NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

EOLAS TECHNOLOGIES INCORPORATED,
Plaintiff-Appellant

v.

AMAZON.COM, INC., GOOGLE LLC, WALMART, INC.,
Defendants-Appellees

GOOGLE LLC,
Plaintiff-Appellee

v.

EOLAS TECHNOLOGIES INCORPORATED,
Defendant-Appellant

REGENTS OF THE UNIVERSITY OF CALIFORNIA,
Defendant

2022-1932, 2022-1933, 2022-1934, 2022-1935

Appeals from the United States District Court for the Northern District of California in Nos. 4:15-cv-05446-JST, 4:17-cv-01138-JST, 4:17-cv-03022-JST, 4:17-cv-03023-JST, Judge Jon S. Tigar.

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Decided: February 1, 2024

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Before CHEN, BRYSON, and STOLL, *Circuit Judges.*

STOLL, *Circuit Judge.*

Eolas Technologies Inc. appeals from the United States District Court for the Northern District of California's summary judgment holding the asserted claims of Eolas's U.S. Patent No. 9,195,507 invalid for claiming ineligible subject matter. Because we agree with the district court's conclusion, we affirm.

BACKGROUND

I

The '507 patent claims priority from a patent filed in 1994. The '507 patent specification notes that the limited processing power of a typical client computer and the low bandwidth of the Internet prohibited most users from interacting with large data objects on the Internet. *See* '507 patent col. 5 ll. 39–52, col. 6 ll. 22–33. The specification describes the present invention as taking advantage of distributed hypermedia environments, such as that provided by the World Wide Web, and harnessing the remote computing power made available by distributed computing.[1] *Id.* col. 6 ll. 57–67; *see also id.* col. 7 ll. 1–6.

The specification explains that tasks that would normally be resource or bandwidth-intensive for a single computer—such as rendering large images or calculating spreadsheet cells—can be performed more effectively with distributed computing. For example, a new viewpoint of a large image or an updated calculation for a large spreadsheet can be computed on a remote computer and then sent to the client computer for display. *See id.* col. 7 ll. 1–33.

Figure 5, shown below, illustrates an embodiment of the invention.

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[1] "Distributed" describes objects or processes that are located and/or processed across multiple computers on a network. *See, e.g.*, '507 patent col. 5 ll. 29–34; *see Eolas Techs. Inc. v. Amazon.com, Inc.*, No. 6:15-cv-01038, 2016 WL 7155294, at *8 (E.D. Tex. Dec. 8, 2016) (*Claim Construction Op.*) (construing "distributed application" to mean an "application that is broken up and performed among two or more computers").

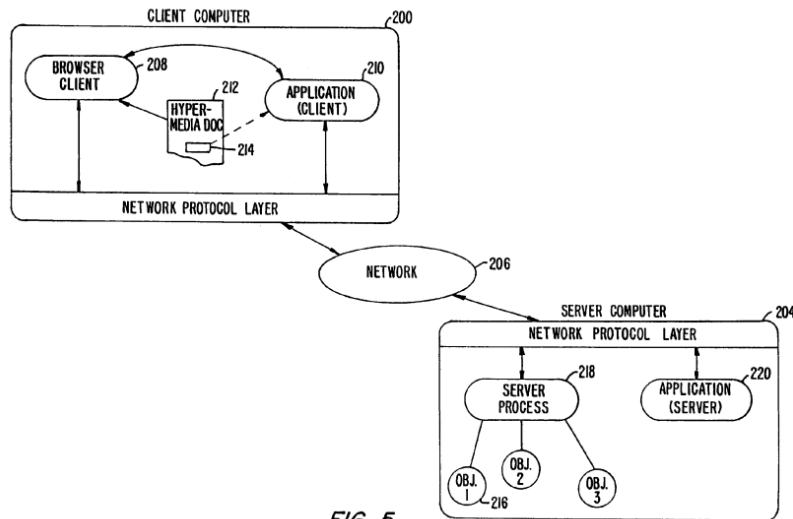4   EOLAS TECHNOLOGIES INCORPORATED v. AMAZON.COM, INC.

