Guidelines*. Unpublished report.
- Green, C.E. and Romberger, W. (2009), 'Leveraging Technology to Meet the Need for Interpreters', *Future Trends in State Courts 2009*, 36-39. Available at http://contentdm.ncsconline.org/cdm4/item_viewer.php?CISOROOT=/accessfair&CISOPTN=184&CISOBX=1&REC=1
- Haas, A. (2006), 'Videoconferencing in Immigration Proceedings', *Pierce Law Review*, 5 (1), 59-90.
- Harvard Law School (2009), 'Access to Courts and Videoconferencing in Immigration Court Proceedings', *Harvard Law Review*, 122 (1151), 1181-1193.
- Hornberger, J., Gibson, C., Wood, W., Dequeldre, C., Corso, I., Palla, B. and Bloch, D. (1996), 'Eliminating language barriers for non-English-speaking patients', *Medical Care*, 34 (8), 845-856.
- Johnson, M. and Wiggins, E. (2006), 'Videoconferencing in criminal proceedings: Legal and empirical issues and directions for research', *Law and Policy*, 28 (2), 211-227.
- Lee, J. (2007), 'Telephone interpreting: Seen from the interpreters' perspective', *Interpreting*, 9 (2), 231-252.
- Lee, J. (2009), 'Interpreting inexplicit language during courtroom examination', *Applied Linguistics*, 30 (1), 93-114.

- Moser-Mercer, B. (2003), 'Remote interpreting: assessment of human factors and performance parameters'. *Communicate!* Summer 2003. Available at <http://www.aiic.net/ViewPage.cfm/article879.htm>.
- Mouzourakis, P. (1996), 'Videoconferencing: techniques and challenges', *Interpreting*, 1 (1), 21-38.
- Mouzourakis, P. (2003), 'That feeling of being there: vision and presence in remote interpreting'. *Communicate!* Summer 2003. Available at <http://www.aiic.net/ViewPage.cfm/article911.htm>.
- Mouzourakis, P. (2006), 'Remote interpreting: a technical perspective on recent experiments', *Interpreting*, 8 (1), 45-66.
- Poulin, A.B. (2004), 'Criminal justice and videoconferencing technology: the remote defendant', *Tulane Law Review*, 78 (1089), 1089-1167.
- Roziner, I. and Shlesinger, M. (2010), 'Much ado about something remote: Stress and performance in remote interpreting', *Interpreting*, 12 (2), 214-247.
- Sossin, L. and Yetnikoff, Z. (2007), 'I can see clearly now: Videoconference hearings and the legal limit on how tribunals allocate resources', *Windsor Yearbook of Access to Justice*, 25 (2), 247-272.
- The Law Societies Joint Brussels Office (2009), *Criminal Law Reform Update*. June 2009. Available at <http://international.lawsociety.org.uk/files/EUCriminalLawReformUpdateJune2009.pdf>.
- Verrept, H., (2011), 'Intercultural mediation through the Internet in Belgian hospitals', 4th *International Conference on Public Service Interpreting and Translation*, 13th-15th April 2011. Abstract available at <http://tisp2011.tucongreso.es/ti2011/files/book-abstracts.pdf>.
- Webster, L.P. (2009), *Evaluation of Videoconferencing Technology: Mesa Arizona Municipal Court Final Report*. Denver: National Centre for State Courts. Available at http://contentdm.ncsconline.org/cdm4/item_viewer.php?CISOROOT=/tech&CISOPTN=708&REC=5.
- Wisconsin Court Interpreters Program (2010), 'Best Practices: Remote Interpreting in Court. Telephone, Videoconferencing and VRI (Video Remote Interpreting)'. Available at <http://www.wicourts.gov/services/interpreter/docs/telephoneinterpet.pdf>.
- Wisconsin Judiciary (2009), 'Technology links Madison court interpreter to courts in Door, Trempealeau', *The Third Branch*, 17 (2), 2. Available at <http://www.wicourts.gov/news/thirdbranch/docs/spring09.pdf>.

