The Sedona Conference Journal

Volume 26

Forthcoming 2025

The Sedona Conference Specifications for Production

A Project of The Sedona Conference Technology Resource Panel



June 2025 Final Version

Recommended Citation:

The Sedona Conference, *Specifications for Production*, 26 SEDONA CONF. J. 171 (forthcoming 2025).

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SPECIFICATIONS FOR PRODUCTION

A Project of The Sedona Conference Technology Resource Panel

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This publication may be cited as follows:

The Sedona Conference, *Specifications for Production*, 26 SEDONA CONF. J. 171 (2025).

PREFACE

Welcome to *Specifications for Production*, a project of The Sedona Conference Technology Resource Panel. The Sedona Conference is a 501(c)(3) research and educational institute dedicated to the advanced study of law and policy in the areas of complex litigation, data privacy, intellectual property, and artificial intelligence. The mission of The Sedona Conference is to move the law forward in a reasoned and just way.

The mission of the Technology Resource Panel is to provide input to Sedona's multiple Working Groups when they are working on an issue involving the use of technology or services provided by electronic discovery or electronic information governance service providers, and to help create neutral guidance and reference material that will benefit the entire marketplace. The Technology Resource Panel consists of two halves: a "User Group," whose members regularly negotiate and work with legal technology service providers; and a panel of service provider members, who have agreed to work with the User Group and provide input along the way.

The Technology Resource Panel was formed in the belief that a well-informed marketplace, speaking in the same language, will ultimately lead to reduced transaction costs for all parties, higher quality, and greater predictability. *Specifications for Production* is designed to help the average attorney plan for eDiscovery, and to give the more technically sophisticated attorney a neutral guidebook to share with opposing counsel at the outset of eDiscovery negotiations. It does not advocate for any particular approach, nor does it favor producing over requesting parties, or vice versa. It is our hope that it will reduce costs and save time in civil litigation by alerting counsel on both sides to common technical issues with production, and helping avoid later disputes, wasted expenses, or "do-overs."

The Sedona Conference acknowledges the contributions of Paul H. McVoy, who served as Editor of the *Specifications for Production* and who was invaluable in driving this project forward. We also thank all of the Technology Resource Panel members who reviewed and commented on several drafts over many months. For a current listing of the Technology Resource Panel service provider and user group members, see https://thesedonaconference.org/trp.

As with all our publications, your comments are welcome. This publication will likely require updating and revision in the future, as the relevant technologies are constantly evolving. Please forward your comments by email to comments@sedonaconference.org.

Kenneth J. Withers Executive Director The Sedona Conference June 2025

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I. INTRODUCTION

A. Purpose of Tech Specs

The Sedona TRP presents the following technical production specifications to the discovery community as a way to standardize the logistical aspects of producing paper and Electronically Stored Information ("ESI") for parties in litigation. These templated specifications are intended to facilitate the parties' agreement on production format(s) and expedite their efforts to efficiently produce documents in a reasonably usable form, as directed by the Federal Rules of Civil Procedure, as well as many State laws.

Time should be taken at the inception of the matter to finalize technical production specifications so as to minimize time consuming issues further on in the case. This is especially important because, generally, parties are not required to produce documents in more than one form. If a litigant receives a production in a usable, but not optimal form for them, they have little recourse for a do-over, especially when the opportunity to engage their opposing counsel regarding the form of production has passed.

B. Distinction between Technical Specifications and an ESI Protocol

It is important to note that these specifications may be incorporated into or added as an appendix to an ESI protocol, but are not meant to substitute or be used in place of an ESI protocol, which normally will discuss workflow, data exchanges, the use of advanced technology for collection, review, production and other aspects of the ESI workflow that are beyond the parameters of this guidance.

