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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* DEANNA TERZIAN, LYNN KRAUSE, CHARLES TERZIAN,  
and FRANCIS KELLY

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Appeal 2020-000125  
Application 15/059,012  
Technology Center 3700

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Before STEFAN STAICOVICI, JAMES P. CALVE, and LEE L. STEPINA,  
*Administrative Patent Judges.*

STEPINA, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 1–16 and 18–20. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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<sup>1</sup> We use the word Appellant to refer to “applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies the real party in interest as CurriculaWorks. Br. 2.

### CLAIMED SUBJECT MATTER

Appellant’s disclosure relates to immersive training programs that include adaptive motivation aspects. Spec. ¶ 3.

Claims 1, 11, and 18 are independent, and claim 1, reproduced below, is illustrative of the claimed subject matter.

1. A method of delivering cognitive training through computer gameplay, the method comprising:
  - establishing a computerized first person shooter (“FPS”) environment;
  - defining a mission for a user to execute within the computerized FPS environment, wherein execution of the mission requires the user to perform a cognitive training exercise using FPS game mechanics within the computerized FPS environment;
  - presenting the mission to the user within the computerized FPS environment as an integral part of the computer gameplay;
  - and
  - accepting user input via a computer, wherein the user input comprises execution of the presented mission using FPS game mechanics within the computerized FPS environment.

Br. 12 (Claims App.).

### REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Cohen	US 9,498,704 B1	Nov. 22, 2016
Lorenza S. Colzato et. al., <i>Action video gaming and cognitive control: playing first person shooter games is associated with improvement in working memory but not action inhibition</i> , 77 Psychological Research 234–239 (2013) (hereinafter “Colzato”)		
Appellant’s Admitted Prior Art, paragraph 9 of Appellant’s Specification (hereinafter “AAPA”)		

## REJECTIONS<sup>2</sup>

I. Claims 11–16 are rejected under 35 U.S.C. § 112(a) as failing to comply with the written description requirement.

II. Claims 1–16 and 18–20 are rejected under 35 U.S.C. § 103 as unpatentable over Cohen, Colzato, and AAPA.

## OPINION

### *Rejection I–Written Description (Claims 11–16)*

The Examiner finds that the recitation of “processors” in claims 11–16 is not supported by Appellant’s original disclosure. Final Act. 6. Appellant argues that support for this element in claims 11–16 is found in paragraphs 3 and 20 of the Specification, and a person of ordinary skill in the art would understand that computerized training, implemented in a first person shooter (FPS) game, would necessarily include the use of one or more processors. Br. 8. In response, the Examiner explains that the issue is not whether a processor is implicitly disclosed by a discussion in the Specification of “computerized training,” but that claim 11 recites two different processors, namely, “a game environment processor” and “a cognitive training processor.” Ans. 3–5. Thus, according to the Examiner, Appellant’s disclosure does not provide written description for the processors (plural) recited in independent claim 11.

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<sup>2</sup> On page 3 of the Advisory Action dated February 7, 2019, the Examiner withdraws rejections of claims 1–16 and 18–20 under 35 U.S.C. § 101 as being directed to patent-ineligible subject matter (Final Act. 2–4) and of claims 2–6 and 12–15 under 35 U.S.C. § 112(b) as being indefinite (Final Act. 6–7).

We agree with the Examiner that Appellant’s original disclosure does not satisfy the written description requirement for the recitation of “a game environment processor” and “a cognitive training processor” as recited in independent claim 11 and required by claims 12–16 depending therefrom. Although paragraph 3 of the Specification uses the term “computerized training,” and paragraph 20 uses the term “PC,” Appellant does not identify any disclosure, either in the Specification or Figures, that fully sets forth “a game environment processor” and “a cognitive training processor” as required by claim 11. In other words, even assuming for the sake of argument that Appellant’s original disclosure supports reciting a processor, it does not support a recitation of two processors in the same system, much less two processors defined as “game environment” and “cognitive training” processors. Accordingly, we sustain the rejection of claims 11–16 as failing to comply with the written description requirement.

*Rejection II—Cohen, Colzato, and AAPA (Claims 1–16 and 18–20)*

Appellant argues for the patentability of the claims subject to the second ground of rejection, i.e., claims 1–16 and 18–20, as a group. Br. 9. We select claim 1 as representative of the group, and claims 2–16 and 18–20 stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(iv).

The Examiner finds Cohen discloses all the elements recited in independent claim 1, except for specifying that the virtual environment is an FPS environment. Final Act. 7; *see also* Ans. 7. To address this deficiency, the Examiner finds Colzato discloses a method of cognitive training that includes establishing an FPS environment.<sup>3</sup> *Id.* at 9. Specifically, the

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<sup>3</sup> Although the heading for the rejection of claims 1–16 and 18–20 under 35 U.S.C. § 103 lists AAPA as one of the applied pieces of prior art (*see* Final

Examiner finds “[t]he bulk of Colzato . . . discloses measuring cognitive control tasks in [an] FPS environment,” and Colzato teaches “presenting a cognitive training exercise within the FPS environment as an integral part of FPS gameplay.” *Id.* at 10 (citing Colzato, p. 238). The Examiner reasons that it would have been obvious to person of ordinary skill in the art to modify Cohen’s system “to specify that the virtual environment to perform the cognitive training could be a first person shooter (FPS) environment in order to take advantage of the cognitive tasks required in a FPS game.” *Id.* at 11. Thus, the Examiner’s reasoning for the proposed modification to the system of Cohen relies on a finding that Colzato includes cognitive tasks in an FPS game.

