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Memo

To: Jennifer Hambleton and Jovana Nedeljkov, MERW

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From: Will Taylor, Jono Henderson and Asahi Koizumi

Subject: **ATC/Serato: Response to Oxera submission on the SOI**

1. Summary

1. On 5 April 2024 a report prepared for inMusic by Oxera was published on the New Zealand Commerce Commission's (NZCC) case register for the proposed acquisition of Serato by AlphaTheta Corporation (ATC).
2. At a high level, Oxera's report critiques our assessment of market share for the software market, the viability of foreclosed users switching to a non-Serato software, the effect of foreclosure on DJs who value the "quality" of DJ software, and exclusion of users who MIDI map rekordbox post foreclosure when assessing the incentive to foreclose. In this note we respond to these critiques.

2. We do not place much weight on historic software market shares

3. In section 3A of their report, Oxera questions the methodology we used to produce market shares. We note first that we did not produce novel estimates – we rescaled the Clearance Application[1] estimates to conservatively exclude mobile-only developers (and openly acknowledged this)[2]. So it is not clear why Oxera state that they do not have access to the methodology we applied.[3]
4. We do not consider it important to debate the precise numbers given that neither we nor Oxera has access to reliable market share data.

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[1] AlphaTheta Corporation Serato Clearance Application, 6 October 2023, Table 3.

[2] At para 59 of the NERA report we state "*Table 2.2 presents our rescaling of ATC's market share estimates to focus just on providers of desktop software. We have done this rescaling by removing the mobile-only providers from Table 3 of the Clearance Applications (but retaining the cross-platform developers including the proportion of their share contributed by mobile apps).*"

[3] Oxera report, para 3.22.

5. Rather Oxera's key concern with the market share calculations we presented appears to be a concern about market definition. Oxera says that our report was *"somewhat vague with respect to market definition"* and that we implied desktop and mobile software *"could be considered part of the same market"*.[4] Market definition is a legal exercise for which economics can be informative, but ultimately, from an economics perspective the key question concerns the constraints that would exist post-acquisition. We therefore intentionally did not make a definitive conclusion regarding market definition – this was not the question we were addressing.

6. An "in or out" approach (which is inevitable in constructing market shares) is an oversimplification, and one that economists are concerned about, given it can be artificial. For example, as noted by Farrell and Shapiro (2010):[5]

> *Product differentiation can make defining the relevant market problematic, notably because products must be ruled "in" or "out", creating a risk that the outcome of a merger investigation or case may turn on an inevitably artificial line-drawing exercise.*

7. Historic market shares are unlikely to be informative of future constraints in a dynamic market. Competitors (including mobile apps) may grow in future and/or constrain the merged entity through innovation regardless of market share – especially if the merger entity were to worsen its offering through any unilateral or vertical strategies post-merger.

3. Oxera speculatively asserts the importance and unattainability of Serato's quality and integration

8. In section 3B of their report, Oxera questions our finding that software developers can reposition to compete more closely with Serato. The basis for their critique is an incorrectly paraphrased version of our reasoning:[6]

> *According to this reasoning, when presented with the choice between two products that are in principle the same, DJs decide to purchase the more expensive option as a result of advertising. The NERA report does not articulate why this would be the case.*

9. We did not assert that software differentiation (and DJs' subsequent selection of software) is based entirely on advertising.

10. Our observation was that the underlying desktop software product was relatively homogenous, but developers currently differentiate their offerings to target a particular niche of customers including through price, price structure, features, and marketing.[7] Our corresponding hypothesis was that there are no material barriers to them repositioning if Serato worsens its offering in future, which provide a constraint on Serato.

11. We also more broadly discussed why barriers to entry are likely to be low, which Oxera does not engage with.

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[4] Oxera report, paras 3.6-3.7.

[5] Farrell, J and Shapiro, C, "Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition", *The B.E. Journal of Theoretical Economics*, Vol 10, Iss. 1, 2010.

[6] Oxera report, para 3.24.

[7] For example, see paras 68, 69, 80 of NERA report.