C. Discussion of Native, Image, and Hybrid Production Formats

It is essential for the producing and receiving parties to cooperate and coordinate on production specifications. At the outset of any matter that will include the production of data originating as paper and ESI, both parties must make decisions about how they want to produce and receive the information. Each party is not limited to the decisions of its adversary, although it is helpful to coordinate to the extent possible. For example, if a receiving party plans to use its data in an online review tool, while the opposing party plans to use no review tool, their final technical production specification may be different.

At a high level, the receiving party must decide whether it wants the documents produced to it in their native form, in an imaged format, or via a hybrid of the two. Regardless of the format, however, it may be to the receiving party's benefit to receive database load files, including extracted metadata and text (e.g., ESI OCR-Text file for hard copy scanned documents), where possible and appropriate.

A native production refers to a production whereby the produced data files are in the format (e.g., Microsoft Word, Excel, PowerPoint, etc.) they are kept in the normal course of business. Unless the receiving party is using a native ingestion review platform, it must have access to the file's native software to open and review the files fully. There are some discovery tools available that will allow for the viewing or opening of multiple types of files, but usually they do not have the full functionality of the original software. The document ID of the native file serves as the functional equivalent of the Bates number. The native file ID is burned onto an image when it is used at deposition, for hearing, or trial by the party presenting it.

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Parties can also request that the producing party convert some or all of its ESI into a static image. The most common types are TIFF images or PDF files. The process to convert ESI to a static image allows for the traditional Bates numbering of pages and the endorsing of the pages with a confidentiality designation. This is the modern corollary of producing documents as paper.

Most common in today's environment is to have some data produced as images, and the other file types produced in their native format. The most often used example would be the production of electronic spreadsheets natively, with email, wordprocessing documents, and other common files produced in native format, along with a static image.

The technical specifications and comments for each production format are explained below. As stated above, these specifications may be incorporated into or added as an appendix to the ESI protocol. Each option is intended to be cut and pasted into a Technical Productions Specification document with minimal editing.

It should be noted that all parties and their retained service providers are not all situated equally. Parties should enter production negotiations with understanding and cooperation and remember the end goal: to be able to use the data produced for them in order to defend or prove their claims in a case.

Following the annotated specifications is Appendix A, which is a comprehensive list of metadata fields that may be exchanged in discovery. While the list is intended to be a wide survey of metadata fields, it is not a complete list. The TRP has tried to specify the metadata fields most commonly used but does not recommend any specific fields.

Finally, Appendix B is a sample Technical Specification document that has been assembled by simply cutting and pasting various sections together and can be used as is, if the specifications match the needs of your case.

II. TECHNICAL PRODUCTION SPECIFICATIONS

These technical production specifications are intended to be used by the parties to produce paper and Electronically Stored Information. These specifications are not intended to broaden or limit the scope of production, rather they are provided as a logistical guide for the parties as they prepare their productions.

Definitions

Please see The Sedona Conference Glossary: eDiscovery & Digital Information Management for any needed Definitions.¹

A. Production of Document Origination as Paper

• Hard Copy Documents

Comment: This production protocol does not address the method of searching or deduplicating hard copy documents.

Production Format

Comment: Parties can opt to produce hard-copy documents in paper format (i.e., copies) or electronic format after scanning. Which option you choose may depend upon the needs of your case, the potential volume of hard copy documents to be produced, and your review strategy. The following specifications apply to hard-copy documents produced in electronic format.

Parties also should recognize that in most cases, images can be scanned to black and white format, but the producing party

^{1.} The Sedona Conference Glossary: eDiscovery & Digital Information Management, Fifth Edition, 21 SEDONA CONF. J. 263 (2020).

should be cognizant that some documents, especially graphs and tables, need to be produced as a color image. When trying to come to an agreement, keep in mind that color images are much larger than black and white images and so cost more money to produce and more money to store once received.

