



## ACADEMIC ARTICLE

# The Smart Court – A New Pathway to Justice in China?

Changqing Shi\*, Tania Sourdin† and Bin Li‡

As with other jurisdictions, China has introduced a range of newer technologies into its justice sector to promote greater access to justice, improve judicial transparency and to promote just outcomes for disputing parties with legal issues. Chinese courts' practice of embracing technology is unique as an overarching approach has been adopted by the central government to build the 'smart court' system across the entirety of its courts. Arguably, the smart court system, which relies on computer technologies that enable big data use, blockchain formation and advisory and determinative forms of artificial legal intelligence, has, to a certain degree, promoted easier access to justice, enabled faster dispute resolution, saved costs by moving judicial process online and ensured that judgments can be enforced. On the other hand, however, there are concerns relating to the use of some technologies that include the use of automated judgments, digital divide issues, judicial independence, as well as issues linked to privacy and data protection. This article concludes that some caution should be exercised in developing the 'smart court' system, primarily in relation to the oversight and introduction of more disruptive technologies to ensure that cheap and quick dispute resolution can be achieved without detrimental impacts on justice.

**Keywords:** smart court; technology; justice; AI; China

## 1. Introduction

Technology, from computing and internet developments to more recent innovations linked to big data use, block chain formation and artificial intelligence (AI),<sup>1</sup> is evolving every day and is contributing to change across all levels of human society. As part of human society,

\* Shanghai University, CN ([mariah@shu.edu.cn](mailto:mariah@shu.edu.cn))

† University of Newcastle, AU ([Tania.sourdin@newcastle.edu.au](mailto:Tania.sourdin@newcastle.edu.au))

‡ University of Newcastle, AU ([bin.li@newcastle.edu.au](mailto:bin.li@newcastle.edu.au))

<sup>1</sup> Artificial intelligence, as a subfield of computer science, was defined by Marvin Minsky as 'the science of making machines do things that would require intelligence if done by man'. In this article, artificial intelligence can be specifically understood as 'artificial legal intelligence' or systems that have capacity to render legal advice or decision making. For discussions in detail about the definition of 'artificial intelligence', see E. Rissland, *Artificial Intelligence and Law: Stepping Stones to a Model of Legal Reasoning*. *The Yale Law Journal* (99), 1990 and S. McJohn, *Artificial Legal Intelligence*. *Harvard Journal of Law and Technology* (12), 1998. See also T. Sourdin, *Alternative Dispute Resolution*, (Sixth Edition), Thomson Reuters, 2020, pp 418–419.

the justice system and associated court processes have also inevitably undergone a range of changes made possible by recently developed technologies. However, despite early promise, many developments in terms of technology and courts have been described as ‘sluggish’<sup>2</sup> although more recently, online court hearings have proliferated in jurisdictions that include the US, the UK, Canada and Australia, partly in response to the challenges raised in the justice system by the COVID-19 pandemic.<sup>3</sup>

As with some other jurisdictions, China has embraced newer technologies and has endeavoured to employ technological advances in the court system in response to some of challenges presented by what has been termed the ‘information era’.<sup>4</sup> Arguably, however, China has recently progressed more quickly than other jurisdictions and this progression is partly related to the overarching framework adopted in the justice system (discussed further below). There are clearly many reasons why China has focused on the introduction of technology in courts and the primary motivation appears to be related to promoting greater access to justice and to support ‘just’ outcomes for those with legal issues.<sup>5</sup> For example, the Supreme People’s Court (SPC) noted in 2019:

“Across the broad spread of the internet, problems such as unbalanced development, inadequate rules and inequitable order have become more evident. Citizens, corporations, and social organisations now expect greater access to justice and to guarantee the socio-economic development in the digital age, which urges the courts to harness the technology to keep pace with the rapidly changing demands of society.”<sup>6</sup>

China adopted an ambitious plan to build a ‘smart court’ (*Zhi Hui Fa Yuan* in Chinese) and to modernise its entire court system across the nation by utilising various technological innovations. As Chief Justice Qiang Zhou, President of the SPC, envisaged in a 2016 SPC Work Report where the concept of the ‘smart court’ was first officially raised, the features of the ‘smart court’ should include:

‘...ensuring the fairness and efficiency of the judiciary and improving judicial credibility, making the most out of technologies including internet, cloud computing, big data and AI, promoting the modernisation of China’s trial system and capability, and achieving the highly intelligent functioning and management of people’s courts.’<sup>7</sup>

The role of technology was reaffirmed in the definition of the ‘smart court’ in 2017 which included that the terminology did not apply to one particular court. Rather, the term relates to ‘the organisational, constructional and operational pattern of people’s courts that is based on advanced innovations with the purposes of achieving fair judiciary and justice for people

<sup>2</sup> T. Sourdin, *Judges, AI and Technology*, (forthcoming 2021, Edward Elgar).

<sup>3</sup> T. Sourdin, J. Zeleznikow, Courts, Mediation and COVID-19. *Australian Business Law Review* (2020) 48(2), 138-158.

<sup>4</sup> See H. Sun, ‘The Smart Court – Judicial Services with the Wing of Informationalisation’, (People’s Court Daily, 8 December 2018). Available at: <[http://rmfyb.chinacourt.org/paper/html/2018-12/08/content\\_146555.htm?div=0](http://rmfyb.chinacourt.org/paper/html/2018-12/08/content_146555.htm?div=0)> [Accessed 21 August 2020].

<sup>5</sup> F. Long, ‘Ten Major Changes The Smart Court Has Made to Justice in China’, (People’s Court Daily, 31 October 2018) Available at: <[http://law.ccssn.cn/fx/fx\\_msfx/201810/t20181031\\_4767859.shtml](http://law.ccssn.cn/fx/fx_msfx/201810/t20181031_4767859.shtml)> [Accessed 21 August 2020].

<sup>6</sup> The Supreme People’s Court, ‘Chinese Courts and the Internet Judiciary’, (2019), p. 59, Available at: <<http://english.court.gov.cn/pdf/ChineseCourtsandInternetJudiciary.pdf>> [Accessed 16 October 2020].

<sup>7</sup> Q. Zhou, ‘The status of judicial protection of intellectual property in Chinese courts (2019)’, (Supreme People’s Court, 21 April 2020) Available at: <<http://www.court.gov.cn/zixun-xiangqing-82842.html>> [Accessed 21 August 2020].

by means of supporting online intelligent court services throughout the whole dispute resolution process in a transparent environment.<sup>8</sup>

Notably, the establishment of the smart court system was integrated into China's *National Strategy for the Informatization Development* in 2016 and aims to 'enhance the informatisation levels at all stages of court processes, including filing, hearing, judgment enforcing, promoting judicial openness, and stimulating judicial fairness.'<sup>9</sup> Informatisation in this context is directed at how China engages internally as an 'information society' and more specifically how courts and judges engage. From 2016, the level of informatisation in China's judiciary has progressed rapidly, and is directed at 'quicker' dispute resolution, enabling the attainment of 'justice' in a broader sense.<sup>10</sup> By June 2019, the smart court system had taken shape in China, offering whole-process transparent online services to the public.<sup>11</sup>

The benefits relating to justice brought about by the smart court initiative have been highlighted in response to the challenges that arose from the COVID-19 pandemic. For example, according to the SPC, during the period from 3 Feb. to 31 March, there were 706,000 new e-filed cases at all levels of courts in China and 150,000 court hearings were conducted through online platforms.<sup>12</sup>

This article provides an overview of China's smart court system through a historical lens and considers examples where various technologies have been employed to facilitate the operation of Chinese courts and deliver outcomes to those involved in legal disputes. The authors suggest that courts in China have faced some unique challenges as a result of the large population of the country and the related vast need for access to justice, noting that the smart court system has been designed to address these issues. The article also explores concerns surrounding the use of technologies in China's court system and contends that some caution should be exercised, primarily in relation to the oversight and introduction of more disruptive technologies.<sup>13</sup>

## 2. The transformation and reform of Chinese Courts

China began to develop full access to global internet services in 1994 and therefore was not one of the first few countries in the world to take advantage of internet technology. Nor was China a pioneer in terms of trialling e-litigation.<sup>14</sup> It is apparent however that while many countries initially considered that technology could be useful in courts and developed some technologically enabled processes, China has been more active than the other jurisdictions

<sup>8</sup> Supreme People's Court, 'Opinions on Accelerating the Building of Smart Courts', (Judicial Document, 12 April 2017) No. 12, Available at: <<http://gongbao.court.gov.cn/Details/5dec527431cdc22b72163b49fc0284.html>> [Accessed 21 August 2020].

<sup>9</sup> State Council General Office, 'Outline of the National Informatization Development Strategy', (Blog post, Last updated 30 July 2016) Available at: <<https://chinacopyrightandmedia.wordpress.com/2016/07/27/outline-of-the-national-informatization-development-strategy/>> [Accessed 21 August 2020].

<sup>10</sup> 'Justice' and 'efficiency' are two purposes pursued by people's courts while 'cost' is a less relevant consideration in the country with an inquisitorial trial system. For example, Art. 2 of *Civil Procedure Law of China* states that its purpose includes, among others, ensure that the people's courts ascertain facts clearly, distinguish right from wrong, apply the law correctly, try civil cases 'promptly'. Similarly, Art. 2 of *Criminal Procedure Law* prescribes its tasks as, among others, 'accurately' ascertain the facts 'in a timely manner'.

<sup>11</sup> See note 6.

<sup>12</sup> H. Sun, 'The Benefits of the Smart Court Fully Demonstrated During the Pandemic', (People's Court Daily, 15 April 2020) Available at: <<https://www.chinacourt.org/article/detail/2020/04/id/4952468.shtml>> [Accessed 21 August 2020].

<sup>13</sup> 'Disruptive technology' in this article is defined as innovations that can change the way that justice system works, particularly about how judicial decisions are made. For discussions on disruptive technologies in detail, see T. Sourdin, note 2.

<sup>14</sup> E-litigation arguably originated from the US in 1970s when information collected through computers was permitted to be used in court processes.

particularly over the past few years. For example, in Australia,<sup>15</sup> as early as 1998, The Hon Justice Michael Kirby observed that the courts were beginning to use new information technology on a daily basis and that technology would likely lead to radical changes in the conducting of trials and the ways in which judges and lawyers would prepare judgments and arguments.<sup>16</sup> Despite this promising start, in many jurisdictions reform has stalled with somewhat *ad hoc* developments dominating. In contrast, developments in China have progressed rapidly with some suggesting that China is the new leader in legal technology.<sup>17</sup>

In order to understand how these developments have progressed in China it is helpful to initially explore the rationale behind such developments. Importantly, the approach in China is directed at all courts and appears to have resulted in little jurisdictional friction which arguably pervades justice and technology discussions in other jurisdictions.<sup>18</sup> This is largely due to the push of the national leadership and the resultant central government approach that creates reforms that are much more likely to take place across the entirety of the justice sector.<sup>19</sup> The framing of the justice and technology discussion is also of interest. For example, in 2019, the SPC commented that China had achieved significant progress in the information technology and internet industry which, in turn, had presented challenges as to national governance and the administration of justice in the country.<sup>20</sup> In addition, it may be that the increasing number of internet users in China makes it viable for the courts to use technology and move judicial activities online. In this regard, according to Cyberspace Administration of China, as of March 2020, there were 904 million internet users in the country (including 897 million mobile internet users), an increase in approximately 75 million users from the end of 2018, although there were still 496 million people who were not using internet due to literacy issues or other reasons.<sup>21</sup>

Pressure on the Chinese court system was also a motivating factor, as China's large population and more extensive civil and commercial activities created challenges for its court system and increased the workload of judges. For example, in 2015 alone, there were more than 16.714 million court cases filed in China, 27.3 times the number recorded in 1978 when China started to open up to the rest of the world. Among all those cases, civil and commercial disputes numbered 11.045 million, 34.7 times the number filed in 1978. The Judicial workload also became a challenge as in 2015, there were 196,000 judges in total, a multiple of only 3.27 times of the 60,000 judges in 1981.<sup>22</sup> The huge gap between case and

---

<sup>15</sup> T. Sourdin, Justice and Technological Innovation. *Journal of Judicial Administration* (2015) 25 p. 96.

<sup>16</sup> M. Kirby, The Future of Courts – Do They Have One? *Journal of Law, Information and Science* [1998] 12; 9(2) p. 141.

<sup>17</sup> R. Susskind, 'China as the next leader in legal technology?' (LinkedIn, 1 August 2017) Available at: <<https://www.linkedin.com/pulse/china-next-leader-legal-technology-richard-susskind/>> [Accessed 21 August 2020].

<sup>18</sup> Although the overarching leadership role of the SPC in building the smart court across China helps the rollout of technology in its court system, it appears that the role of the SPC is only limited at the promoting level. Relatedly, the development of the smart court is also 'patchy' in the sense that courts in different provinces have procured technical services from differing legal technology companies and that there is a 'uneven' level of building the smart court due to the budgetary differences across the country. See detailed discussion in part 4 of the article.

<sup>19</sup> For example, in his speech to the central conference on political and legal work in early 2019, President Xi Jinping spoke of the need to make more efforts on the development of crime prevention and control system, which is multifaceted and features IT application.

<sup>20</sup> See note 6.

<sup>21</sup> Cyberspace Administration of China, 'The 45th China Statistical Report on Internet Development' (2020) Available at: <[http://www.cac.gov.cn/2020-04/27/c\\_1589535470378587.htm](http://www.cac.gov.cn/2020-04/27/c_1589535470378587.htm)> [Accessed 21 August 2020] pp. 20-25.

<sup>22</sup> Cited in H. Zhang, 'The Court's "Many Cases and Fewer People" Coping Dilemma and Its Way Out' (Working paper, Shandong University (Philosophy and Social Sciences Edition), 2018) Issue 2, Available at: <<http://iolaw.org.cn/showNews.aspx?id=65416>> [Accessed 21 August 2020].

judge numbers was reflected in the SPC statement in 2015 that judges were facing increasingly heavy workloads as those working in regions with strong economic performance were required to complete 300 cases per judge every year.<sup>23</sup> In its annual *Work Report* in 2017, the SPC reported that in the Zhejiang Province, which hosts many large corporations, including Alibaba, the average number of closed cases was 315 per judge. Additionally, the SPC recently noted that in 2019 the average number of closed cases per judge was 228.<sup>24</sup>

Related to the conflict between growing case numbers and the insufficient human resources available in courts is the concern that some cases are not concluded in a timely manner, which does not serve the purpose of justice, in the sense that justice delayed is justice denied.<sup>25</sup> Conversely, in many western countries, significant concerns relating to the cost and delay of justice were raised in the 1980s and the primary solutions were associated with the introduction of more effective case management as well as greater use of alternative dispute resolution, changed jurisdictional arrangements and the growth of tribunals.<sup>26</sup> Whilst technology played a role in decreasing delay and costs mainly through the introduction of supported case management systems, in China, technology that could significantly transform court operations was simply not available in the 1980s and 1990s when significant court reform was undertaken in the Western world. In China, as in many Western countries, in response to the increase in cases filed in courts, it has been suggested that increased filing fees across all lodged applications may reduce case filings.<sup>27</sup> However, for a range of reasons, this policy has not been pursued in the same way as in a number of Western countries where differentiated filing and daily hearing fees have been introduced to limit court filings and promote pre filing settlement.

In China, concerns relating to vulnerable populations and the equality of access have however resulted in a number of approaches that are focussed more on technological innovation. In this regard, it has been argued that the 'intelligent' transformation of courts through utilisation of information technology would align with the traditional values of judiciary by enabling courts' functions to be more transparent, efficient and people-centric.<sup>28</sup> With reference to the growing number of internet users in China, it has also noted that technological convenience can support judicial convenience which can in turn, significantly reduce the high costs associated with access to justice.<sup>29</sup>

In addition, technological transformation has been focused on opening up the courts to the public. In 2014, in view of the potential to improve the justice system through technological means, Chief Justice Qiang Zhou called on all Chinese courts to endeavour to enable the public to experience 'fairness' and 'justice' by implementing the principle of judicial openness '...with the assistance of internet technology such as uploading all judgments online,

<sup>23</sup> Supreme People's Court, 'The SPC 2015 Work Report,' Available at: <<http://www.court.gov.cn/zixun-xiangqing-82572.html>> [Accessed 16 October 2020].

<sup>24</sup> Supreme People's Court, 'Supreme People's Court Work Report', (Sourced from Xinhuanet, 1 June 2020) Available at: <<http://www.court.gov.cn/zixun-xiangqing-232991.html>> [Accessed 21 August 2020].

<sup>25</sup> T. Sourdin, N. Burstyner, Justice delayed is justice denied. *Victoria University Law and Justice Journal*, (2014) Vol. 4, No. 1.

<sup>26</sup> See McClellan, Justice PD, Civil Justice Reform – What has it achieved? *NSWJSchol* [2010] 5. Available at: <<http://classic.austlii.edu.au/au/journals/NSWJSchol/2010/5.html>> [Accessed 16 October 2020].

<sup>27</sup> L. Su, Trial Management and Social Governance – How Courts Effectively Respond to the Increasing Filed Cases. *China Legal Science*, (2010) Issue 6.

<sup>28</sup> J. Xu, 'Jurisprudence of the smart court system' (Working paper, China Law Network, 2017) Issue 3, Available at: <<http://www.iolaw.org.cn/showNews.aspx?id=57911>> [Accessed 21 August 2020].

