

**Oxford Nanopore Technologies’ views on Illumina’s and PacBio’s response to the CMA’s notice of possible remedies (dated 7<sup>th</sup> November 2019)**

**A. Summary**

Illumina and PacBio (together ‘the Parties’)’s remedies proposal dated 7 November, 2019 (“the proposal”) is wholly inadequate and does nothing to offset the anticompetitive effects of the merger either in the UK or on a worldwide basis.

Notwithstanding the proposal, the merger would still result in a situation where Illumina/PacBio combined would have a market share in the UK of 90%+ and worldwide 80%+. The merger would not only eliminate the competition Illumina is facing from PacBio, but would enhance the ability to foreclose ONT and other parties from the market, including through aggressive commercial bundling and pricing practices.

The Parties’ proposal is egregiously misleading. It includes offering patents that have been revoked,<sup>1</sup> while also excluding substantially relevant patents and applications from PacBio’s intellectual property (IP) portfolio and pipeline. In addition, the offer does not include *any* of the relevant Illumina patents and/or patent applications.

Finally, ONT strongly objects to how Illumina has characterised the benefits of the proposed remedies for ONT which, rather than a genuine offer to address serious concerns, appears to be an attempt to publicly discredit ONT.

In sections B, C and D below, we set out our arguments in more detail. We have also provided comments on the specific patents offered and examples of relevant IP omitted by the Parties in Annex 1.

**B. Examples of inadequacy of the patent package offered**

Rather than attempting to offer an intellectual property package aimed at giving ONT freedom to operate, the remedies proposal is more notable for what it fails to offer.

The remedies proposal is territorially limited in scope and does not include patents in territories other than Europe and the U.S..

The proposal notably omits to include certain patents previously asserted against ONT by PacBio and Illumina. It also omits patents and pending applications which are directly related to those patents currently being asserted in patent litigation against ONT (Annex 1). Further, the offer does not include the majority of the Parties’ existing IP in this area, nor does it cover any of their future filings.

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<sup>1</sup> The European Patents Number 3045542 and Number 3170904 have been revoked by the European Patent Office (‘EPO’) in first instance decisions in all countries relevant under the European Patent Convention. PacBio appealed both revocation decisions earlier in 2019 and the revocations are now pending final decision by the EPO’s Board of Appeal.

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In addition, the proposed remedy includes patents EP3045542 and EP3170904 that were revoked this year by the European Patent Office (EPO).<sup>2</sup> The EPO effectively ruled that the claims were limited to a method of template directed sequencing by synthesis which Oxford Nanopore's sequencing does not perform. PacBio is currently pursuing variations on these patents from the same patent family which could form part of future litigation against ONT. These are also not included in the remedy proposal.

Despite the fact that neither PacBio nor Illumina have nanopore sequencing products, both are actively seeking patents in this space with the apparent intent of blocking access to the sequencing market. Illumina has represented that a driver of its purchase of PacBio is PacBio's nanopore expertise, but there does not appear to be anyone at PacBio who has ever done nanopore sequencing. Instead, the Parties are actively seeking concept patents to block ONT. An example of this is the ongoing litigation in Delaware, where PacBio is asserting four patents that it has not ever practiced and are not embodied in any of its products. Beyond these four patents, the USPTO recently issued two additional patents related to the patents at issue in the Delaware case that seek to preclude ONT from offering its nanopore sequencing products in the U.S.

Neither appears to have plans to launch a nanopore product, however the Parties have expended substantial resources in litigation against ONT. The remedy proposal clearly preserves Illumina and PacBio's ability to attempt to thwart competition from ONT and other third parties either via patent litigation, or through anti-competitive commercial practices.

ONT's comments on specific patents offered and critical IP omitted by the Parties are set out in Annex to this memorandum.

### **C. The Parties' remedies proposal seeks to publicly discredit ONT and mischaracterises the purported benefits**

ONT strongly objects to how the Parties, in an attempt to undermine ONT, has characterised the benefits of the proposed remedies for ONT, and it refutes the claimed benefits.

ONT objects to the Parties' public characterisation of the remedy proposal as providing ONT with the IP needed to improve its accuracy. ONT has a proven track record of developing and improving its own technology in many ways. The Parties appear to have used this as an opportunity to discredit ONT's products by overstating and oversimplifying ONT's alleged "accuracy problems".

The Parties claim that a licence to ONT of the patents referred to in Annex 1 of their Response to the CMA's Notice of Possible Remedies would allow ONT to commercialise "2D products". In the settlement agreement between ONT and PacBio, ONT is prevented from offering 2D products in the UK and Germany until 2023 irrespective of the remedies proposed.<sup>3</sup> Further, the Parties offering is not relevant as these 2D products were superceded in May 2017 and are no longer sold. ONT believes that reintroducing these obsolete products would have a minimal impact on the

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<sup>2</sup> See Footnote 1 above.

<sup>3</sup> See also Annex 7 of ONT's response to S109 Notice.

competitive dynamics in this market. ONT has developed new, alternative methods for high-accuracy sequencing that are outside the scope of the settlement agreement.

The Parties claim that their remedies proposal “*would remove the threat of an injunction potentially preventing the sale of all ONT sequencing products in the U.S.*”. This is an exaggeration as even in the unlikely event that PacBio were successful, it would not prevent ONT from selling all sequencing products in the U.S.. While the Parties’ proposed licences would render PacBio’s current claims of patent infringement moot, their scope is not broad enough to protect ONT from further vexatious claims and serial litigation by the Parties in the U.S. and elsewhere. In any case, ONT believes that an injunction is a highly unlikely outcome and views the litigation by PacBio as without merit.

#### **D. The Parties’ remedies proposal does not address competition concerns**

The CMA noted that the NGS market is currently characterised by the dominant Illumina with a few smaller players; PacBio, BGI, ONT, Qiagen, Thermo Fisher. The CMA also noted that the proposal would result in a situation where Illumina/PacBio combined would have a market share in the UK of 90%+ and worldwide 80%+.

Meanwhile, in October 2019, Qiagen announced the shuttering of its own sequencing platform and signed an agreement to use the Illumina platform instead. More recently, on November 15<sup>th</sup> Qiagen announced that are reviewing acquisition offers from multiple parties which may affect the competitive dynamics.<sup>4</sup>

The proposed merger between Illumina and PacBio would reduce the number of Illumina competitors even further, stifle market entrants, and severely affect the ability of the remaining players to compete.

#### **E. Conclusion**

- The proposed merger between Illumina and PacBio would strengthen Illumina’s dominance and significantly reduce the competitive forces on Illumina.
- The merger would serve to strengthen Illumina’s ability to foreclose ONT and block potential new market entrants.
- The proposed IP remedies do nothing to address the underlying issue that the merger would allow Illumina to subsume a disruptive long read technology platform, further cementing its monopolistic position in the marketplace.
- ONT believes that in order to preserve competition in this market, the most suitable remedy is to block the proposed merger.

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<sup>4</sup> See <https://www.businesswire.com/news/home/20191115005474/en/QIAGEN-Receives-Conditional-Non-binding-Indications-Interest-Enters>