- Paper Converted to Image Files:
 - Scanned Paper Production Format Option 1: Except as otherwise specified herein, each hard-copy document will be electronically scanned and produced as single-page, black and white, CCITT Group IV TIFF image file with 300 dpi resolution. Each image file will use the Bates number of the page as its unique file name. Page size shall be 8.5 x 11 inches unless, in the reasonable judgment of the Producing Party, a particular item requires a larger page size. Original document orientation as displayed in hard copy document shall be maintained in the TIFF image (*e.g.*, portrait to portrait and landscape to landscape).
 - Scanned Paper Production Format Option 2: Except as otherwise specified herein, each hard-copy document will be electronically scanned and produced as a separate PDF file with 300 dpi resolution. Each document file will use the Bates number of the first page of the document as its unique file name. Page size shall be 8.5 x 11 inches unless, in the reasonable judgment of the Producing Party, a particular item requires a larger page size. Original document orientation as displayed in hard-copy document shall be maintained in the PDF file (e.g., portrait to portrait and landscape to land-scape).

Comment: In some cases, the receiving party would prefer the PDF files to be text searchable. This needs to be agreed to beforehand.

• OCR & OCR-Text File

Comment: The parties may agree to apply optical character recognition to scanned hard-copy documents such that they may be electronically searched and to produce accompanying OCR text files. In other cases, the parties may agree that searchable TIFF image files and OCR text files, or text-searchable PDF files, will be produced if the producing party elects to OCR the scanned images for its own use. In still other cases, the parties may leave the question of OCR unaddressed.

- Scanned Paper Text File Provision: Each scanned hard-copy document shall be subject to OCR and accompanied by a document-level OCR-text file containing all of the text for that item, rather than one text file per page. Each text file shall be named using the Bates number of the first page of the corresponding Production item. OCR Text files should be provided in a "Text" folder on the production media.
- Preservation of Original: Following production, the original hard-copy documents shall be preserved according to applicable record retention requirements.
- Scanned Paper Color Provision: If the information in a scanned hard-copy document is not fully usable or understandable when produced in black and white (for example, lines in graphs or portions of pie charts that cannot be discerned from the legend when produced in black and

white), the requesting party may request the document be reproduced in color, and the request shall not be unreasonably denied. If the documents are produced in color, .jpg files should be produced with associated extracted text and other document-level metadata.

- Scanned Paper Oversize Original Provision: If the information in a scanned hard-copy document is not fully usable or understandable when produced with a page size of 8.5 x 11 inches, the requesting party may request the document be reproduced in larger size or in large paper format, and the request shall not be unreasonably denied.
- Scanned Paper Unitization Provision: In scan-ning hard-copy documents, distinct documents shall not be merged into a single record, and single documents shall not be split into multiple records. The Producing Party shall take reasonable steps to physically and logically unitize hard-copy documents. Pages that are stapled or clipped shall be produced as a single document and not multiple one-page documents. The Producing Party shall undertake reasonable efforts to, or have its vendors, logically unitize (i.e., use cues such as consecutive numbering, report titles, appendices, headers and footers, and other logical cues that indicate the pages belong together) hard-copy documents that are not otherwise bound.
- Scanned Paper Further Option: In the case of an organized compilation of separate documents (for example, a binder containing several separate documents behind numbered tabs), each of the

hard-copy documents should be separately scanned, but the relationship among and order of the documents in the compilation should be reflected in the proper coding of the beginning and ending documents and attachment fields. The Producing Party shall make reasonable best efforts to unitize hard-copy documents correctly.

- Scanned Paper Metadata Load File: Please see Appendix A for a list of metadata fields appropriate for a load file that accompanies scanned documents. The fields that should be produced for scanned documents are indicated in the paper column.
- B. Production of Electronically Stored Information

Comment: ESI that originates in electronic form of any kind, be it email, text messages, social media posts, spreadsheet or myriad other forms must also be produced in the discovery process. There are several options here, but the overarching purpose is to enable your team to be able to review the information before production and then allow opposing counsel to use the documents once they receive them.