<sup>29</sup> D. Hong, 'How does justice face technological innovations such as "Internet +" and artificial intelligence', (Working paper, China Law Network, 2018) Issue 11, Available at: <<http://iolaw.org.cn/showNews.aspx?id=68862>> [Accessed 21 August 2020].

livestreaming court hearings etc.<sup>30</sup> This approach can again be contrasted with Western developments in case management that often focus on internal court reforms rather than an opening up of court processes.<sup>31</sup>

Despite the fast rollout of technology into court systems in recent years, it is suggested however that 'smart' courts are the result of a transformation of China's court system consisting of three stages that commenced in the 1990s. The first stage commenced after the 'National Conference on Matters of Court Communication and Computer' in 1996 ('The 1996 Conference') and concluded in 2003 when all courts in China completed the digitisation of their files and web site links. The 1996 Conference was the first time that technology had been a focus in terms of resolving judicial administration issues.<sup>32</sup> Notably, prior to that time, many court files in China had been handwritten. The work undertaken not only shifted all work to word processing which was a very common feature of most courts internationally, but it also paved a way for courts to develop an online filing system at a later stage (see discussion below). In a subsequent document issued in 1997, the SPC further indicated that the primary reason for courts to build computer systems was that the traditional handwriting of court files (including judgments) could not provide efficient services in the context of the increasing case numbers.<sup>33</sup> More broadly, the lack of digital or electronic documents relating to courts' routine work, such as case filing documents and evidence as well as legislative instruments that were constantly referred to by judges, jeopardised the efficiency of courts.<sup>34</sup> As such, Liu has suggested that this stage of Chinese court reform centred around the digitisation of courts' files (including case management documents) to introduce computing technology to courts.<sup>35</sup> In the first *Five-Year Reform Outline of People's Courts (1999-2003)*, the SPC also indicated that in order to modernise judicial administration, courts at all levels across the country were expected to digitise files by relying on computers by the end of the 2001. Further, the SPC required that within five years (i.e. by the end of 2003), a nationwide internet network connecting all courts would be completed for the purposes of improving technological contribution to judicial administration work.<sup>36</sup> In a sense, as court reforms in other jurisdictions progressed, many did not include reforms that enabled the sharing of all court documents via the internet and this particular period saw a significant shift in court work focusing on court administration that relied on connectivity.

The second phase of transformation of China's courts from 2004 to 2013 was characterised by the emergence of internet-assisted court hearings. That is, computing and internet technologies were utilised for the purpose of case management and also in hearings. As Guo reported, in 2004 a local court in Guangdong Province in South China accepted a filed separation application where a couple respectively lived in China and Canada and the court communicated with the respondent (the husband in this case) overseas via email and also served

---

<sup>30</sup> Q. Zhou, 'Using New Media, Advancing Judicial Openness', 2014, Available at: <<http://www.court.gov.cn/zixun-xiangqing-6111.html>> [Accessed 16 October 2020].

<sup>31</sup> See note 25.

<sup>32</sup> S. Guo, 'Twenty-two years of court information construction: practice, problems and prospects', Available at: <<http://www.iolaw.org.cn/showNews.aspx?id=70179>> [Accessed 21 August 2020].

<sup>33</sup> Supreme People's Court, 'National Court Computer Information Network Construction Plan', (Departmental regulations, last updated 7 November 2017) Available at: <<https://www.66law.cn/tiaoli/2897.aspx>> [Accessed 21 August 2020].

<sup>34</sup> Ibid.

<sup>35</sup> Y. Liu, Big Data Driven Modernisation of Trial System and Trial Capability. *Southeast Academic Research (Dong Nan Xue Shu)* (2020) Vol. 3, Available at: <<https://posts.careerengine.us/p/5ee62a613c4ef717ca2ea1bf>> [Accessed 16 October 2020].

<sup>36</sup> Supreme People's Court, 'The Five-Year Reform Outline of the People's Court (1999-2003)' (Court Notice No. 28, 20 October 1999) Available at: <<http://www.iolaw.org.cn/web/special/2015/new.aspx?id=44911>> [Accessed 21 August 2020] [38].

documents and exchanged material in this way.<sup>37</sup> Although this case did not involve video-conferencing and emails were used to communicate and share information, this remains as an early example of how internet-related technology was utilised to facilitate court trial work. A more notable example of internet-assisted hearing took place one year later in 2005. A local court in Guizhou Province used *Tencent QQ*, an instant online messaging tool, to assist where one of the divorcing parties was not able to attend in person while working in another province. Similar arrangements were adopted to support outgoing migrant workers experiencing difficulty in travelling to civil hearings and the local court in Guizhou continues to use this tool in summary proceedings.<sup>38</sup> As Chen has noted, the first full hearing conducted via video-conferencing in China took place in 2007 in a criminal case involving theft in Shanghai.<sup>39</sup>

Coupled with the emergence of internet-assisted trials from the early 2000s, hearing activities began to be recorded by technical means, such as audio and video recording. In this regard, it is noted that the second stage of transformation was again in response to a call from the SPC in relation to justice reform. For example, the SPC set out tasks that courts were required to complete in the second *Five-Year Reform Outline of People's Courts (2004–2008)*.<sup>40</sup> During this period, judicial openness was promoted by livestreaming court hearings to the public. For example, in September 2009, the Beijing High People's Court announced that in order to promote justice and enable people to monitor the work of courts, it had completed a Beijing-wide livestream court hearing website where the general public across the country had simultaneous access to observe hearings conducted in any court in Beijing region.<sup>41</sup>

In March 2010, the High People's Court of Henan Province in Central China also announced that it had conducted its first livestream hearing as part of its efforts to improve the transparency of justice.<sup>42</sup> Despite some potential advantages in relation to livestream hearings, there were some concerns raised surrounding the protection of parties' privacy and the reduction of judicial discomfort with livestreaming<sup>43</sup> (see discussion below relating to concerns about the smart court). Indeed, to address those issues, the SPC listed 'regulating livestream hearing' as one of the court reform tasks in its third *Five-Year Reform Outline of People's Courts (2009–2013)*.<sup>44</sup> In 2010, the SPC issued a work document titled '*Measures on People's Courts*'

<sup>37</sup> S. Guo, note 32.

See also 'A foreign-related marriage e-mail trial concluded a transnational divorce case' (Sourced from China News Network, 31 July 2004) Available at: <<http://news.sina.com.cn/o/2004-07-31/16073256390s.shtml>> [Accessed 21 August 2020].

<sup>38</sup> Q. Luo, G. Yang, , 'Promoting the QQ tribunal', (News article, 9 February 2015) Available at: <<http://gz.people.com.cn/n/2015/0209/c194827-23840896.html>> [Accessed 21 August 2020].

<sup>39</sup> J. Chen, Issues and return of "cloud trial" in criminal cases. *Shanghai Law Society* (11 June 2020) Available at: <<http://www.shanxilawsociety.org.cn/newshow/6382.html>> [Accessed 21 August 2020].

<sup>40</sup> Y. Chen, 'The Supreme Court issued the 25th Five-Year Reform Outline', (News article, People's Court News, 28 October 2005) Available at: <<http://www.china-judge.com/ReadNews.asp?NewsID=3280&BigClassName=%CB%BE%B7%A8%B8%C4%B8%EF&BigClassID=17&SmallClassID=25&SmallClassName=%CB%BE%B7%A8%B8%C4%B8%EF&SpecialID=0>> [Accessed 21 August 2020].

<sup>41</sup> Sina News, 'Beijing High People's Court Now Livestreaming Court Hearings', (Online article, 17 September 2009) Available at: <<http://news.sina.com.cn/c/2009-09-17/065816311211s.shtml>> [Accessed 16 October 2020].

<sup>42</sup> Central Government Portal, 'Henan conducts the first court trial webcast to further promote judicial justice', (News Article, 11 March 2010) Available at: <[http://www.gov.cn/gzdt/2010-03/11/content\\_1553005.htm](http://www.gov.cn/gzdt/2010-03/11/content_1553005.htm)> [Accessed 21 August 2020].

<sup>43</sup> M. Zhang, 'Proactive or Cautious? Limits of Livestream Court Hearings', Available at: <<http://www.zhxcourt.gov.cn/index.php?do=court&ac=info&cid=3656>> [Accessed 16 October 2020].

<sup>44</sup> China News, 'An Analysis of 10 Key Words in the People's Court's Three-Five Year Reform Outline', (Online Article, 26 March 2009) Available at: <<http://www.chinanews.com/gn/news/2009/03-26/1618736.shtml>> [Accessed 21 August 2020].

*Livestreaming and Broadcasting Recorded Hearings* binding all courts to a clear process designed to manage livestreaming and the recording of hearings.<sup>45</sup>

### 3. Newer Technology Use in the Smart Court

In 2014, Chinese courts entered a third stage of transformation with the introduction of the smart court initiative which supported more sophisticated technology use. In the *Fourth Five-Year Reform Outline of People's Courts (2014-2018)*, the SPC referred to information technology to build an 'open, dynamic, transparent and convenient' judicial system to enable the public to 'understand, trust and monitor' the operation of justice.<sup>46</sup> In 2017, one year after the concept of the 'smart court' was officially raised, China's President Jinping Xi required courts to combine the task of deepening judicial reform through modern science and technology so that legal system reform could enable the 'further development of socialism with Chinese characteristics'.<sup>47</sup> By 2017 the executive leadership determined that modern reform of the courts required a system that was infused with modern technology. Further, in the most recent *Five-Year Reform Outline of People's Courts (2019-2023)*, the SPC confirmed that 'comprehensively advancing the construction of the smart court' is one of the ten aims of justice reform during this period.<sup>48</sup> In terms of the specific measures engaged to achieve this objective, the SPC has referred to the technological innovations relating to AI, including enhancing voice to text approaches in hearings as well as intelligent auxiliary case management systems.<sup>49</sup>

It also appears clear that a number of significant changes had already been introduced into courts by 2017. Indeed, Susskind in *Online Courts and The Future of Justice*, commented about his experience visiting a court in Hangzhou, China in 2017:

'I was impressed with what I saw: a static robot in the reception area that offered online legal help for court users; on-site facilities for the e-filing of documents; dedicated virtual courtrooms; speaker-independent voice recognition (they no longer need stenographers); and a demonstration of China's first "internet-court", which resolves internet-related disputes concerning, for example, online loans, e-commerce (contractual and product liability issues), domain name disputes, and online copyright issues. With 800 million users in China, the volume of related disputes has called for new methods. I am told that the court in Hangzhou has now handled more than 10,000 disputes, in roughly half of the time of traditional hearings.'<sup>50</sup>

<sup>45</sup> Documents are available at <<http://tjhdly.chinacourt.gov.cn/article/detail/2019/08/id/4294736.shtml>>.

There are several circumstances under which either livestream or broadcasting recorded hearings are prohibited, including the explicit objection of disputing parties in civil and administrative cases, the explicit objection of the procuratorate in criminal cases and cases involving national secrets, commercial secrets, young offenders etc.

<sup>46</sup> Supreme People's Court, 'Opinions of the Supreme People's Court on Comprehensively Deepening the Reform of the People's Court', (Opinion article, 26 February 2015) Available at: <<http://www.court.gov.cn/zixun-xiangqing-13520.html>> [Accessed 21 August 2020].

<sup>47</sup> Xinhua News Agency 'Unswervingly advance judicial reform and take the road of socialist rule of law with Chinese characteristics-General Secretary Xi Jinping's important instructions on judicial system reform aroused enthusiastic responses', (Online article, 11 July 2017) Available at: <[http://www.xinhuanet.com//politics/2017-07/11/c\\_1121302631.htm](http://www.xinhuanet.com//politics/2017-07/11/c_1121302631.htm)> [Accessed 21 August 2020].

<sup>48</sup> The Paper, 'The full text of the Supreme Court's "Fifth Five-Year Reform Outline" | Authoritative Interpretation', (Online article, 27 February 2019) Available at: <[https://www.thepaper.cn/newsDetail\\_forward\\_3051310](https://www.thepaper.cn/newsDetail_forward_3051310)> [Accessed 21 August 2020].

<sup>49</sup> Ibid.

<sup>50</sup> R. Susskind, *Online Courts and The Future of Justice*, Oxford University Press, 2019.

As noted above, the smart court requires that court services are available and conducted online. Initially many changes were directed at servicing litigants and their lawyers and ensuring that information about judgments was made available. As part of this effort, in 2015, the SPC highlighted the completion of three online platforms including China Judicial Process Information Online,<sup>51</sup> China Judgments Online<sup>52</sup> and China Judgments Enforcement Information Online.<sup>53</sup>

The 'China Judicial Process Information Online' is intended to provide disputing parties and lawyers with an opportunity to receive updates on their own cases by enabling litigants to log in with information, including their name, mobile number, identification card or passport number and a verification code. In addition, comprehensive information that assists parties and lawyers to navigate the litigation process is also available from this online platform.<sup>54</sup>

'China Judgments Online' publishes judgments delivered by all levels of courts in China, except those that cannot be openly published in accordance with the law, therefore it is regarded as 'the source of big data relating to Chinese law and legal practice'.<sup>55</sup> This particular online platform can also facilitate the empirical study of Chinese law while promoting a 'transparent' judicial system.<sup>56</sup> Notably, This platform serves as an important database for all Chinese judges when they are considering cases that share similar facts to those that had been decided prior in order to ensure judgment consistency.<sup>57</sup> More significantly, the information and data drawn from the judgments on the online platform have been used in some court systems embedded with AI technology and developed by local courts. For example, Beijing High People's Court has developed and deployed a 'Wise Judge' ('*Rui Fa Guan*' in Chinese) system, relying on nationwide judgment data drawn from China Judgments Online, which can apply to judges in Beijing region involved in drafting judgments to ensure that 'cases with similar facts received similar judgments'.<sup>58</sup> Similarly but specifically in the criminal area, Shanghai High People's Court has developed the 'Intelligent Auxiliary System of Criminal Case Handling' where mass judicial data (including that from China Judgments Online) is collected and used by Shanghai judges to ensure that judgments in similar cases are in line

<sup>51</sup> China Judicial Process Information Online, (Webpage) Available at: <<https://splcgk.court.gov.cn/gzfwwww/>> [Accessed 21 August 2020].

<sup>52</sup> The Supreme People's Court, 'Judgements Online', (Case database, 2020) Available at: <<https://wenshu.court.gov.cn/>> [Accessed 21 August 2020].

<sup>53</sup> Supreme People's Court, 'China implements the revision and upgrade of the information disclosure network', (Online article, 8 June 2018) Available at: <<http://zxgk.court.gov.cn/>> [Accessed 21 August 2020].

<sup>54</sup> For example, the website provides a wide range of useful information in relation to litigation activities, including *People's Court Courtroom Rules*, SPC's judicial interpretations of laws, guiding cases etc.

<sup>55</sup> W. Zuo, C. Wang, Big Data Legal Research Based on Judgment Document Network: Reflection and Prospect. *Journal of East China University of Political Science and Law* (2020, Issue 2) Available at: <[https://pkulaw.cn/fulltext\\_form.aspx?Db=qikan&Gid=957b09be1ad237b32109911f5772cc1fbdff&EncodingName=>](https://pkulaw.cn/fulltext_form.aspx?Db=qikan&Gid=957b09be1ad237b32109911f5772cc1fbdff&EncodingName=>)> [Accessed 21 August 2020].

<sup>56</sup> S. Luo, 'The use of big data in judgment documents drives the development of various judicial trials', (News article, 28 October 2017) Available at: <<https://www.chinacourt.org/article/detail/2017/08/id/2983142.shtml>> [Accessed 21 August 2020] 'As of September 2020, there are over 102,497,215 judgements that have been published on this platform.'

<sup>57</sup> In July 2020, the SPC issued *Guiding Opinions Concerning Strengthening Search for Similar Cases to Unify the Application of Law* to guide the practice of judges using principles derived from prior cases to fill in the gaps in legislation and judicial interpretations.

<sup>58</sup> *Ibid.*

with those delivered in the rest of the country.<sup>59</sup> In promoting this system, former President of Shanghai High People's Court, Justice Yadong Cui, commented that:<sup>60</sup>

'Because the judicial personnel are different individuals with subjectivity there will inevitably be some differences in ensuring uniformity of law, which will result in inconsistent law enforcement and different judgments in cases sharing the highly similar facts. Application of artificial intelligence can provide relatively streamlined judicial reasoning and evaluation standard, provide the judge with all similar cases, laws, regulations and judicial interpretations etc, so the judge can strictly follow the rule of evidence and procedure, which will reduce judicial arbitrariness and promote justice.'

However, such developments around AI judging are not without controversy, in particular, in the criminal area. Huang has suggested for example that government policies should be introduced to prevent the use of Judge AI in the criminal justice area.<sup>61</sup> Zhang has also noted that while automated judgments may improve efficiency, the process could impact on judges and may cause them to be reluctant to elaborate about their reasoning or to craft the decisions. As a result, some AI generated judgments are issued without human judge input and may be unclear and difficult to understand.<sup>62</sup>

'China Judgments Enforcement Information Online' is an online platform where courts publish a list of those litigants who have failed to comply with court judgments and to pay compensation. The data about those 'discredited' people (including names and corresponding identification numbers) can be used to prevent such people from certain activities that include purchasing real estate or travelling by air.<sup>63</sup> According to the online platform, as of November 2019, there were about 15.91 million persons listed as 'discredited'.<sup>64</sup> It has been suggested by the SPC that various measures including the 'discredited' list have contributed to sort out the long-standing issues linked to 'hard to enforce judgments'.<sup>65</sup> Relatedly, the data drawn from the list has also been utilised beyond the justice system for social governance purposes and been integrated with China's social credit system to calculate the credit points of natural and legal persons.<sup>66</sup>

<sup>59</sup> Y. Cui, "Artificial Intelligence" Makes the Court System More Just, Efficient and Authoritative,' (Online, October 2017) Available at: <<https://law.stanford.edu/china-law-and-policy-association-clpa/articles/>> [Accessed 21 August 2020].

<sup>60</sup> Ibid.

<sup>61</sup> See J. Huang, Negative List of Artificial Intelligence in Criminal Justice. *Exploration and Free Views (Tan Suo Yu Zheng Ming)*, (2017) Vol. 10, Available at: <<https://dy.163.com/article/D9AGV5D40521BN7Q.html>> [Accessed 16 October 2020].

<sup>62</sup> Y. Zhang, AI Assisted Sentencing and The Achievement of Judicial Activism. *Journal of Shanghai Institute of Political Science and Law*, Vol. 2, 2019. Available at: <<https://www.pkulaw.com/qikan/e893152e7da617e9fc5b-93c8affdce93bdfb.html>> [Accessed 16 October 2020].

<sup>63</sup> The Supreme People's Court, 'The home page of the information release and inquiry platform for the list of people who are untrustworthy in courts nationwide statement', (Court statement, 8 October 2013) Available at: <<http://zxgk.court.gov.cn/shixin/>> [Accessed 21 August 2020].

<sup>64</sup> China Times, 'The number of old people has soared: 180 times in 5 years, at least 1 per 100 people', (Online article, 22 November 2019) Available at: <<https://finance.sina.com.cn/china/gncj/2019-11-22/doc-iihn-zahi2667884.shtml>> [Accessed 21 August 2020].

<sup>65</sup> Above note 22.

<sup>66</sup> Chinese Government, '2018 Annual Analysis Report on the Untrustworthy Blacklist Released', (Service Information, 19 February 2019) Available at: <[http://www.gov.cn/fuwu/2019-02/19/content\\_5366674.htm](http://www.gov.cn/fuwu/2019-02/19/content_5366674.htm)> [Accessed 21 August 2020].

In addition to the SPC's effort to establish online platforms,<sup>67</sup> as part of national strategy of the smart court transforming judicial services to an online environment, a special type of court called 'Internet Court' has been established. In August 2017, Hangzhou Internet Court, was inaugurated in Hangzhou, Zhejiang Province which is regarded as the China's Capital of e-business because it hosts the headquarters of Alibaba. Hangzhou Internet Court has the jurisdiction to manage a range of internet-related cases, such as contract disputes arising out of online shopping and services.<sup>68</sup> Through a web-based platform entitled 'Hangzhou Internet Court Litigation Platform', all the judicial proceedings can be completed online, from case filing and the serving of court documents through to the exchange and examination of evidence, an online hearing and judgement delivery,<sup>69</sup> although the court may decide to use a face to face process to manage the hearing process.<sup>70</sup> One year later, two other internet courts with similar online litigation platforms were established in Beijing and Guangzhou.

Notably, the Beijing Internet Court issued a *White Paper on the Application of Internet Technology in Judicial Practice*<sup>71</sup> in September 2019 introducing and promoting its progress in the construction of an 'online intelligent' court. The white paper highlights how various technologies (mainly related to AI) are being employed to assist the court to deliver its services, including facial recognition technology to confirm litigant identity as well as machine learning technology to automatically generate judgments for judges.<sup>72</sup> Blockchain technology has also been used in internet courts for evidence preservation purposes and in 2018 Hangzhou Internet Court became the first court in China to recognise blockchain technology as a means of storing evidence to assist in dealing with copyright infringement cases.<sup>73</sup> Later that year, the SPC confirmed that internet courts can rely on evidence provided by the parties that can be authenticated by electronic signatures, time stamps, hash value verification, blockchain and other tamper-proof verification methods.<sup>74</sup>

The primary focus of many of these reforms has been to reduce unreasonable delay. In this regard, Justice Qian Du, President of Hangzhou Internet Court, noted in 2019 that within its two years of operation, the court had delivered around 20,000 judgements and the average hearing time for each case had been saved by 65% compared to face to face hearings.<sup>75</sup>

<sup>67</sup> So far, the SPC has completed one more online platform, 'China Trial Live Broadcast', additional to the three ones. As this platform is less relevant to big data and artificial intelligence, the article doesn't cite it as a specific example here. The weblink to China Trial Live Broadcast is <<http://tingshen.court.gov.cn/>>.

<sup>68</sup> The official webpage of Hangzhou Internet Court, <<https://www.netcourt.gov.cn/>> [Accessed 16 October 2020].

<sup>69</sup> Ibid.

<sup>70</sup> For example, if a party applies to go offline. Please also see Supreme People's Court Network, 'Provisions of the Supreme People's Court on Several Issues Concerning the Trial of Cases by Internet Courts', (Court Provisions, 7 September 2018) Available at: <<http://www.court.gov.cn/zixun-xiangqing-116981.html>> [Accessed 21 August 2020].

<sup>71</sup> Beijing Internet Court, 'White Paper on the Application of Internet Technology in Judicial Practice', (Anniversary Series Paper, 17 August 2019) Available at: <<https://www.chinadaily.com.cn/specials/WhitePaperontheApplicationofInternetTechnologyinJudicialPractice.pdf>> [Accessed 21 August 2020] pp. 11-13.

<sup>72</sup> Ibid. See also China Justice Observer, 'How the Beijing Internet Court Develops and Runs its IT System: Inside China's Internet Courts Series -04', (Online article, 6 October 2019) Available at: <<https://www.chinajusticeobserver.com/a/how-the-beijing-internet-court-develops-and-runs-its-it-system>> [Accessed 21 August 2020].

<sup>73</sup> J. Aki, 'Chinese Internet Court Uses Blockchain To Combat Online Plagiarism', (Online article, 19 December 2018) Available at: <<https://au.finance.yahoo.com/news/chinese-internet-court-uses-blockchain-055508526.html>> [Accessed 16 October 2020].

<sup>74</sup> Supreme People's Court Network, 'Provisions of the Supreme People's Court on Several Issues Concerning the Trial of Cases by Internet Courts', (Judicial Interpretation, 7 September 2018) Available at: <<http://www.court.gov.cn/zixun-xiangqing-116981.html>> [Accessed 21 August 2020].

<sup>75</sup> D. Chen, C. Wang, 'What Hangzhou Internet Court Has Brought to Us in the Past Two Years', (Online article, Xinhua Net Legal Daily, 15 August 2019). Available at: <[http://www.zj.xinhuanet.com/2019-08/15/c\\_1124877777.htm](http://www.zj.xinhuanet.com/2019-08/15/c_1124877777.htm)> [Accessed 16 October 2020].

Beijing Internet Court also reported positively on the efficiency of its online litigation platform in terms of finalising disputes.<sup>76</sup> In addition, internet courts have reported that the online trial mode has helped parties avoid travelling and therefore make the litigation more affordable and justice accessible.<sup>77</sup>

As a result of the global pandemic, China's smart court system increased online hearing processes and reduced face to face hearings. For example, during 3 February to 31 March 2020, there were 706,000 online case filing with all courts in the country with 150,000 online trials and 302,000 online mediation sessions taking place.<sup>78</sup>

To facilitate online litigation, China's courts have also developed justice applications ('apps') to provide mobile access to the public and these apps have been particularly important where lockdowns and social restrictions have been in place as a result of the COVID-19 pandemic. In this regard, an app called 'Ning Bo Mobile Micro Court' ('*Ning Bo Yi Dong Wei Fa Yuan*' in Chinese) was officially launched by Ning Bo Intermediate People's Court in Zhejiang Province in January 2018. The app enables litigants to complete the entire litigation process online, including case filing, serving of legal documents, mediation, evidence exchange, court hearing and enforcement. As of August 2018, there had been around 70,000 cases filed using this app and it was reported that this tool had saved judicial costs and enhanced litigant levels of satisfaction.<sup>79</sup>

In view of the success of this app in Ning Bo region, the SPC continued to develop a national version of 'Mobile Micro Court' (as opposed to the regional version in Ning Bo) and promoted the new version to other parts of the country since August 2018. According to official data, by 31 March 2020, the total users of this app reached 1.39 million and there were 390,000 new users in March alone, representing a growth by 86.78 per cent compared with February. Also, in March, there were 437,000 new cases filed on the app, an increase of 287 per cent than in February. Among these cases, 72.63 per cent took less than 15 minutes for parties to complete the filing process.<sup>80</sup> As Mr. Jianfeng Xu, Director of the Information Centre of the SPC, observed in May 2020 that all 32 High People's Courts in China had used 'Mobile Micro Court' app with nationwide cross-region case filing enabling people to participate in litigation activities during the pandemic.<sup>81</sup>

#### 4. Concerns about Technology Use in The Smart Court

As noted above, the prototype of China's smart court was completed in 2019 equipped with various technologies in order to provide streamlined court services. In this respect, three model internet courts illustrate how technology can be used to support court services for parties, lawyers and judges as the technology can also assist with case management and trial-related activities.

<sup>76</sup> Beijing Internet Court Research Group, 'Current State of Online Trials in China and Its Improvement', (Online article, Network Law Practice Circle, 11 February 2020) Available at: <<https://www.shangyexinzhhi.com/article/494611.html>> [Accessed 16 October 2020].

<sup>77</sup> Ibid.

<sup>78</sup> People's Court News, 'Wisdom to fight the "epidemic", "cloud trial executive" show their skills – Summary of people's courts using the results of smart court construction to carry out trial execution during the epidemic', (Online article, China Court Network, 10 April 2020) Available at: <<http://www.court.gov.cn/zixun-xiangqing-225281.html>> [Accessed 14 August 2020].