12. Oxera emphasises the importance of software "quality" and "performance" (seemingly over features or the UX/UI of the software).[8] It does not fully explain what it means by these attributes but appears to equate them with seamless hardware integration[9] and asserts without evidence that achieving this is *"a process that is unlikely to be actionable in a short period of time and at low cost"*.[10]

13. In section 4, Oxera presents analysis of the merged entity's ability and incentive to foreclose hardware rivals. Much of this analysis relies on the assumption that no other software developer could match Serato's quality post-merger, or that no other hardware/software combination could match ATC/Serato for seamless integration post-merger. For example (emphasis added, footnotes omitted):[11]

> *inMusic's experience of working closely with Serato to guarantee integration shows that achieving full integration is a complex and lengthy process. Since different pieces of hardware are fully compatible with only a few software packages, **DJs that had to switch away from Serato following foreclosure would have limited option (if any) to achieve the same level of performance with the existing hardware**.*
>
> *[…]*
>
> ***Faced with an inability to achieve a similar level of quality and stability with existing non-integrated software packages**, some DJs may not have any option other than to switch to a fully integrated software-hardware solution provided by ATC, which would be the safest alternative available, regardless of the cost of purchasing the new hardware.*
>
> *[…]*
>
> ***DJs with lower requirements may try to continue using the existing hardware with sub-optimal alternative software packages.** However, in the medium term, they may find it preferable to switch to ATC hardware. This could happen, for example, when they improve their skills and decide to upgrade to higher-functionality systems, or as part of the regular replacement cycle of their hardware. […]*

14. This is a static view that neglects the possibility of rival responses:

    A. Software rivals would have an incentive to enter, expand, reposition, or improve their product to respond to unilateral or vertical strategies by the merged entity.

    B. This assumes that hardware rivals are helpless. While some currently appear to focus their efforts on integration with Serato[12] , faced with foreclosure they would have an incentive to instead introduce their own software, improve their existing software (as many rivals

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[8] E.g. at 3.26 Oxera state that *"For some DJs, quality is of paramount importance and this is the likely driver of certain products being preferred and the enabler of the observed price differences"*. Though we note later at 4.9 Oxera appears to clarify that its view is that for beginner DJs quality is less important and mobile apps may be substitute for desktop software, but for experienced DJs, "*quality and (in particular) seamless integration of the chosen DJ hardware are likely to be as important as software functionalities*."

[9] For example, see paras 3.27, 4.9, 4.23 of Oxera report.

[10] Oxera report, para 3.28.

[11] Oxera report, paras 4.14, 4.16, and 4.18.

[12] For example, inMusic's experience of working closely with Serato that Oxera outlines at para 4.14.

already have their own software), or endorse compatibility with non-Serato software providers (which many do already)[13].

C. Both software and hardware rivals would have every incentive to ensure their products were well-integrated. Oxera says that foreclosed DJs would have no other option but to switch to ATC if they want to achieve the same level of hardware/software integration, but this is unlikely given the various other competitors that provide software with the intention of it being used with a wide range of hardware. For example, Virtual DJ and Algoriddim are each compatible with at least 31[14] and 14[15] brands of hardware respectively. This also demonstrates that the difficulties of achieving integration are overstated by Oxera. In this regard, we note Serato's 8 April submission that if it had *no prior involvement with the development of a hardware product*, it would take 2 months to integrate with that hardware.[16] Additionally, we note that among the 20 most popular DJ controllers used with Serato DJ from 31 January 2023 to 31 January 2024, **SCI**[ ] were officially supported by djay iOS, **SCI**[ ] by djay OSX, and **SCI**[ ] by Virtual DJ.

15. Oxera does claim, when discussing partial foreclosure, that a rival response may occur but take too long to be effective.[17] We do not claim any technical expertise in the time taken for hardware-software integration, so do not know how long it would take. To the extent that any foreclosure strategy would necessarily play out and only have an effect over a longer period of time (which we discuss below at 31-32, but broadly this would be when existing hardware models are not effected and/or the foreclosure strategy is partial), rivals would not need to action these responses immediately.

16. Fundamentally, Oxera's position appears to be premised on Serato having an intrinsic and/or insurmountable advantage over *any* rival software products. Even if Serato is currently the highest-quality or best-integrated DJ software, there is no evidence that this will continue to be the case in perpetuity.

4. Oxera's analysis is erroneously focused on professional DJs using high-end hardware

17. Oxera states that we identified high-end hardware as being "more prone to vertical foreclosure".[18] This is not correct.

18. Our actual finding was that higher hardware margins mechanically produce lower critical diversion ratios (if calculated specifically for high-end hardware), but there would likely be an offsetting effect of actual diversion also being much lower due to users being less willing and

[13] For one example, see InMusic's Rane ONE controller which advertises compatibility with Algoriddim's djay Pro AI and Virtual DJ as well as Serato DJ Pro. From https://www.rane.com/one, accessed on 15 April 2024.

[14] From https://www.virtualdj.com/products/hardware.html, accessed on 15 April 2024. See the 'Brand' dropdown box, which lists 31 brands plus an 'Other' category.

[15] From https://www.algoriddim.com/hardware, accessed on 15 April 2024.

[16] Serato 8 April submission on the SOI, para 205.

[17] Oxera report, para 4.41.

[18] Oxera report, para 3.16.

able to switch high-end hardware.[19] Put simply, incentive to foreclose might appear higher for high-end hardware users but in relative terms the ability to foreclose would be lower (noting that our more general finding was that there would be no ability to foreclose regardless because there are many substitutes for Serato and barriers to entry are likely to be low)[20] .

19. Much of Oxera's analysis of vertical effects in section 4 relies on the opposing idea that users of high-end non-ATC hardware are likely to be professional DJs that would be forced to switch hardware regardless of cost if Serato became incompatible with their device, and then would become averse to switching back. In other words, Oxera asserts that these users will be successfully and permanently foreclosed. For example (emphasis added, footnotes omitted):[21]

> *Faced with an inability to achieve a similar level of quality and stability with existing non-integrated software packages, some DJs may not have any option other than to switch to a fully integrated software-hardware solution provided by ATC, which would be the safest alternative available,* ***regardless of the cost*** *of purchasing the new hardware.* ***The DJs who are most likely to switch are the professional ones****, who often play their music in public and for which quality and reliability are paramount features.* ***These DJs are also the ones that are most likely to purchase more expensive DJ hardware, and therefore they are the least price-sensitive (and most profitable) group of customers.***
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> ***Once they have switched to Pioneer DJ, these DJs are unlikely to wish to switch again to other hardware brands, to avoid incurring the cost of changing hardware again.*** *This would harm non-ATC hardware manufacturers considerably since, as explained above and discussed more in section 4B, the customers who would switch are the most profitable customers of DJ hardware manufacturers.*

20. Oxera provides no evidence for these claims. As we discuss in the previous section, it has not articulated why Serato's quality and integration would not be replicable by any other rival. Oxera assumes that professional DJs are less price-sensitive and would likely switch to ATC hardware regardless of cost, but somewhat contradictingly suggests they would be unlikely to switch hardware again in future (thus downplaying any dynamic considerations). This also ignores the possibility that professional DJs may often use hardware provided by the venue rather than supplying their own, as we discuss in the next paragraph.

21. We also understand that professional DJs are less likely to be using controllers, which the NZCC has identified as the focus of its analysis.[22] Oxera doesn't address our point that DJs using high-end hardware will be difficult to foreclose because high-end hardware usually has embedded software nor do they acknowledge that the NZCC in their SOI states that professional DJs often seek a DJ player/mixer set-up (which does not require a laptop) to be provided by the venue and that "[t]hese customers are unlikely to view controllers as substitutable".[23]

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19 NERA report, paras 180-181. Oxera describes this finding more accurately at 4.20-4.22 of their report.

20 NERA report, para 4(c)(i).

21 Oxera report, paras 4.16-4.17.

22 NZCC SOI, para 38.

23 NZCC SOI, para37.1.1.

22. If we assume for now that professional DJs are more likely to switch hardware than non-professional DJs, then for this to inform the merged entity's foreclosure calculus, one of two conditions would need to hold:

    A. the merged entity would need to be able to specifically target a foreclosure strategy at professional DJs; or

    B. professional DJs would need to comprise a sufficient proportion of the overall foreclosed user base to be influential on the degree of actual diversion.

23. On the first condition, it's not clear and Oxera have not set out how the merged entity could discriminate to professional users when applying a foreclosure strategy, beyond targeting a foreclosure strategy at specific higher end devices, which is what our existing modelling already captures. This is why our critical diversion analysis (at its most granular) looks at individual hardware product groups and scales critical diversion ratios by hardware margin. We also note this is consistent with the NZCC's view that there are unlikely to be separate customer markets for different types of users.[24]

24. On the second condition, we cannot conclude definitively as we do not have information on the proportion of DJs that are professional. But if the merged entity targeted all DJ hardware (or all controllers) with a foreclosure strategy, it is not clear that there are enough professional DJs to 'move the needle' on actual diversion, even if all of them were diverted. If the merged entity were to only foreclose a subset of devices (e.g. high-end controllers and/or all-in-ones), it is possible that professional DJs might comprise a relatively higher proportion, as Oxera suggests. If this is the case, as already noted, our existing category level modelling essentially already captures this. However:

    A. As already noted, these users are likely to be the ones the merged entity would have the least ability to foreclose; and

    B. it is also not clear that the merged entity would be able to target a foreclosure strategy at only these devices, as that neglects the possibility of hardware rivals retaliating by ceasing to pay royalties for (and integrate Serato with) their lower-end controllers.

25. To summarise, Oxera's report is erroneously concerned about the effect of foreclosure on a demographic of professional DJs that supposedly rely on Serato, but does not evaluate whether it would be possible for the merged entity to exploit this reliance without sacrificing significant profits from other users.

[24] NZCC SOI, para 31.

5. Dynamic factors are likely to depress actual diversion below existing market shares

26. In section 4B.1 of their report, Oxera estimates actual diversion ratios (ADRs) and compares them with the critical diversion ratios (CDRs) that we calculated in section 3.3.2 of our report. We cannot see Oxera's results due to redaction, but we infer that their ADRs are higher than our CDRs, which would imply ability and incentive to foreclose.[25]

27. However, in our view Oxera's analysis of actual diversion is incomplete.

28. Oxera explains that it calculates ADRs based on hardware market shares, with the assumption being that post-foreclosure diversion to ATC would be proportional to its share of the hardware market.[26] While this is a common method of inferring diversion ratios in the absence of detailed data, it is inherently static/overly simplistic (e.g. market shares in diversified product markets say nothing about which firms compete most closely) and in the present context is likely to overstate actual diversion.

29. This is because there are several dynamic factors that are likely to depress actual diversion in practice. For example:

    A. **Competitor responses:** As we have discussed above at 14, hardware rivals would have every incentive to integrate with alternative software or self-supply after being foreclosed (not to mention a vast majority of hardware is already officially supported by multiple software products). These competitor responses would increase the viable alternative hardware/software combinations beyond what is currently available, which we would expect to reduce the proportion of diversion to the ATC/Serato combination, all else equal.

    B. **Reputational effects:** The merged entity would likely face negative reputational effects from implementing a foreclosure strategy which would reduce the appeal of the ATC/Serato combination relative to other available combinations, all else equal. This would be particularly the case for any users that currently value Serato's openness and compatibility which would be diminished post-foreclosure.

    C. **Reduced market size:** A less competitive DJ hardware market may inhibit growth in the hardware and software markets (or even shrink it) post-foreclosure which will then require the merged entity to effectively recapture a bigger share of the remaining markets (relative to the counterfactual markets) for the foreclosure to be profitable, since some customers no longer exist.

30. There may also be consequences for the merged entity in other markets that would offset any benefit in the DJ hardware and software markets. For example, as we noted in our 8 April memo that was shared with the NZCC,[27] Serato is trying to grow in the (apparently relatively larger) music production market and the merged entity foreclosing its DJ hardware rivals may:

    A. cause these rivals to retaliate on the music production side (e.g. currently, the most paired hardware with Serato Studio is a **SCI**[ ]); or

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25 For example, see para 4.34 of Oxera report.

26 Oxera report, paras 4.27-4.28.

27 NERA, ATC/Serato: Issues raised in the SOI, 8 April 2024, para 23.

B. may generally worsen Serato's reputation among music production software customers, causing them to switch away, especially if there is overlap between DJ and music production customers.

31. Furthermore, while some of the costs of foreclosure would be immediate (i.e. losing royalties, the cost to ATC of 'cashing out' the SPA), the benefits would only occur over a longer period of time. If Serato cannot be retroactively made incompatible with existing hardware, users may wait until the end of existing hardware life to switch to ATC. This effectively reduces actual diversion in the short-term, and also gives competitors more time to respond.

32. In section 4B.2, Oxera points out that our vertical arithmetic analysis did not consider a partial foreclosure strategy. We agree with Oxera's comments that vertical arithmetic cannot easily capture the nuances of partial foreclosure,[28] and accordingly we did not attempt to do so. We also acknowledge that a partial foreclosure strategy might mitigate or delay some of the costs of foreclosure. However, the dynamic factors we have discussed in this section would all still act to depress actual diversion, and so the benefits of foreclosure would also remain mitigated under a partial strategy. In particular, if the effect of foreclosure is not immediate because existing hardware continues to function with Serato, this gives time for hardware rivals to respond, which mitigates Oxera's unsupported concern that developing deep integration and achieving market acceptance would be time-consuming.[29] As noted above at para 14.C, Serato has submitted that the integration process for a piece of hardware that it has had no prior involvement in the development of would only be 2 months.

33. Finally, Oxera raises the prospect of non-diverted users choosing rekordbox as their alternative software, reducing the cost of foreclosure to the merged entity as this would be an internal transfer of software margin. We note that this would rely on the merged entity continuing to allow rekordbox to be MIDI mapped (i.e. not implementing a software lock). While this would mitigate some of the risk of a Serato foreclosure strategy, it would also mitigate its effect (i.e. by continuing to provide a software option for hardware rivals to use).

28 Oxera report, para 4.35.

29 Oxera report, para 4.41.