FIG. 5.

Id. Fig. 5. In this embodiment, a browser client 208 on the user's computer requests and parses through a data object (e.g., hypermedia document 212),[2] and identifies an application for the application client 210 to invoke in order to interact with the data object. *See id.* col. 9 ll. 4–20, col. 9 ll. 29–33. The application client 210 communicates with the distributed network 206 (e.g., World Wide Web) to access the data object located on a server computer 204. *Id.* col. 9 ll. 34–40. Upon receipt of the data object from the application client 210, the browser client 208 displays the data object on the client computer 200. *Id.* col. 9 ll. 54–57; *see also id.* col. 9 l. 65–col. 10 l. 3. The specification also describes an example of an application performing multidimensional image visualization. *Id.* col. 9 ll. 34–35. In this

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[2]   A "hypermedia document" is a document presented to a user in a computer system in which "the user is able to click on images, sound icons, video icons, etc., that link to other objects of various media types, such as additional graphics, sound, video, text, or hypermedia or hypertext documents." '507 patent col. 2 ll. 22–30.

example, application server 220 performs the rendering and transformation calculations as the user interacts with the three-dimensional data object, with application client 210 updating the user's view with each new viewpoint calculation. *Id.* col. 10 ll. 34–39, ll. 46–54. The specification describes a preferred embodiment in which the user interacts with the three-dimensional data object "within, or adjacent to, a window generated by browser client 208 that contains a display of hypermedia document 212." *Id.* col. 9 ll. 59–61.

According to the '507 patent, having the application server 220 use the computing resources of the server computer 204, as described in the three-dimensional visualization example, is much faster than having the application client 210 executing on the client computer 200. *Id.* col. 10 ll. 60–64.

Eolas argued before the district court that there is no substantial difference between method claims 32, 37, and 39 and system claims 19, 24, and 26. The district court agreed and determined these method claims were representative of the system claims. *See Eolas Techs. Inc. v. Amazon.com Inc.*, No. 17-cv-03022, 2022 U.S. Dist. LEXIS 243302, at *53–54 (N.D. Cal. May 16, 2022) (*Summary Judgment Op.*). Representative independent claim 32 recites:

> 32. A method, performed by a server computer connected to the World Wide Web distributed hypermedia network on the Internet, for disseminating interactive content via the World Wide Web distributed hypermedia network on the Internet, the method comprising:
>
> > A. receiving, by the server computer, a request for information; and
> >
> > B. transferring, by the server computer, the information onto the World Wide Web

distributed hypermedia network on the Internet, wherein:

(i) a World Wide Web browser on a client computer connected to the World Wide Web distributed hypermedia network has been configured with a plurality of different interactive-content applications, each said interactive-content application being configured to enable a user to interact, within one or more World Wide Web pages, with at least part of one or more objects while at least part of each of said one or more objects is displayed to the user within at least one of said one or more World Wide Web pages, and

(ii) at least part of the information is configured to allow the World Wide Web browser on the client computer to:

a. detect at least part of an object to be displayed in a World Wide Web page, and

b. cause a display of the World Wide Web page to a user,

(iii) the World Wide Web browser has been configured to:

a. select an interactive-content application, based upon the information, from among the different interactive-content applications, and

> b. automatically invoke the se-
> lected interactive-content applica-
> tion to enable the user to employ
> the selected interactive-content ap-
> plication to interact within the
> World Wide Web page with at least
> part of the object while at least part
> of the object is displayed to the user
> within the World Wide Web page,
> wherein the automatically invoked
> interactive-content application has
> been configured to operate as part
> of a distributed application config-
> ured to enable a user to perform the
> interaction through the use of com-
> munications sent to and received
> from at least a portion of the dis-
> tributed application located on two
> or more distributed application
> computers connected to the World
> Wide Web distributed hypermedia
> network on the Internet, the two or
> more distributed application com-
> puters being remote from the client
> computer.

'507 patent col. 23 l. 25–col. 24 l. 2.

Eolas argues that independent claim 45 is patent eligi-
ble for additional reasons not present in representative
claim 32. In particular, Eolas emphasizes that claim 45
recites additional limitations of generating and sending
computer commands to perform viewing transformations:

> 45. A method performed by one or more computers
> for coordinating distributed processing to enable
> dissemination of interactive content to a client
> computer, the method comprising:

a. coordinating by the one or more computers processing of at least part of a distributed application to perform at least one task,

b. coordinating by the one or more computers communications sent to and received from at least a portion of the distributed application located on two or more separate computers connected to the World Wide Web distributed hypermedia network to enable the separate computers to work together to perform the at least one task, wherein at least part of the distributed application has been implemented to be part of a distributed interactive-content application configured to enable a user to interact with at least part of an object, displayed within a World Wide Web page by the client computer, and

c. generating and sending by the one or more computers commands over a network to coordinate activity of the separate computers working together to perform viewing transformations to enable the interaction with at least part of the object, wherein:

    a. the two or more separate computers are remote from the client computer containing a World Wide Web browser configured to cause the display of the World Wide Web page,

    b. the World Wide Web browser has been configured with a plurality of different interactive-content applications, each said interactive-

content application being configured to enable a user to interact, within one or more World Wide Web pages, with at least part of one or more objects while at least part of each of said one or more objects is displayed to the user within at least one of said one or more World Wide Web pages,

c. the World Wide Web browser has been enabled, by information that has been transferred onto the World Wide Web distributed hypermedia network, to detect at least part of the object and to display the world Wide Web Page,

d. the World Wide Web browser has been configured to select an interactive-content   application, based upon the information, from among the different interactive-content applications, and automatically invoke the selected interactive-content application,

e. the automatically invoked interactive-content application has been configured to operate as part of the distributed interactive-content application.

Id. col. 24 l. 56–col. 25 l. 37.

II

Eolas filed suit against Amazon.com, Inc.; Google LLC; and Walmart, Inc. (collectively, "Appellees") in the Eastern District of Texas for infringing certain claims of the '507

patent. The cases were later transferred to the Northern District of California.

During claim construction, the district court construed the claim limitation "World Wide Web browser on a client computer" to not require that the interactive content applications be internal to the World Wide Web browser.[3] *See Claim Construction Op.*, 2016 WL 7155294, at *12–13. In other words, the district court determined that the claim did not require relocation of the interactive content application into the World Wide Web browser.

Appellees filed a motion for summary judgment, arguing that the claims 19, 24, 26, 32, 37, 39, and 45 are ineligible for patenting under 35 U.S.C. § 101. Applying the two-step test set forth in *Alice Corp. v. CLS Bank International*, 573 U.S. 208 (2014), the district court concluded that under *Alice* step one, the asserted claims are "directed to the abstract idea of enabling interactivity with remote objects on a client computer browser using distributed computing." *Summary Judgment Op.*, 2022 U.S. Dist. LEXIS 243302, at *20. The district court determined under *Alice* step two that the purported inventive concepts of distributed computing and improved security, whether

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[3]   The court specifically construed the claim term "the World Wide Web browser on a client computer" to mean "a client computer application, *separate from the interactive-content application*, that allows a user to access the World Wide Web." *Claim Construction Op.*, 2016 WL 7155294, at *13 (emphasis added). This separation cuts against the notion that the interactive content application must be in the browser. Also, the court's construction is consistent with the title of the '507 patent, which refers to "Automatically Invoking External Application" and Figure 8A of the preferred embodiment, which refers to launching an external application at step 290. '507 patent Fig. 8A, col. 15 ll. 4–7, ll. 17–18.

individually or as an ordered combination, embodied the abstract idea, and thus could not transform the claim beyond the abstract idea as required to demonstrate eligibility under *Alice* step two. *Id.* at *60–61. It also explained that the remaining aspects of the asserted claims lacked an inventive concept to transform the abstract idea into a patent-eligible application because they cite generic computer components and functions. *See id.* at *61–62. The district court therefore held the asserted claims ineligible under § 101 and granted summary judgment in Appellees' favor. *Id.* at *67–68.

Eolas appeals. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

When reviewing a district court's grant of summary judgment, we apply the law of the regional circuit. *See Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1146 (Fed. Cir. 2016). Summary judgment in the Ninth Circuit is appropriate when, after drawing all reasonable inferences in favor of the non-moving party, there remains no genuine issue of material fact precluding the grant of summary judgment. *See Comite de Jornaleros de Redondo Beach v. City of Redondo Beach*, 657 F.3d 936, 942 (9th Cir. 2011).

Patent eligibility under § 101 is a question of law that may involve underlying questions of fact. *See Mortg. Grader, Inc. v. First Choice Loan Servs. Inc.*, 811 F.3d 1314, 1325 (Fed. Cir. 2016). We review the district court's ultimate conclusion on eligibility de novo. *See Intell. Ventures I LLC v. Capital One Fin. Corp.*, 850 F.3d 1332, 1338 (Fed. Cir. 2017). We look to the two-step test articulated in *Alice* to determine whether a claim is eligible for patenting under § 101. *See* 573 U.S. at 217–18. For *Alice* step one, we must assess whether the claims at issue are directed to a patent-ineligible concept, namely a law of nature, natural phenomenon, or abstract idea. *Id.* at 217. If

the answer is yes, we then consider the claim elements, both individually and as an ordered combination, to determine whether they contain an "inventive concept" sufficient to "'transform the nature of the claim' into a patent-eligible application." *Id.* at 217–18 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72–73, 78 (2012)). In other words, we must determine whether the claims recite additional features beyond the abstract idea, rendering the claims eligible for patenting. Those additional features must be more than "well-understood, routine, conventional activity." *Mayo*, 566 U.S. at 79–80.

Starting with *Alice* step one, the district court determined that representative claim 32 of the '507 patent "is directed to the abstract concept of enabling interactivity with remote objects on a client computer browser using distributed computing." *Summary Judgment Op.*, 2022 U.S. Dist. LEXIS 243302, at *27.

On appeal, Eolas argues that this characterization is overgeneralized in that it fails to acknowledge the claim's recitation of objects on the World Wide Web. *See* Appellant's Br. 43–44. We agree. Eolas's claims are not directed to computers, networks, or interacting with content generally; rather, they recite interacting with content on the World Wide Web. For example, the body of claim 32 recites certain configuration requirements of a World Wide Web browser, World Wide Web pages, and the World Wide Web distributed hypermedia network. The district court's characterization "disregard[s] th[e]se express claim elements" in a way that is "'untethered from the claim language.'" *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1295 (Fed. Cir. 2020) (quoting *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1337 (Fed. Cir. 2016)); *see also Enfish*, 822 F.3d at 1337 (warning against "describing the claims at such a high level of abstraction" in the § 101 analysis). The specification further supports our understanding of what the claimed invention is directed to in that it describes

problems specific to the World Wide Web and explains how the invention purports to solve them.

At the same time, we are concerned that the district court's characterization of what the claims are directed to is too specific in that the court included implementation details—*i.e.*, using distributed computing—that may be best left for consideration under *Alice* step two. *See Summary Judgment Op.*, 2022 U.S. Dist. LEXIS 243302, at *60–61. In narrowly articulating what the invention was directed to under *Alice* step one and concluding that this subject matter was abstract, the district court eliminated any opportunity to consider whether distributed computing transforms the invention into eligible subject matter under *Alice* step two. *See BSG Tech LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018) ("After identifying an ineligible concept at step one, we ask at step two '[w]hat else is there in the claims before us?'" (quoting *Mayo*, 566 U.S. at 78 (modification in *BSG*)).

We nonetheless agree with the district court that, even under our slightly modified view of what the claims are directed to, the claims are directed to an abstract idea under *Alice* step one. Simply put, interacting with data objects on the World Wide Web is an abstraction. *See Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 714–15 (Fed. Cir. 2014).

Eolas contends that it developed new functionality that was not previously available and thus its claims are eligible under § 101. We are not persuaded by this particular argument. At best, the specification explains that prior art systems provided users "very little, if any, interaction with the[] data objects" on the World Wide Web due to the constraints of client computers, '507 patent col. 6 ll. 22–34, and thus "it [wa]s desirable to allow a user to manipulate data objects in an interactive way to provide the user with a better understanding of information presented and to allow the user to accomplish a wider variety of tasks," *id.*

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col. 6 ll. 37–41. But an abstract idea that is new or ground-breaking is not any less abstract. *See Ultramercial*, 772 F.3d at 714 (rejecting argument that "abstract ideas remain patent-eligible under § 101 as long as they are new ideas, not previously well known, and not routine activity").

Case law from the Supreme Court and this court suggests that claims purporting to improve a technological process are not directed to an abstract idea under § 101. *See Alice*, 573 U.S. at 223; *Visual Memory LLC v. NVIDIA Corp.*, 867 F.3d 1253, 1260 (Fed. Cir. 2017). According to Eolas, the '507 patent claims capture "specific technological solutions to [three] specific technological problems," and thus, the claims are not abstract under *Alice* step one. Appellant's Br. 25. First, Eolas asserts that at the time of the invention, user interaction with data objects was limited to downloading data objects "onto their client computers and then launching external applications that would [then] permit manipulation" of the data objects. Appellant's Br. 23. Eolas asserts that with the claimed invention, "rather than downloading objects to be manipulated with outside-the-Web-browser helper applications, objects are embedded within Web pages and Web browsers are configured with applications that can be automatically invoked to permit manipulation while the object is displayed within the Web page." Appellant's Br. 24. In other words, Eolas claims that inside-the-browser applications facilitate object manipulation. Second, Eolas contends that in addition to relocating applications to reside within the Web browser, the claims address scalability with its distributed computing configuration: "new applications are broken up and distributed, with one part working in the browser and other parts on remote distributed application computers." *Id.* Third, Eolas contends that, by invoking only applications that are configured to be used with the Web browser, the invention improves security. Appellant's Br. 24–25. In the alternative, Eolas relies on these same three aspects of

the invention as alleged inventive concepts that would render the claims eligible under *Alice* step two. *See* Appellant's Br. 55–58. As noted above, *Alice* step two requires determining whether an element, or a combination of elements, in the claim contains an inventive concept sufficient to "'transform the nature of the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 72, 79). Finally, Eolas contends that claim 45's additional limitation of "viewing transformations" provides an inventive concept that renders claim 45 patent-eligible. Appellant's Br. 35.

Whether analyzed as technological improvements under *Alice* step 1 or as inventive concepts under *Alice* step 2, none of Eolas's three alleged concepts for representative claim 32 make the claim eligible. We likewise conclude that claim 45 does not recite additional features beyond the claimed abstract idea that render the claim eligible for patenting. We consider each of Eolas's alleged inventive concepts in turn below.

First, Eolas contends that relocation of the interactive content application from outside to inside the World Wide Web browser itself was an important new structural change that improved interactivity with the World Wide Web. But we do not see this limitation anywhere in the claims and thus it cannot satisfy *Alice* step two. And Eolas did not challenge the district court's claim construction, which does not require that the interactive content application be internal to the World Wide Web browser, on appeal. Furthermore, Eolas did not present this alleged inventive concept of relocating the interactive application in the web browser in its § 101 arguments before the district court below. Thus, not only do the claims not recite locating the interactive content applications within the browser, but it appears that Eolas waived this argument by not presenting it below. Relocation of the interactive content application within the web browser is therefore not

an inventive concept that renders the claims eligible under *Alice* step 2.

Second, Eolas asserts that the claims recite the inventive concept of distributed processing between the application in the browser and applications on remote distributed computers. But it is undisputed that, at the time of the invention, distributed processing was well-understood, routine, conventional activity. *See Summary Judgment Op.*, 2022 U.S. Dist. LEXIS 243302, at *61 n.12; Appellees' Br. 54. For example, one of the named inventors of the '507 patent confirmed that the inventors did not invent distributed computing, servers, or applications. J.A. 16647, 16649 (Martin Depo. at 63:9–18, 65:8–24).

Moreover, as the district court explained, the claims merely describe a desired function or outcome without providing details of the claimed distributed processing. Specifically, claim 32 requires an automatically invoked interactive-content application "configured to operate as part of a distribution application" that "enable[s] a user" to interact with data objects within a World Wide Web Page. '507 patent col. 23 ll. 54–62. And the rest of the claim recites that "a portion of the distributed application [is] located on two or more distributed application computers connected to the World Wide Web distributed hypermedia network on the Internet [with] the two or more distributed application computers being remote from the client computer." *Id.* col. 23 l. 61–col. 24 l. 2. The claim thus recites distributed processing, but does not specify how the claimed configuration for distributed processing is any different than generic distributed processing. For example, the claim does not specify how the processing is distributed among the distributed application computers. Nor does it require distributed processing among applications internal and external to the web browser. Without more, the distributed processing as claimed is not an inventive concept that transforms claim 32 into a patent-eligible invention.

Third, Eolas alleges its claims alleviate certain security concerns existing at the time of the invention by limiting the invoked interactive content applications to those configured to operate within the Web browser. But this alleged inventive concept is not within the scope of the claims because, as noted above, the claims do not actually require that the interactive content applications be located within the browser. Indeed, the claims merely recite that the browser invokes interactive-content applications (which, under the district court's construction, are separate from— *i.e.*, external to—the "World Wide Web browser"). *See* '507 patent col. 23 ll. 50–53 ("[T]he World Wide Web browser . . . select[s] an interactive-content application . . . from among the different interactive-content applications."); *see also id.* Title ("Distributed Hypermedia Method and System for Automatically Invoking External Application Providing Interaction and Display of Embedded Objects within a Hypermedia Document"); *id.* col. 15 ll. 4–7, ll. 15–30. Thus, the claims are not eligible under either *Alice* step one or *Alice* step two based on this contention.

Finally, turning to claim 45, Eolas asserts that the additional limitation requiring remote computers to generate and send computer commands to perform "viewing transformations" offers a 3D view that improves a computer network system's specific technical features or operations. Appellant's Br. 35. This additional limitation does not transform the abstract idea into a patent-eligible claim. The district court construed "viewing transformations" to mean "operations performed on data for visual display to a user." *Claim Construction Op.*, 2016 WL 7155294, at *16. This broad construction, which is unchallenged on appeal, encompasses visual display generally, something well-known in the art at the time of the invention. *See, e.g.*, J.A. 16655–56 (Martin Depo. 145:18–146:2) (Inventor Martin denying having invented sending commands to a remote server to perform visualization processes); J.A. 12150–51 (prior art publication describing sending

scientific visualization to remote computers); '507 patent col. 6 ll. 2–4 (explaining in background of the invention section that "a variety of visualization techniques . . . have been developed"); J.A. 13047 (Inventor Doyle describing existing visualization systems in a 1994 proposal). Nor does anything else in the claim or the specification show how the recited viewing transformation differs from conventional visual display. Thus, the "viewing transformations" limitation in claim 45—construed as "operations performed on data for visual display to a user"—fails to transform the abstract idea into an eligible technical solution. *See, e.g.*, *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1355 (Fed. Cir. 2016) (stating that "'displaying concurrent visualization' of two or more types of information . . . is 'insufficient to pass the test of an inventive concept in the application' of an abstract idea" (quoting *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1353, 1355 (Fed. Cir. 2014)).

For all of the above reasons, we conclude that the claims are directed to an abstract idea under *Alice* step 1 and that the alleged inventive concepts identified by Eolas do not otherwise transform the abstract nature of the claims to render the claims patent-eligible. We thus agree with the district court's judgment that the asserted claims of the '507 patent are not eligible for patenting.

CONCLUSION

We have considered Eolas's remaining arguments and find them unpersuasive. Because the district court correctly concluded that the '507 patent claims are directed to ineligible subject matter, we affirm.

AFFIRMED