<sup>79</sup> People's Court News, 'Move your fingers to a lawsuit', (Online article, China Court Network, 26 August 2020) Available at: <<https://www.chinacourt.org/article/detail/2018/08/id/3471944.shtml>> [Accessed 14 August 2020].

<sup>80</sup> Supreme People's Court, 'The status of judicial protection of intellectual property in Chinese courts', (Online article, 21 April 2020) Available at: <http://www.court.gov.cn/zixun-xiangqing-228161.html> [Last visited 14 August 2020].

<sup>81</sup> Ibid.

There have been numerous positive reports about the introduction of modern technologies into China's courts and the 'smart court' system which have suggested that these developments can promote easier access to justice, enable faster dispute resolution, save costs by moving judicial process online and can ensure that judgments can be enforced.<sup>82</sup> In addition it has also been said that judges benefit from technological innovations that can, assist them with conducting research and drafting judgments resulting in the finalisation of more cases in the same period of work time as previously.<sup>83</sup> In terms of the justice system, technology use has also been said to promote the transparency and openness of the system and strengthen public trust in judiciary.<sup>84</sup>

Despite the claim that there are general benefits for the public, parties, judges and court system, there has been little nuanced evaluation or analysis of the quality of online court services and there may be some divergence between official statements and the perspectives of some judges, parties and lawyers. For example, some judges and lawyers have raised concerns about frustrating technical issues in relation to connectivity and malfunction problems during online hearing processes that may delay hearings.<sup>85</sup> Such technical issues may have resulted in a preference for traditional face to face hearings in different jurisdictions.<sup>86</sup> In this regard, the SPC issued an official document in February 2020 with a view to guiding online litigation activities across China amid the pandemic. In the document titled *Circular of Strengthening and Regulating Online Litigation Services Amid the Pandemic* ('the Circular'),<sup>87</sup> the SPC promoted online litigation services to support the orderly operation of courts. However, the SPC indicated that 'the willingness' of parties to participate in the online hearing process was a precondition for judges to proceed with an online trial and therefore no mandatory online hearing was allowed without the consent of parties.<sup>88</sup>

Some scholars have further raised the issue of digital divide where parties have difficulty in navigating through online litigation platform or have limited knowledge about smart phones and justice apps.<sup>89</sup> This is particularly problematic as, despite high levels of connectivity, it has been estimated that there are approximately 500 million people who have difficulty in accessing internet services within China.<sup>90</sup> Digital capacity and literacy issues may add to the

<sup>82</sup> See note 5, pp. 66–72. In addition, according to *The Blue Book on Rule of Law: 2020 Report on The Informationalisation of Chinese Courts*, by 2019, 100% of the Higher People's Courts accepted online filing. For Intermediate People's Courts and the local courts, the corresponding figures were 99.3% and 97.6%.

<sup>83</sup> For example, according to *The Blue Book on Rule of Law: 2020 Report on The Informationalisation of Chinese Courts*, in 2019 alone, AI enabled system in the courts of Hebei Province assisted with the production of nearly 1.95 million judgments.

<sup>84</sup> See L. Cai, *Internet + Judicial Transformation: The Construction of The Smart Court*. *China Law Society*, (2016) Available at <<https://www.chinalaw.org.cn/portal/article/index/id/20355.html>> [Accessed 16 October 2020].

<sup>85</sup> 'A month of online court hearings, judges and lawyers have all gone crazy', cited in Supreme People's Court Monitor, 'Supreme People's New Vision for the Chinese Courts', (Online article, 4 May 2020) Available at: <<https://supremepeoplescourtmonitor.com/2020/05/04/supreme-peoples-courts-new-vision-for-the-chinese-courts/>> [Last visited 14 September 2020].

<sup>86</sup> N. Byrom, et al., 'The Impact of COVID-19 Measures on the Civil Justice System', Civil Justice Council, (Report, May 2020) 29.

<sup>87</sup> Supreme People's Court, 'Notice of the Supreme People's Court on Strengthening and Standardizing Online Litigation Work during the Prevention and Control of the New Coronary Pneumonia Epidemic', (Practice Notice No. 49, 18 February 2020) Available at: <<http://www.court.gov.cn/zixun-xiangqing-220071.html>> [Last visited 14 August 2020].

<sup>88</sup> Supreme People's Court, 'Provisions on People's Courts Publishing Judgments on the Internet', (Judicial Interpretation No. 19, 31 August 2016) Available at: <<http://www.court.gov.cn/zixun-xiangqing-220071.html>> [Last visited 14 August 2020].

<sup>89</sup> T. Sourdin, et al., *Humans and justice machines: Emergent legal technologies and justice apps*. *Precedent*, (2020) Issue 156 p. 23.

<sup>90</sup> See note 19.

workload of judges where they may be required to inform people about how to use online hearing platforms.<sup>91</sup>

While issues noted above might be gradually solved in the future through technological advances, the provision of litigant support services, literacy enhancement programs and by litigant training initiatives, a central issue remains relating to how ‘justice’ can be achieved as there is a risk that a focus on the cheap and quick resolution of disputes will come at the cost of a just outcome.<sup>92</sup>

In this regard, there are risks that arise that can be linked to the type of technologies that are used.<sup>93</sup> In this respect, the technologies that are currently employed can be grouped into three levels with some overlap between levels and also exert different impacts depending on how the technologies are used. First, and at the most basic level, technology can be used to inform, support and advise people involved in the justice system (‘supportive technology’, such as livestreaming court hearings to the public or enhanced public information via the internet). Second, technology can replace functions and activities that were previously carried out by humans (‘replacement technology’, that includes online case filing and evidence exchange, enhanced case management systems). Finally, at the third level, technology can change the way that judges and legal professionals work and provide for very different forms of justice (‘disruptive technologies’, such as AI-enabled automated judgments), where processes change significantly, and may reshape the adjudicative role.<sup>94</sup>

In the context of the smart court, there are relatively few concerns about supportive technologies that can assist to educate the public, support access to the courts and enable people to better understand dispute resolution processes and options noting that concerns about the digital divide remain (as noted above). Notably, some issues can relate to an uneven approach to supportive technological reform with some courts being more advanced than others.<sup>95</sup> In this regard, it has been observed that the building of the smart court in regions with high economic performance such as Beijing, Shanghai and Zhejiang in East China, has clearly outpaced some economically disadvantaged areas, such as Qinghai and Tibet in West China.<sup>96</sup> It is noted that this is the result of financial issues in that Chinese courts receive their majority of income from the corresponding hierarchy level of administration<sup>97</sup> and therefore it is more likely for local governments with greater budgets to support technologically sophisticated local courts.<sup>98</sup>

<sup>91</sup> See note 76.

<sup>92</sup> T. Sourdin, et al., Just, Quick and Cheap? Civil Dispute Resolution and Technology. *Macquarie Law Journal* (5 August 2019) Available at: <<https://ssrn.com/abstract=3462344>> [Last visited 14 August 2020].

<sup>93</sup> J. Allsop AO CJ, ‘Technology and the Future of the Courts (Special Lecture Series on Technology and the Future of the Legal Profession)’, *Federal Court of Australia*, (2019) Available at: <<https://www.fedcourt.gov.au/digital-law-library/judges-speeches/chief-justice-allsop/allsop-cj-20190326>> [Accessed 16 October 2020].

<sup>94</sup> T. Sourdin, Judge v Robot? Artificial Intelligence and Judicial Decision-Making. *UNSW Law Journal* (2018) 41(4) pp. 1114, 1129.

<sup>95</sup> H. Zhao, L. Wang, ‘The Construction of The Smart Court System needs a boost at the Lower and Intermediate level Courts’, *People’s Court Daily* (8 August 2020). Available at: <[http://rmfyb.chinacourt.org/paper/html/2020-08/08/content\\_170918.htm](http://rmfyb.chinacourt.org/paper/html/2020-08/08/content_170918.htm)> [Accessed 16 October 2020]. See also A. Xu, Chinese judicial justice on the cloud: a future call or a Pandora’s box? An analysis of the ‘intelligent court system’ of China. *Information & Communications Technology Law* (2016) Vol. 26, No. 1, pp. 69-70.

<sup>96</sup> *Ibid.*

<sup>97</sup> The court finances model in China has of course contributed to the suspicion of judicial independence from the administration. Please see Congressional-Executive Commission on China, ‘Judicial Independence in the PRC’, Available at: <<https://www.cecc.gov/judicial-independence-in-the-prc#:~:text=Both%20Communist%20Party%20and%20government,of%20China's%20judges%20and%20courts.&text=centralizing%20control%20over%20court%20finances%20and%20judicial%20salaries%3B%20and>> [Accessed 16 October 2020].

<sup>98</sup> H. Xie, J. Mao, ‘Empirical Analysis and System Reconstruction of Funding Guarantee Mechanism of Basic Court’, *China Court Network*, (Media Release, 21 October 2015) Available at: <<https://www.chinacourt.org/article/detail/2015/10/id/1729913.shtml>> [Last visited on 14 August 2020].

In terms of supportive technologies that enable virtual or online hearings there have already been a range of research programs across the world that are focussed on virtual/remote hearings. For example, in 2018, the UK trialled and then evaluated the country's first-ever 'video hearings' in the tax tribunal, where appellants and representatives from the tax office attended remotely from their home or office.<sup>99</sup> Notably, to better evaluate the quality of virtual hearings, the Civil Justice Council in the United Kingdom recently undertook an evaluation project exploring some of the advantages and challenges presented by the online approach.<sup>100</sup> In Australia, similar pilot online hearings took place in the criminal cases in 2011 with 'mixed' results.<sup>101</sup> It has been noted that during the pandemic, a significant number of courts across the world have made an urgent shift to online mode in response to COVID-19 while the use of internet and other online technologies in the justice system has presented interesting questions around the impact on the right of access to justice, the right to a fair trial and the administration of justice more broadly.<sup>102</sup> In particular, studies have suggested that while video hearings have the potential to support cost and time savings and thereby improve access to justice, the question of 'appropriateness' of cases and people involved for such a virtual approach should be carefully considered by courts.<sup>103</sup> In this regard, research has suggested that in the criminal area, those who appear remotely from police custody or jail are more likely to receive longer sentences than those who appear in person.<sup>104</sup> In this regard, though there is a lack of empirical study in the country in relation to how online hearings impact on sentencing matters, one Chinese prosecutor in Shanghai has argued that certain criminal cases are not appropriate for a 'cloud' hearing.<sup>105</sup> Such cases include those involving defendants with hearing and speech impairment or multiple defendants.<sup>106</sup> Further, remote approaches can make it harder for self-represented litigants to obtain representation and other forms of support as they are separated from a physical courthouse.<sup>107</sup>

Apart from the issue of 'appropriateness', there are concerns about the capacity of online trials to support 'justice' which is linked to ambiguous regulatory rules.<sup>108</sup> In this regard, the SPC has instructed that under circumstances where a plaintiff has provided their consent to

<sup>99</sup> S. Acland-Hood, 'Video hearings put to the test', (UK Government, 13 September 2018) Available at: <<https://insidehmcts.blog.gov.uk/2018/09/13/video-hearings-put-to-the-test/>> [Accessed 16 October 2020].

<sup>100</sup> See note 86.

<sup>101</sup> E. Methven, NSW trials online court for civil cases. *Alternative Law Journal*, (2015) 40(3) Available at: <<https://www.altlj.org/news-and-views/downunderallover/duao-vol-40-3/921-nsw-trials-online-court-for-civil-cases>> [Accessed 16 October 2020] p. 212.

<sup>102</sup> T. Sourdin, et al. Court innovations and access to justice in times of crisis. *Health Policy and Technology*, (2020) Available at <<https://www.sciencedirect.com/science/article/pii/S2211883720300927>> [Accessed 16 October 2020].

<sup>103</sup> See note 97.

<sup>104</sup> M. Terry, et al. Virtual Court Pilot Outcome Evaluation, *Ministry of Justice Research Series 21/10*, (December 2010) Available at: <<https://www.justice.gov.uk/downloads/publications/research-and-analysis/moj-research/virtual-courts.pdf>> [Accessed 16 October 2020] pp. 25-26.

<sup>105</sup> 'Cloud' hearings is another term commonly used in China to refer to 'online' hearings.

<sup>106</sup> J. Chen, 'Legal Issues around the Online hearing of Criminal Cases,' *Proceedings of Legal Forum of 2020 World Artificial Intelligence Conference*, Shanghai. Available at: <<http://gb.oversea.cnki.net/KCMS/detail/detail.aspx?filename=SHFX202007001012&dbcode=IPFD&dbname=IPFDTEMP>> [Accessed 16 October 2020].

<sup>107</sup> I. Eagly, Remote Adjudication in Immigration. *Northwestern University law review*, (2015) 109(4), p.938.

<sup>108</sup> For example, Judge Hong Wu from a local court in Jiangsu Province identified a few justice issues of online hearings due to the absence of clear guidelines for courts, including the 'appropriate' scope of cases that can be heard online, evidence exchange and examination rules for online hearings etc. Professor Yuqian Bi from China University of Political Science and Law further warned that it was essential to have legal rights of parties protected during online trials and that the principle of due process cannot be violated by moving hearings online. For further discussion, please see Y. Zhao, *Investigation into 'Cloud' Trial and 'Cloud' Case Handling during the Pandemic*, Legal Daily, 12 March 2020. Available at: <[http://www.legaldaily.com.cn/index/content/2020-03/12/content\\_8140986.htm](http://www.legaldaily.com.cn/index/content/2020-03/12/content_8140986.htm)> [Accessed 16 October 2020].

an online hearing but failed to appear on the agreed time or dropped from the online hearing without the consent of a judge, except some justified reasons (such as connectivity, blackout, force majeure), judges 'may' rule that this may constitute a 'refusal to appear' and addressed accordingly by 'the relevant laws'.<sup>109</sup> As Liu suggested that the wording of 'may' might be interpreted as leaving the decision to courts in their own local rules resulting in differing judicial practices across the country.<sup>110</sup>

For example, in April 2020, Tong'an District People's Court in Fujian Province heard a case arising out of a car repair service. The plaintiff had not indicated any opposition to an online hearing (after receiving the court notification of online process) and then failed to appear on the listed day as a result of a business trip. The plaintiff had apparently asked his younger brother to appear as the plaintiff 'himself' with a face mask on. The judge eventually found out that the plaintiff's brother instead of the plaintiff himself was attending the trial and therefore rendered a ruling that the absence of the plaintiff and his failure to appoint an agent by a written document satisfied the judge that the plaintiff wanted to 'withdraw' his claim.<sup>111</sup> Ironically, according to the SPC's binding *Judicial Interpretation on Civil Procedure Law*, after a court ruling of case withdrawal, a plaintiff still has the right to file another case based on the same claim.<sup>112</sup> Clearly, the ambiguity of the relevant rules could result in the expenditure of unnecessary time and cost for judges, parties and lawyers and as a result lawyers have called on clients for caution before deciding on using the 'online' trial from the perspective of protecting their interests.<sup>113</sup>

As to more disruptive technological impacts, concerns can be linked to the extent to which justice values may not be aligned with some disruptive approaches that may mean that judges are replaced with forms of AI.<sup>114</sup> In the context of the smart court, justice concerns have encompassed issues relating to the role of 'judges', the transparency of decision making and the reliability of data 'fed' to artificial intelligence. For example, despite efficiency and uniformity being identified as the 'main strengths of AI adjudication',<sup>115</sup> Ji has critically commented that the automated judgments deriving from AI technology raises questions about whether machines, rather than judges can be referred to as 'judges'.<sup>116</sup>

<sup>109</sup> Supreme People's Courts, 'Notice of the Supreme People's Court on Strengthening and Standardizing Online Litigation Work during the Prevention and Control of the New Coronary Pneumonia Epidemic', (Practise Notice, 18 February 2020) [8] Available at: <<http://www.court.gov.cn/zixun-xiangqing-220071.html>> [Last visited 14 August 2020].

<sup>110</sup> J. Liu, Z. Liu, 'Several Issues of Online Trial during the Epidemic', *Zhonglun View* (Online article, 9 March 2020) Available at: <<http://www.zhonglun.com/Content/2020/03-09/1636003112.html>> [Last visited 14 August 2020].

<sup>111</sup> C. Li, Y. Guo, 'Brother pretending to be brother to hold court? Reprimanded in court and dealt with withdrawn!', *China Court Network* (Online article, 28 April 2020) Available at: <<https://www.chinacourt.org/article/detail/2020/04/id/5148873.shtml>> [Accessed 14 August 2020].

<sup>112</sup> Supreme People's Court, 'Opinions of the Supreme People's Court on Several Issues Concerning the Application of the Civil Procedure Law of the People's Republic of China', *People* (Online article, 14 July 1992) [144] Available at: <<http://www.people.com.cn/zixun/flfgk/item/dwjf/falv/9/9-1-1-08.html>> [Accessed 14 August 2020].

<sup>113</sup> See note 106. In regard to procedural fairness, see Michael Legg, The COVID-19 Pandemic, The Courts and Online Hearings: Maintaining Open Justice, Procedural Fairness and Impartiality. *Forthcoming (2021) 49 Federal Law Review [2020] UNSWLRS 46*. Available at <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3681165](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3681165)> [Accessed 16 October 2020].

<sup>114</sup> T. Sourdin, B. Li, 'Technological Impacts on Civil Dispute Resolution', *Machine Lawyering* (Blog post, 21 November 2019) Available at: <<https://www.legalanalytics.law.cuhk.edu.hk/post/2019/11/21/technological-impacts-on-civil-dispute-resolution>> [Accessed 14 August 2020].

<sup>115</sup> R. Re, A. Solow-Niederman, Developing Artificially Intelligent Justice. *Stanford Technology Law Review*, (2019) 22, pp. 242, 255.

<sup>116</sup> W. Ji, The Change of Jurisdiction in the Era of Artificial Intelligence. *Oriental Law*, (2018) Issue 1, pp. 131-132.

In addition, although the function of automated judgment in the smart court may be helpful in reducing judicial workload as draft judicial decisions can be generated, and producing similar outcomes for like cases, it is possible that judges could over rely on AI recommendations and be reluctant to depart from such recommendations thereby raising issues about judicial impartiality and also whether such judges are effectively 'instrumentalised judges'.<sup>117</sup> Li et al have also challenged the commonly used technical approaches in legal judgment prediction in China by highlighting that AI and natural language processing may fail to consider and learn sufficient semantic representations from different parts of case description.<sup>118</sup> As a result, there is a risk that the independence of 'judges' could be undermined by the combined intentions of programmers, software engineers, information technology companies and other entities so long as they participate in the design of the automated judicial decision making process.<sup>119</sup> The full scale involvement of legal technology companies in justice system in China is a particular concern in the context of the smart court, which highlights the risks in commercialising and outsourcing judicial services.<sup>120</sup>

As seen from the **Table 1** below, seven major legal technology companies have effectively provided their services to courts to support the building of the smart court system and competed for the market share across the country.<sup>121</sup> It is not clear what measures the SPC has undertaken to ensure that justice is not inappropriately influenced by legal tech businesses although the SPC has taken a leadership role in building the smart court. In addition, as the smart court system in different courts has been designed and developed by various companies, there is an issue about incompatibility amongst those systems leading to a difficulty in data sharing due to a lack of technical guidelines.<sup>122</sup> As a result, there has been a call for the SPC to play a more effective leadership role by unifying the technical standards for the 'informationalisation' of the courts.<sup>123</sup>

Another related concern is that the legal technology companies have access to huge amount of judicial data when designing their products for the courts and this clearly poses an information security challenge<sup>124</sup> as well as a risk that data collected by the system developers may be vulnerable to collection and misuse by unauthorised third parties.<sup>125</sup>

In addition, Zuo has noted that in China, the quantity and quality of judicial data that has been relied on by developers to provide repositories for judges to facilitate their decision

<sup>117</sup> D. Carneiro et al. Online dispute resolution: an artificial intelligence perspective. *Artificial Intelligence Review* (2014), 41, p. 211. Available at: <file:///C:/Users/bl860/Downloads/Carneiro2014\_Article\_OnlineDisputeResolutionAnArtif.pdf> [Accessed 9 October 2020].

<sup>118</sup> S. Li et al. MANN: A Multichannel Attentive Neural Network for Legal Judgment Prediction. *IEEE Access*, (2019) Vol. 7, Available at: <https://ieeexplore.ieee.org/abstract/document/8861054> [Accessed 9 October 2020].

<sup>119</sup> Re et al. note 117.

<sup>120</sup> Xu, note 95.

<sup>121</sup> Hua Chuang Securities, 'Research Report on IT Industry in China: Legal Technology and the Building of the Smart Court', 2019, Available at: <http://pdf.dcfw.com/pdf/H3\_AP201904011312878971\_1.pdf> [Accessed 9 October 2020].

<sup>122</sup> H. Xue, 'AI boosts the construction of the smart court', *People's Court Daily* (2 August 2019). Available at: <http://www.legaldaily.com.cn/commentary/content/2019-08/02/content\_7952889.htm> [Accessed 9 October 2020].

<sup>123</sup> L. Lei, 'Yang Wanming discussion with Yan Aoshuang', *People's Court Daily* (5 September 2020). Available at: <http://rmfyb.chinacourt.org/paper/html/2020-09/05/content\_171834.htm?div=-1> [Accessed 9 October 2020].

<sup>124</sup> Anheng Information, 'How Secure the Smart Court would be?', (Online article, 2020) Available at: <https://www.sohu.com/a/399621209\_783750> [Accessed 9 October 2020].

<sup>125</sup> See T. Sourdin et al. *Digital Technology and Justice: Justice Apps*, Routledge, November 2020.

**Table 1:** Major Technological Entities in the ‘Informationalisation’ Process of Chinese Courts.<sup>126</sup>

<b>Name</b>	<b>Time of Establishment</b>	<b>Introduction</b>
Beijing Thunisoft Corp Ltd	2001	One of the leading legal tech companies in China. The business has extended to the courts in Beijing and other over 10 provinces, including the ‘Wise Judge’ system in Beijing.
iFlytek	1999	One of the leading legal tech companies in China. The business has extended to the courts across the country, specialising in ‘voice to text’ technology.
Chin@sys	2001	Services have been procured by local and/or intermediate courts in a few provinces including Jiangsu, Liaoning, Heilongjiang, Sichuan and Henan.
Nanjing Tongdahai Network Engineering Co., Ltd	1995	Employing over 600 staff it has outreach across China. It developed a judgment enforcement app for the courts in Nantong City.
Yunjiacloud	2014	Specialising in the big data technology and its use in justice system.
Xinshiyun	2011	Specialising in cloud computing technology and cloud related services, including livestreaming court trial and video recording. It has the country’s largest storage centre of the court trial videos.
Qingdao Eastsoft	1993	Currently servicing over 200 courts across over 10 provinces in the country.

making is of questionable value.<sup>127</sup> Specifically, Ma, Yu and He have commented that only 50 percent of the total court judgments in China had been moved online and this has been used to inform data capture. With nearly half of all judgments unavailable to developers, it is questionable how reliable any suggested outcomes may be.<sup>128</sup> Wang has further noted automated judgment processes require sophisticated machine learning to read, comprehend and then assess the texts of sample judgments. However, in practice, most developers have utilised general language processing technology which is then applied to specific ‘justice’ settings, which raises additional issues about the accuracy of automated judgments.<sup>129</sup>

<sup>126</sup> The original table is from the research report in note 121. It was slightly edited by the authors when adopted into this article.

<sup>127</sup> W. Zuo, Some Thoughts on Prospects of the Application of Legal Artificial Intelligence in China. *Tsinghua University Law Journal* (2018) Issue 2, pp. 115–117.

<sup>128</sup> C. Ma et al. Big Data Analysis: Open Report on China’s Effort to Move Court Judgements Online. *China Law Review* (2016) 4, pp. 195–246. Further, authors note that apart from judgment data, other data should be relied on as the former can be aberrant in that it may only represent outcomes in a small percentage of cases lodged with a court. In the context of legal research in China, however, the collection and analysis of data by researchers themselves (instead of relying on the official data) could be difficult. In this regard, Professor Weimin Zuo at Sichuan University observed in his article entitled ‘A Burgeoning Legal Research Model: Empirical Study’ that the empirical legal study was only at its inception stage in the country and that overall legal scholars lack the statistical skills to employ the empirical approach. The article is available at <<https://www.ilawpress.com/material/detail/439144046485570048>>.

<sup>129</sup> L. Wang, Judicial Big Data and Technical Barriers for Developing Artificial Intelligence. *China Law Review* (2018) Issue 2, p. 61.

## 5. Conclusions

China's smart court system is directed at providing 'quick' and 'just' judicial services to a large population in a rapidly growing economy. There are clearly issues that emerge with increasing case numbers and insufficient judicial capacity. The uniformity of judgments relating to 'like' cases across the country has also been an ongoing issue and the national leadership has sought to rely on newer technologies to address each of these issues. Against the background of a need for justice reform, the smart court has been integrated into China's national strategy for informatisation and will continue to be the operational approach adopted for all courts in China. The smart court has embraced various newer technologies, supported by AI, the use of big data, and to a limited extent blockchain approaches.

The evolution of the smart court system, originated from late 1990s when China started to have access to global internet services, has differed from developments in many other jurisdictions. The initial digitisation of all court documents provided the foundation for courts to move their judicial activities online although initial digitisation was directed at judicial administration tasks. Gradually, internet assisted trials enabled courts to be more flexible in addressing circumstances such as parties unable to physically appear in court. It was not until 2014 that courts started to comprehensively introduce more technological innovations that were externally focussed and intended to provide one stop court services to parties, including case filing, serving of court documents, evidence exchange and examination, hearing and enforcement.

Judges have benefited from many of these technological advances and the SPC considers that the more recent smart court reforms have enabled greater access to transparent justice for all and contributed to the faster case settlement. Despite this, there are concerns relating to some of these approaches. These include issues linked to automated judgments, digital divide issues, judicial independence, as well as concerns linked to privacy and data protection.

## Competing Interests

The authors have no competing interests to declare.

**How to cite this article:** Changqing Shi, Tania Sourdin and Bin Li, 'The Smart Court – A New Pathway to Justice in China?' (2021) 12(1) *International Journal for Court Administration* 4. DOI: <https://doi.org/10.36745/ijca.367>

**Published:** 11 March 2021

**Copyright:** © 2021 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC-BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See <http://creativecommons.org/licenses/by/4.0/>.



*International Journal for Court Administration* is a peer-reviewed open access journal published by International Association for Court Administration.

**OPEN ACCESS** The Open Access icon, which is a stylized 'O' with a padlock symbol inside it.