Appellant asserts the Examiner erred by combining the teachings of Cohen and Colzato because doing so “would render at least Colzato unsuitable for its intended purpose.”<sup>4</sup> Br. 10; *see also id.* at 9 (quoting MPEP § 2143.01(V) (citing *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1994))). Specifically, Appellant argues “the intent of Colzato was to study the impact of playing video games, including FPS games, on cognitive skills[, and t]o accomplish this, Colzato examined the performance of two populations – ‘experienced video game players . . . and individuals with little to no videogame experience’ - on various cognitive control tasks.” *Id.* at 9–10.

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Act. 7), the Examiner appears to rely on AAPA only for elements recited in claims other than claim 1, e.g., claim 8, which recites “developing a motivational profile for the user” (*see id.* at 11–12).

<sup>4</sup> Appellant does not contest the Examiner’s findings of fact with respect to Cohen and AAPA. *See* Br. 9–10. Appellant does not specifically address the Examiner’s stated rationale, set forth on page 11 of the Final Office Action, for combining the teachings of Cohen and Colzato. *See id.*

According to Appellant, “had Colzato delivered its cognitive training exercises as integrated into an FPS game, the line between its two populations would have ceased to exist - the non-gamer population would have become a gamer population, and no conclusions regarding the impact of gaming on cognitive performance could have been drawn.” *Id.* at 10.

The Examiner replies that “Colzato is used merely to teach that a FPS environment would be a good or obvious choice for a virtual environment disclosed by Cohen.” Ans. 8.

After stating that Cohen discloses a system for learning and cognitive training in a virtual environment and fails to disclose the specifics of the virtual environment, namely, that it is based on an FPS, the Examiner poses the inquiry “[i]n choosing a virtual environment for Cohen, would one of ordinary skill in the art choose Farmville or a commerce virtual environment or would one choose a virtual environment that required cognitive tasks[?]” *Id.* at 9. In responding, the Examiner then finds Colzato discloses that “‘First Person Shooter’ (FPS) games require players to develop a flexible mindset to rapidly react and monitor fast moving visual and auditory stimuli, and to inhibit erroneous actions,” which the Examiner concludes “are considered to be cognitive control tasks.” *Id.* Thus, as noted above, the Examiner’s reasoning rests on the finding that Colzato discloses cognitive tasks in an FPS game.

Appellant’s argument does not apprise us of Examiner error. First, the portion of the MPEP quoted by Appellant regarding inoperability states, “If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.” MPEP § 2143.01(V)

(citing *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1994))). In *Gordon*, the proposed modification to the sole reference cited by the Examiner rendered the device disclosed inoperable for its purpose. *In re Gordon*, 733 F.2d at 902. Here, the Examiner’s proposed modification is to the system disclosed by Cohen, not Colzato. *See* Final Act. 11. Thus, the principle of rendering the modified reference unsuitable for its intended use does not apply as argued by Appellant because the Examiner does not propose to modify the system in Colzato. Appellant makes no assertion that the system disclosed by *Cohen* would be rendered unsuitable for its intended purpose, when modified according to teachings of Colzato.

Second, the Examiner’s finding that Colzato discloses presenting a cognitive training exercise within an FPS environment as an integral part of FPS gameplay (Final Act. 10) is supported by a preponderance of the evidence. Colzato’s Abstract states:

The interest in the influence of videogame experience in our daily life is constantly growing. “*First Person Shooter*” (FPS) games require players to develop a flexible mindset to rapidly react and monitor fast moving visual and auditory stimuli, and to inhibit erroneous actions. This study investigated whether and to which degree experience with such videogames generalizes to other cognitive control tasks.

(Emphasis added). Colzato then explains that “findings support the idea that playing FPS games is associated with enhanced flexible updating of task-relevant information without affecting impulsivity.” *Id.* Colzato’s Table 1 (the sole table included in Colzato) summarizes the measured cognitive



performance advantages found in persons defined as video game players<sup>5</sup> (VGPs) compared with non-video game players (NVGPs). Colzato, p. 236. Colzato concludes that video game players outperformed non-video game players. *Id.* at 237. Thus, Colzato teaches that FPS games require mental activity that appears to carry over to cognitive tests outside of FPS games. *See id.* at 236–237. Based on these teachings, we agree with the Examiner that Colzato teaches cognitive tasks performed in an FPS game. *See* Final Act. 11. Consequently, the Examiner’s stated reason for modifying the system disclosed by Cohen (*see id.*) is supported by rational underpinnings.

We have considered all of Appellant’s arguments regarding the patentability of claims 1–16 and 18–20, but none of them identify Examiner error. Accordingly, we sustain the rejection of claims 1–16 and 18–20 as unpatentable over Cohen, Colzato, and AAPA.

## CONCLUSION

The Examiner’s rejections are affirmed.

## DECISION SUMMARY

<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
11–16	112(a)	Written Description	11–16	
1–16, 18–20	103	Cohen, Colzato, AAPA	1–16, 18–20	

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<sup>5</sup> Video game players participating in the Colzato’s study played only FPS games. Colzato, p. 235.

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<b>Claims Rejected</b>	<b>35 U.S.C. §</b>	<b>Reference(s)/Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
<b>Overall Outcome</b>			1-16, 18-20	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED