

What is Well-Understood, Routine & Conventional?

A Review of *Berkheimer v. HP Inc.*,
881 F.3d 1360 (Fed. Cir. 2018)

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Outline

- Brief discussion of 35 U.S.C. § 101
- Background of *Alice/Mayo* Framework
- Discussion of *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018)
- Discussion of *Berkheimer* Memorandum
- Practice Tips

35 U.S.C. § 101

§ 101 - Inventions Patentable:

“Whoever invents or discovers any new and useful *process, machine, manufacture, or composition of matter*, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”

These four categories are referred to as the “statutory categories” of invention.

35 U.S.C. § 101

Even if it does fall within a statutory category, what is not patent eligible subject matter?

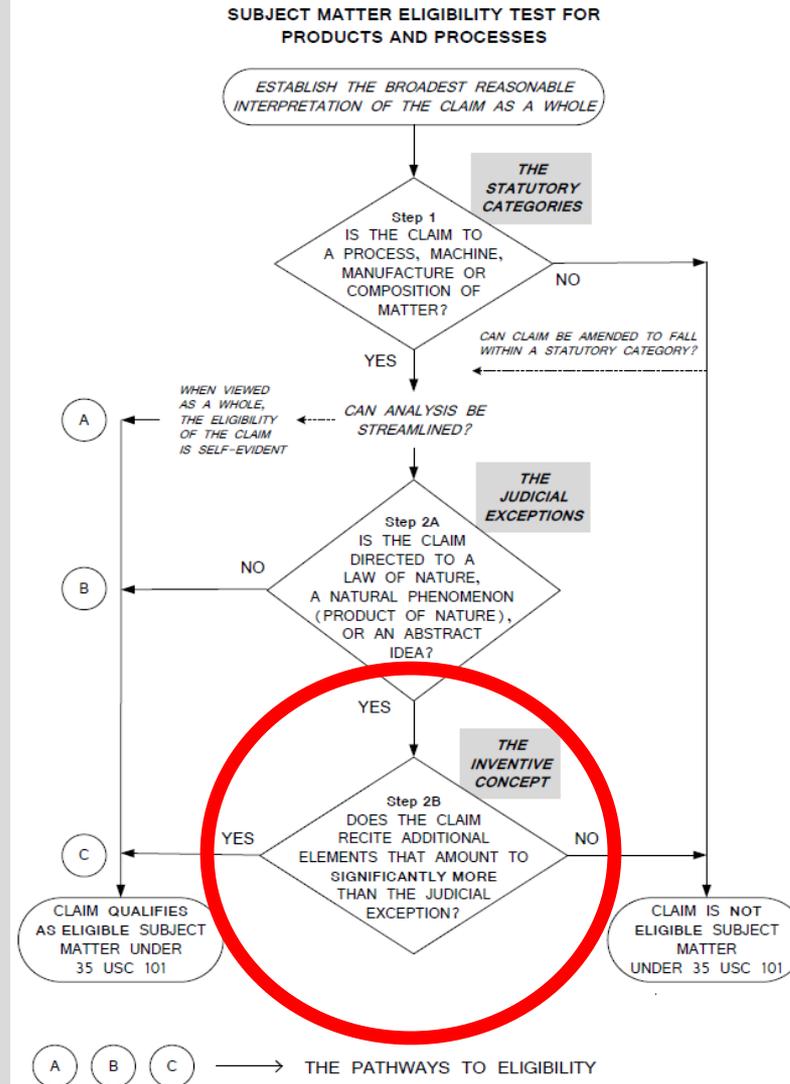
- Laws of nature, natural phenomena, and abstract ideas (“judicial exceptions”)
 - Examples: gravity, green tea extract, entropy, Pythagorean theorem, etc.

The *Alice/Mayo* Framework

Determining subject matter eligibility under 35 U.S.C. § 101:

- 1) Determine if the claims fall under one of the statutory categories and, if they do, then
- 2) Determine if the claims recite a patent-ineligible concept and, if they do, then
- 3) Determine if the claims, individually and in combination, contain an inventive concept that transforms the claims into “significantly more” than the patent ineligible subject matter.

The Alice/Mayo Framework



*The 2014 Interim Guidelines on Subject Matter Eligibility incorporated into MPEP § 2106.

Does the Claim Recite an Inventive Concept?

- Common strategy: argue that the claim(s) recites an additional element/step that transforms the claim(s) into significantly more
- Inquiry: Is the additional element/step well-understood, routine, and conventional in the art?
 - If additional element is a specific limitation *other than* what is well-understood, routine and conventional in the field, then this “consideration favors eligibility” See MPEP § 2106.05(a)

Examples of what is well-understood, routine, and conventional

Computer-related inventions:

- Receiving or transmitting data over a network, e.g., using the Internet to gather data
- Performing repetitive calculations,
- Electronic recordkeeping,
- Storing and retrieving information in memory
- Electronically scanning or extracting data from a physical document,
- A web browser's back and forward button functionality,

Biotechnology inventions:

- Determining the level of a biomarker in blood by any means,
- Using polymerase chain reaction to amplify and detect DNA,
- Detecting DNA or enzymes in a sample,
- Immunizing a patient against a disease,
- Analyzing DNA to provide sequence information or detect allelic variants,
- Freezing and thawing cells,
- Amplifying and sequencing nucleic acid sequences,
- Hybridizing a gene probe,

See MPEP § 2106.05(d)(II)

Recent CAFC decisions impacting Subject Matter Eligibility

- *Finjan Inc. v. Blue Coat Systems, Inc.*, 879 F.3d 1299 (Fed. Cir. 2018)
- *Core Wireless Licensing S.A.R.L., v. LG Electronics, Inc.*, 880 F.3d 1356 (Fed. Cir. 2018)
- *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018)
- *Vanda Pharmaceuticals Inc. v. West-Ward Pharmaceuticals*, 887 F.3d 1117 (Fed. Cir. 2018)

Berkheimer v. HP Inc.

Procedure

- Berkheimer brought infringement action against HP regarding U.S. Patent No. 7,447,713 (filed Oct. 2001; patent granted Nov. 2008)
- US District Court for the Northern District of Illinois held claims 1-7 and 9 were invalid as ineligible under § 101 and granted summary judgment to HP (also held claims 10-19 are invalid for indefiniteness)
- Berkheimer appealed the district court's summary judgment holding that claims 1-7 and 9 of '713 patent were invalid as ineligible under § 101 (also appealed the district court's decision holding claims 10-19 of the '713 patent invalid for indefiniteness)
- CAFC Decision:
 - affirm the district court's decision that claims 10-19 of the '713 patent are invalid as indefinite and its grant of summary judgment that claims 1-3 and 9 of the '713 patent are ineligible under 35 U.S.C. § 101
 - **vacate the district court's grant of summary judgment that claims 4-7 are ineligible under § 101 and remand for further proceedings**

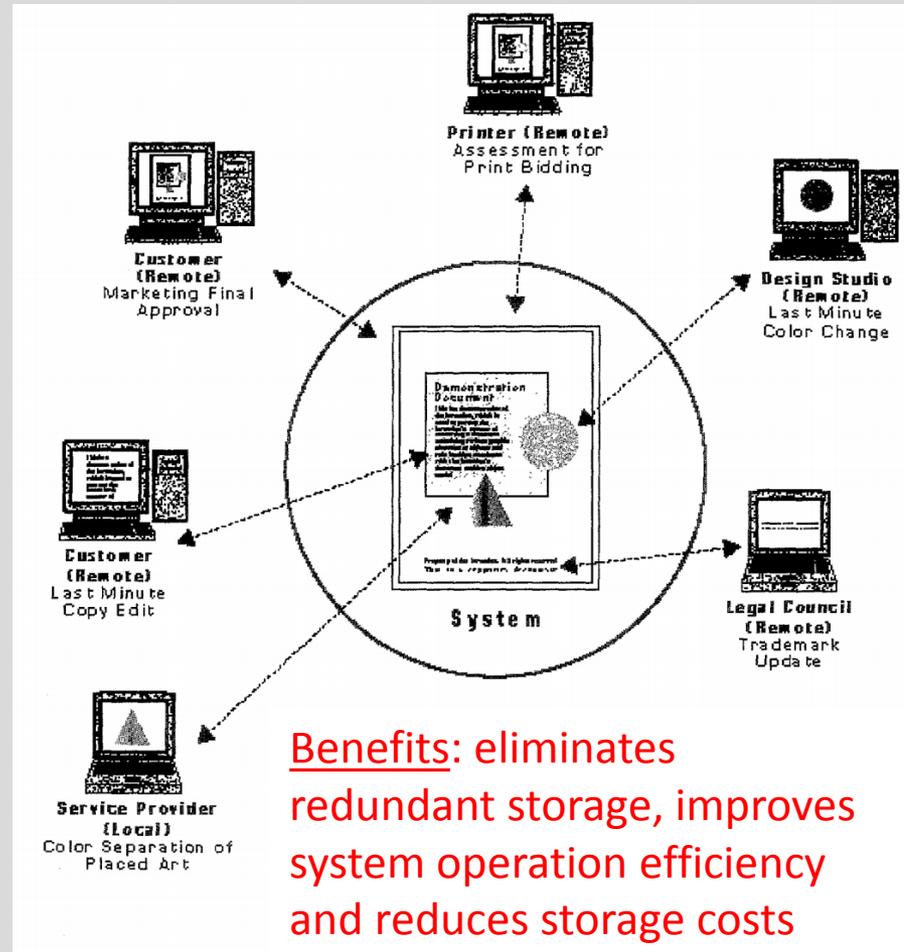
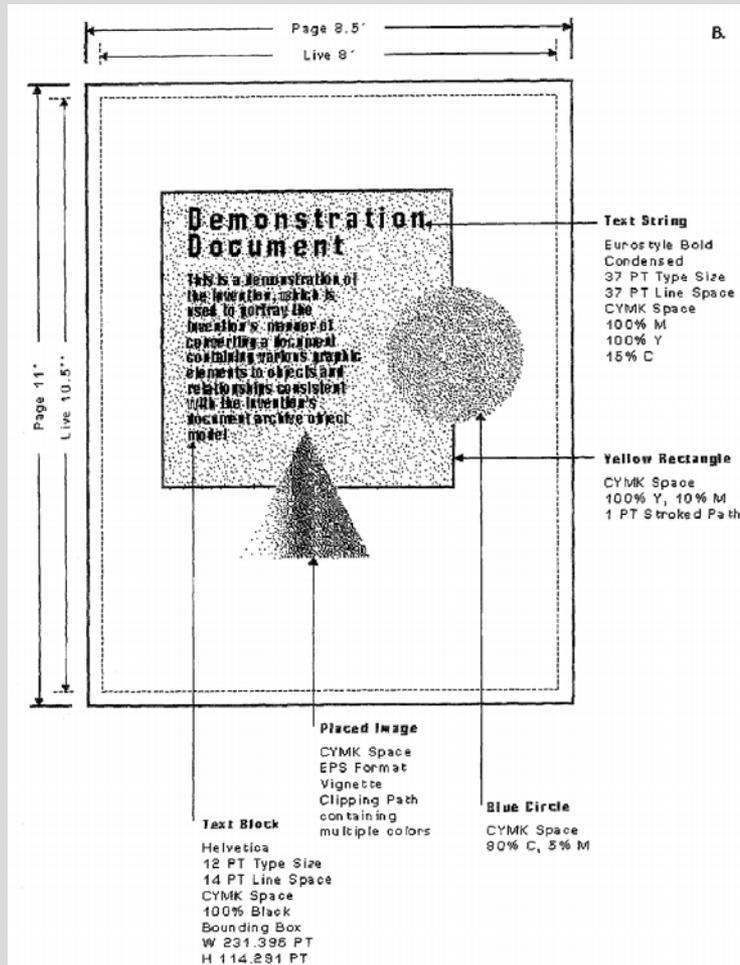
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The Claimed Invention

- “The invention pertains to processing to form object-oriented representations of files received in a standardized format. The object oriented representations can be graphically manipulated and then entered into an archival data base with minimal redundancy and with relationships maintained among the elements of the item for subsequent retrieval, editing, recompiling and outputting the file.”
 - Allows a user to carry out one-to-many editing of object-oriented data
- Like Google Docs for group-editing an image

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The Claimed Invention



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Claims

1) A method of archiving an item in a computer processing system comprising:

presenting the item to a parser;

parsing the item into a plurality of multi-part object structures wherein portions of the structures have searchable information tags associated therewith;

evaluating the object structures in accordance with object structures previously stored in an archive;

presenting an evaluated object structure for manual reconciliation at least where there is a predetermined variance between the object and at least one of a predetermined standard and a user defined rule.

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Claims

- 4) The method as in claim 1 which includes **storing a reconciled object structure in the archive without substantial redundancy**.
- 5) The method as in claim 4 which includes selectively editing an object structure, linked to other structures to thereby effect a **one-to-many change** in a plurality of archived items.
- 6) The method as in claim 5 which includes compiling an item to be output from the archive, wherein at least one object-type structure of the item has been edited during the **one-to-many change** and wherein the compiled item includes a plurality of linked object-type structures converted into a predetermined output file format.
- 7) The method as in claim 6 which includes compiling a plurality of items wherein at least one object-type structure had been linked in the archive to members of the plurality.

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Issue

- Are the claim limitations (i.e. “storing a reconciled object structure in the archive without substantial redundancy,” “one-to-many change”) well-understood, routine or conventional?
- At district court, HP presented evidence of an expert witness’ testimony that such limitations were *known*
- But even though a function is known, is it a *well-understood, routine and conventional* function?
- District court concluded that the claims do not contain an inventive concept under *Alice* step 2b because they describe “steps that employ only ‘well-understood, routine, and conventional’ computer functions”

Berkheimer v. HP Inc.

Arguments

- Berkheimer argued Summary Judgment was improper because portions of the specification referring to **reducing redundancy** and **enabling one-to-many editing** contradict the district court's finding that the claims describe well-understood, routine, and conventional activities
- Berkheimer argued that claim 1 recites an improvement to computer functionality and digital asset management systems
- Berkheimer argued that the claimed combination improves computer functionality through the elimination of redundancy (claim 4) and the one-to-many editing feature (claim 5), which provides inventive features
- HP argued that redundancy and efficiency are considerations in any archival system (including paper based systems), so those features are well-understood, routine and conventional

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Arguments

- Berkheimer pointed to the specification for support that reducing redundancy and the one-to-many editing features were not well-understood, routine and conventional at the time of invention:

“By eliminating redundancy in the archive 14, system operating efficiency will be improved, storage costs will be reduced and a one-to-many editing process can be implemented wherein a singular linked object, common to many documents or files, can be edited once and have the consequence of the editing process propagate through all of the linked documents and files. The one-to-many editing capability substantially reduces effort needed to up-date files which represent packages or packaging manuals or the like as would be understood by those of skill in the art.” (col. 16, lines 52-61)

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Holding

- “These conventional limitations of claim 1, combined with limitations of analyzing and comparing data and reconciling differences between the data, ‘fail to transform the abstract idea into a patent-eligible invention.’ *Alice*, 134 S. Ct. at 1357.”
- The limitations amount to no more than performing the abstract idea of parsing and comparing data with conventional computer components. Because claims 1-3 and 9 **do not capture the purportedly inventive concepts**, we hold that claims 1-3 and 9 are ineligible

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Holding

- The question of whether certain claim limitations (4-7) represent well-understood, routine, conventional activity **raised a disputed factual issue**, which precluded Summary Judgment that all of the claims at issue were not patent eligible
 - Court is **not** deciding that claims 4-7 are patent eligible under § 101
 - Only deciding that based on the present record, Summary Judgment was improper, given the fact questions created by the specification's disclosure. There is a genuine issue of material fact.
- CAFC has reaffirmed the *Berkheimer* holding in two additional decisions:
 - *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121 (Fed. Cir. 2018)
 - *Exergen Corp. v. Kaz USA, Inc.*, Nos. 2016-2315, 2016-2341, 2018 WL 1193529, at *1 (Fed. Cir. Mar. 8, 2018)

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Memorandum

- USPTO Memorandum issued April 19, 2018
- USPTO elevated the standard required for an Examiner to reject claims based on the premise that the additional element in the claim(s) at issue is well-understood, routine, and conventional in the art under MPEP § 2106.07(a) and (b)
- “the additional elements must be widely prevalent or in common use in the relevant field, comparable to the types of activity or elements that are so well-known that they do not need to be described in detail in a patent application to satisfy 35 U.S.C. § 112(a).”

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Memorandum

- Expressly sets forth 4 ways an Examiner may formulate a rejection that an additional element is well-understood, routine and conventional activity:
 - 1) citation to an express statement in the specification or to a statement made by an Applicant during prosecution that demonstrates the well-understood, routine, conventional nature of the additional elements,
 - 2) court decision citation discussed in MPEP § 2106.05(d)(II) noting the well-understood, routine, conventional nature of the additional element,

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Memorandum

- 3) citation to a publication that *demonstrates* the well-understood, routine, conventional nature of the additional elements.
- But merely citing the additional element in a single patent or published application is **not sufficient** to demonstrate that the additional element is well-understood, routine and conventional in the art,
 - Ex: a copy of a thesis in a University Library may be a “printed publication” (under § 102) but may not be sufficient to show that the element is well-understood, routine, and conventional in the art

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Memorandum

- 4) Statement that the Examiner is taking official notice of the well-understood, routine, conventional nature of the additional elements. However, **official notice should only be used when the Examiner is certain, based upon his or her personal knowledge**, that the additional elements are well-understood, routine, and conventional.
- If the Examiner uses (4) and Applicant challenges the Examiner's position:
 - the Examiner must provide one of items 1-3, *or*
 - Provide an affidavit or a declaration detailing specific factual statements supporting their position under 37 C.F.R. § 1.104(d)(2)

Practice Tips

- The standard for an Examiner to determine if an element or step is well-understood, routine and conventional under step 2B of the *Alice/Mayo* analysis has been elevated
- Burden being explicitly placed on the Examiner to demonstrate that an element is well-understood, routine and conventional even if the element is in known in the art by meeting one of the four requirements
- No presumption that an element is well-understood, routine and conventional *even if the element is in known in the art*
- If an Examiner cites to a publication for support that a step is well-understood, routine and conventional in the art, publication must show that the step is actually well-understood, routine and conventional in the art; not just present as step in a process

Practice Tips

- Possible to rebut Examiner's assertion if they take the route of using their own knowledge to support a rejection
 - Examiner must then provide one of the items discussed in paragraphs (1) through (3)
 - or an affidavit or declaration under 37 C.F.R. 1.104(d)(2) setting forth specific factual statements and explanation to support his or her position
- Level of “well-understood, routine and conventional” USPTO is expecting is the same as if the step is so well-known it would not have to be in the disclosure to meet written description/enablement requirement
- Incorporate improvements into the claim language (given there is support in the specification)

Questions?

Thanks for your attention!

What is claimed:

1. A method of archiving an item comprising in a computer processing system:

presenting the item to a parser;

parsing the item into a plurality of multi-part object structures wherein portions of the structures have searchable information tags associated therewith;

evaluating the object structures in accordance with object structures previously stored in an archive;

presenting an evaluated object structure for manual reconciliation at least where there is a predetermined variance between the object and at least one of a predetermined standard and a user defined rule.

2. The method as in claim 1 wherein the respective structure can be manually edited after being presented for reconciliation.

3. The method as in claim 1 which includes, before the parsing step, converting an input item to a standardized format for input to the parser.

4. The method as in claim 1 which includes storing a reconciled object structure in the archive without substantial redundancy.

5. The method as in claim 4 which includes selectively editing an object structure, linked to other structures to thereby effect a one-to-many change in a plurality of archived items.

6. The method as in claim 5 which includes compiling an item to be output from the archive, wherein at least one object-type structure of the item has been edited during the one-to-many change and wherein the compiled item includes a plurality of linked object-type structures converted into a predetermined output file format.

7. The method as in claim 6 which includes compiling a plurality of items wherein the at least one object-type structure had been linked in the archive to members of the plurality.

8. The method as in claim **7** wherein the plurality of items comprises a plurality of color separations and including producing the color separations sequentially wherein at least some of the separations contain a common graphical symbol edited commonly in the archive by editing the respective common respective object structure.

9. The method as in claim **1** which includes forming object oriented data structures from the parsed items wherein the data structures include at least some of item properties, item property values, element properties and element property values.

10. An object, oriented archival system comprising:
a storage medium, and a set of executable instructions for establishing an archive of documents represented by linked object oriented elements stored in the medium, wherein the archive exhibits minimal redundancy with at least some elements linked to pluralities of the elements and wherein some of the instructions, in response to a selected editing command, alter at least one element common to and linked to a selected plurality of other elements to thereby effect a one-to-many editing process and additional instructions for compiling an output file, in a selected format.

11. The system as in claim **10** which includes instructions for producing a plurality of files corresponding to color separations for printing a multi-color item.

12. The system as in claim **10** which includes instructions for storing object oriented elements incorporating property elements and associated values.

13. The system as in claim **12** which includes additional instructions for storing document properties and property values.

14. The system as in claim **13** wherein the executable instructions link selected property elements with selected document properties and values.

15. The system as in claim **10** wherein archived object oriented elements comprise a data structure which incorporates document properties and associated values.

16. The system as in claim **15** wherein document properties carry a linking tag.

17. The system as in claim **10** wherein executable instructions compare incoming object oriented elements to archived elements to thereby minimize redundancy in the archive.

18. The system as in claim **10** wherein a document can be represented by a plurality of linked object-type data structures which include document properties; document property values, element properties and element property values.

19. The system as in claim **10** wherein the output file comprises at least one of an input for a printer, an input for a printing press, and an input for an electronic network.

20. The method as in claim **1** for generating layers corresponding to color separations for a printing process further comprising:

establishing the archive populated with a plurality of graphically oriented object-type structures wherein a first plurality of the structures represents a first layer, corresponding to a color separation for a multi-color output document, wherein the members of the first plurality are linked to establish element definitions and locations, relative to one another, in the first layer, and, at least a second plurality of the structures wherein the second plurality represents a second layer corresponding to a second color separation for the output document wherein the members of the second plurality are linked to establish element definitions and locations, relative to one another, in the second layer, and, wherein the establishing step includes, analyzing the members of the first and second pluralities for common structures, and storing a representation of only one structure in the event that multiple common structures are detected.

21. The method as in claim **20** which includes converting at least one new document to a predetermined input format, and parsing the document to a third plurality of object oriented-type structures.

22. The method as in claim **21** which includes evaluating the members of the third plurality in accordance with at least one of a predetermined rule and a predetermined standard.

23. The method as in claim **22** which includes producing at least one of a report and a visual display of the results of the evaluating step.

24. The method as in claim **23** which includes editing the visual display thereby altering at least one of the members of the third plurality.

25. The method as in claim **21** which includes comparing the object structures to the pre-stored contents of a selected archive and adding only non-redundant object structures to the archive and establishing at least one added link to a pre-stored object structure in the event of a detected redundancy wherein the contents of the archive are substantially non-redundant.

26. The method as in claim **21** which includes compiling at least one output document into a predetermined output formal from a plurality of archived object structures.

27. The method as in claim **20** which includes editing a plurality of layers, substantially simultaneously, by altering a single object structure, common to all of the layers. 5

28. The method as in claim **25** which includes editing a plurality of documents, substantially simultaneously, by altering a single object structure common to all of the documents.

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