Production Format

Electronic stored information should be produced in such fashion as to identify the original location (*i.e.*, the network file folder, hard drive, or other location) where the documents are stored and, where applicable, the natural person in whose possession they were found (or on whose hardware device they reside or are stored). If the storage location was a file share or work group folder, that file path should be specified as well. Attachments to any parent documents should also be produced and linked via the appropriate metadata field to the respective parent documents containing the attachments.

Option 1: Native Production

Comment: A native file production can be produced in a few ways. The first is a pure native production where the native files themselves are produced as is. Another option is that the native data can be run through software that extracts its metadata and text. Upon production, the text and metadata for responsive documents can be included with the production.

All ESI should be produced in the format that it is kept in the ordinary course of business. For example, Microsoft Word files should be produced as Microsoft Word formatted files.

Comment: The following provisions would be included for data that had been processed in software that extracted text and/or metadata.

Extracted full text (not OCR text) should also be delivered for each electronic document. The extracted full text should be delivered at the document level according to the specifications above, similar to paper documents.

Foreign language text files and metadata should be delivered with the correct encoding to enable the preservation and presentation of the documents' original language.

For data that does not have a usable pure native format, data may be converted into a reasonably usable and accessible form. For example, email should be delivered in .msg format, with attachments embedded into the file.

For documents that need redactions where no native data redaction tool exists, data may be converted into a static format like PDF or TIFF so that redactions may be applied.

- Image Files Option 1: ESI needing redactions will be converted to single-page, black and white, CCITT Group IV TIFF image files of at least 300 dpi resolution. Each image file will use the Bates number of the page as its unique file name. Page size shall be 8.5 x 11 inches unless, in the reasonable judgment of the Producing Party, a particular item requires a larger page size.
- Image Files Option 2: ESI needing redactions will be converted to separate PDF file with at least 300 dpi resolution. Each document file will use the Bates number of the first page of the document as its unique file name. Page size shall be 8.5 x 11 inches unless, in the reasonable judgment of the Producing Party, a particular item requires a larger page size.
- Native File Optional Addition: The produced files should be renamed to reflect the Bates number of the file being produced and to include the confidentiality designation assigned to the file. For example: XXX000001-CONFIDENTIAL.

Comment: ESI can be produced in its native format as it is kept in the normal course of business by the Producing Party. In some cases, especially smaller cases with little data volume, this may be the most practical and efficient way to proceed. Documents are not processed through traditional data processing software, where metadata and text are extracted from the original file. Files are reviewed in their native software program where the documents are then sorted into responsive, non-responsive, and privileged categories. The responsive information is then produced to the other side.

It should be noted, with a pure native production as described above, there is no way to redact or withhold parts of a

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document (like an email attachment) for privilege or non-responsiveness. It is also harder to track productions and to verify that the produced documents were not changed by opposing counsel, either on purpose or inadvertently.

The Producing Party should also be aware that some native files may contain embedded objects in them that will be produced in their entirety. For example, a PowerPoint slide may have a graph copied from an Excel spreadsheet. That graph may be a view into the entire spreadsheet, which will be produced with the PowerPoint file, and accessible by the receiving party.

Finally, other risks exist when receiving a native production. Electronic files can have programmed functionality embedded inside them that will execute when the file is opened. For example, dates may be updated to the current date or read receipts can be activated when opening emails with this feature enabled. Care should be taken when receiving a native production to maintain the integrity of the produced file and prevent unintentional changes.

• Option 2: Hybrid Production

Comment: Due to the challenges of a native production, parties that desire to produce native files often ingest them into a document-review system. During this process, the metadata and text are extracted and parsed in such a way as to allow for greater organization in the discovery process. Once in the software, parties then have options on how they produce documents. Documents can be Bates numbered, documents can be converted to TIFF or PDF for redacting, and attachments can be withheld for privilege or non-responsiveness.

- o Image Files
 - Image Files Option 1: Except as noted below, ESI should be produced as single-page, black and

white, CCITT Group IV TIFF image files of at least 300 dpi resolution. Each image file will use the Bates number of the page as its unique file name. Page size shall be 8.5 x 11 inches unless, in the reasonable judgment of the Producing Party, a particular item requires a larger page size.

- Image Files Option 2: Except as noted below, ESI should be produced as a separate PDF file with at least 300 dpi resolution. Each document file will use the Bates number of the first page of the document as its unique file name. Page size shall be 8.5 x 11 inches unless, in the reasonable judgment of the Producing Party, a particular item requires a larger page size. Original document orientation as displayed in hard-copy document shall be maintained in the PDF file (*e.g.*, portrait to portrait and landscape to landscape).
- Optional Hybrid Production Format Additions:

Spreadsheets should be produced in their native format. Extracted full text should also be delivered for each spreadsheet. The extracted full text should be delivered on a document level according to the specifications above, similar to paper documents. The produced files should be renamed to reflect the Bates number of the file being produced and to include the confidentiality designation assigned to the file. For example: XXX00001-CONFIDENTIAL.

Presentations, like Microsoft PowerPoint files, should be produced in their native format. Extracted full text should also be delivered for each electronic document.

The extracted full text should be delivered at the document level according to the specifications provided above for paper documents. The produced files should be renamed to reflect the Bates number of the file being produced and also to include the confidentiality designation assigned to the file. For example: XXX000001-CONFIDENTIAL

Foreign language text files and metadata should be delivered with the correct encoding to enable the preservation and presentation of the documents' original language. Encoding is the process of creating a text file with the correct technical information included in the file so that the displaying computer is instructed as to which character set to use. For example, a text file that contains Chinese characters would not display correctly if the computer wasn't informed as to which character set to use.

• Metadata Load Fle

Comment: Metadata is "the generic term used to describe the structural information of a file that contains data about the file, as opposed to describing the content."² To the extent that metadata is requested and required by protocol or agreement, metadata can be delivered in multiple formats, including in a load file and accompanying spreadsheet file.

Attached is Appendix A, and although it is not an exhaustive list of all the metadata fields available, it contains a list of metadata fields that may be necessary for exchange in a variety of litigation scenarios. Please note the column "Most Common" in Appendix A, which indicates the consensus among the TRP of fields most commonly exchanged. Also of note, different platforms may use different names for the metadata fields listed

^{2.} *See id.* As noted in the *Glossary*, there is both System-Generated Metadata and User-Created Metadata.

below. Further, different platforms may either merge or consolidate the metadata information outlined below.³

C. Production Formats of Other Forms of ESI

• Structured Data

As defined in The Sedona Conference Glossary, Structured Data is "Data stored in a structured format, such as databases or data sets according to specific form and content rules as defined by each field of the database. Contrast to Unstructured Data."

To the extent a response to discovery requires production of electronic information stored in a database or other structured data repository, the parties should meet and confer regarding methods and format of production. Parties should consider whether all relevant information may be provided by querying the database for discoverable information and generating a report in a reasonably usable and exportable electronic file. The discussions will generally include some or all of the following:

- o Fields and Field definitions
- o Mutually agreeable exchange format
- Proprietary databases
- Number of Records
- The type of database, *i.e.*, Relational

Comment: The parties should keep in mind that responsive data may make up only a part of a database or structured data repository. In addition, the production of data from a proprietary or legacy database may be more difficult or expensive than

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^{3.} For example, some platforms may include all custodians in the single CUSTODIAN field versus breaking out custodians into CUSTODIAN versus ALLCUSTODIANS field.

other forms of production so the parties should work together to minimize these issues.

The Sedona Conference Database Principles: Addressing the Preservation and Production of Databases and Database Information on Civil Litigation is a useful resource for any party involved in the preservation, collection, review and production of structured data.

• Messaging Applications

Comment: This section provides technical specification options for messaging applications, including those contained within a collaboration tool. The parties also need to reach agreement on how links to files, websites or other content within a message will be produced. Normally, documents, files, pictures or video are embedded into the message and will be exported with the file or captured during the collection process.

The parties will meet and confer to determine the temporal framework for the productions of messaging ESI:

- **Temporal Messaging Production Option 1**: The single message with no further context.
- **Temporal Messaging Production Option 2**: A responsive message shall be produced in context with the messages coming twelve hours before and twelve hours after the responsive message being produced.
- **Temporal Messaging Production Option 3**: The entire conversation or "channel" should be included in the production without time restraint.
- **Messaging Production Format Option 1**: Produce complete screen shots of responsive text messages, including the author and recipient of the message, and the date/time the message was sent or received.

The parties should agree ahead of time that this is an acceptable format for the exchange of text messages, for one or both parties. If the message spans more than a single image, the screenshots should be captured so that the images contain enough information from one screen to the next for the receiving party to reassemble the text "string". See example below:

2:02	ul 🗢 🖽	2:03	al 🗢
D 9 ¢ 5 Peop		<	People >
Tuesday 5	:12 PM	+1 (203) 824-2597	
Dana Anyone playing tor	ight besides	I might swing d around 6:30-7	own for a little bit after dinner
me and Emily?		Dana	
I can't tho I fun!	would love to! Have	OK. Text before only have three early.	you come. We so we might finish
+1 (203) 859-0130		Lisa	
Im in!		Did not know u	were playing
Emily		tonight.	
таууу	•		
Dana can pick us u	p	Lisa i said u nad	iyoga
+1 (203) 859-0130		You must be in	vour Vogi brain 😚
What time?			your rogronant
Dana		Emily	
Now		E You said you ha	id yoga
Ish		Lisa	
Emily		Oh yes today is	Tuesday!!!!
We can meet you c	lown there	Omg almost for	rootl Thank you
+1 (203) 824-2597		ong antost for	goti manik you.
I might swing down around 6:30-7 afte	n for a little bit r dinner	l'm stuck on Mo yesterday off a	nday. Had nd all confused.
iMessage	U	(+) iMessage	

See also *The Sedona Conference Primer on Managing Electronic Discovery in Small Cases*,⁴ which provides more information on how to treat messaging data in smaller cases.

The image should include all the available information from the text message and should not be limited so as to exclude any information that is visible on the screen of the device displaying the image (e.g., any part of the message conversation, the contact information or the date the message was sent or received).

> • **Messaging Production Format Option 2**: Produce the content of messages in a spreadsheet, where each field of metadata is separated by line in the spreadsheet, including the text of the message. If there are images, videos or audio files linked to the message, a path to the attached file should be included in the spreadsheet and point to the destination file on the production media.

Comment: Generally, messages are stored on a device or in a program on a table that is similar to a spreadsheet, with each column containing an aspect of the message that the software program then uses to assemble the message for viewing purposes or user interaction. Sometimes, this is a good option to get data produced quickly as it allows for the context to be retained, and for the review and production to occur without need of a separate review tool.

 Messaging Production Format Option 3: Messages should be produced as rendered by a document review or other discovery software to mimic how the messages would appear in their native form, i.e.,

^{4.} The Sedona Conference, *Primer on Managing Electronic Discovery in Small Cases*, 24 SEDONA CONF. J. 93 (2023).

with message bubbles for each individual message, with an indication of the author, recipient, and the date\time of each individual message. Separations for date should also be included.

• Social Media

Comment: Often there are public and private parts to social media pages, like Facebook, TikTok and Instagram. Many social media sites also have built in tools to allow their users to quickly and simply export data into one or more formats.

Note that the export tools are not built for litigation, rather for personal use and may not contain all the details or attributes that are seen on the website, either publicly or privately. In addition, social media companies are often changing their software, so that changes to the export can happen with no notice, or in the middle of a litigation, meaning that the format of the export can change unexpectedly.

- Social Media Production Format Option 1: Provide log in information for the site or sites so that the opposing party can log in and inspect or export what they want.
- Social Media Production Format Option 2: Provide the native export from the social media site as it was exported using the tools available from within the program. Data should not be edited or culled in any way.
- Social Media Production Format Option 3: Produce screenshot images using the specification for images above. The produced screenshot images should include all available information including user information, date\time information of the post and any responses or comments to the post.

Comment: Frequently, the only way to capture the content of responsive ESI from a social media site is to take a screenshot. This option is best when the data displayed on the screen is not available to export to a user created archive because of security permissions, which are often dictated by the person posting the content, not the user of the specific site.

• Hyperlinked Data

Comment: Please note that this paper makes no commentary on whether linked documents should or can be produced. If linked documents are going to be produced, this section outlines the technical options for their production.

- Hyperlinked Data Production Format Option 1: Hyperlinked files should be produced in a format that mirrors the way embedded attachments are produced. The files should be linked to the originating file, meaning that the linked document would follow the originating email. The emails would be proximally linked to the originating email with the PRODBEGATTACH and PRODENDATTACH fields described in the metadata field list.
- **Hyperlinked Data Production Format Option 2:** Linked files should be produced as stand-alone files and include a **designation** in the Custodian field of the metadata to indicate they are a linked file. For example, if the Custodian is Smith, the Custodian field should be populated by Smith-Hyperlinked File. If technologically feasible, the party should also produce a cross-reference file that provides the Bates

number of the file that originally contained the link with a list of the files to which the original file linked.

Comment: The technological feasibility of producing linked documents, sometimes referred to as linked attachments or modern attachments, is evolving. Some parties may have access to tools that make the production of the linked data possible, while other parties may have no ability to produce linked files associated with the originating email. There are also situations where a party may have the ability to readily produce some linked files but not others, depending on how they were stored or linked. Finally, parties may or may not be able to produce the correct version of a file that was originally linked.

- Websites
 - Website Data Production Format Option 1: A website shall be produced in its native HTML format and structured in such a way that it can be readily navigated by the producing party. The production should include the necessary files and resources so that the receiving party can click on links and get to the target resource if the resource is not available publicly.
 - Website Data Production Format Option 2: Website data should be produced in a fixed-image format, with linked files associated via the PRODBEGATTACH and PRODENDATTACH fields, with appropriate metadata captured from the website at time of collection.

Comment: Websites are dynamic and updated frequently, which can affect the options for producing them in litigation. Websites are often programmed with hyperlinks that reference

other parts of the website, files, videos or other websites on the Internet.

When coming to an agreement on the production of websites, there are several considerations to understand. For example, what version of the website will be produced. As the website is likely to change over time, the parties must quickly agree upon the version and/or date of the website to be preserved, collected, and produced.

SPECIFICATIONS					
Field Name (with Aliases), Most Commonly Used Marked with an asterisk	Field Description	Field Type	Field – Extracted OR Created	ESI Type	
PRODBEG*	The unique se- quential docu- ment control number of the first page of the document. Can- not contain spaces or special characters.	Note Text	Created	Paper, Email, Non-Email, Social Media, Messaging Apps	
PRODEND*	The unique se- quential control number of the last page of the document. Can- not contain spaces or special characters.	Note Text	Created	Paper, Email, Non-Email, Social Media, Messaging Apps	
SOURCE*	Globally popu- lated field con- taining the name of producing party (not the law firm or ven- dor name). Not pulled from metadata.	Multi-En- try	Created	Paper, Email, Non-Email, Social Media, Messaging Apps	

III. APPENDIX A TO TRP TECHNICAL PRODUCTION SPECIFICATIONS

	N (1)			
COSTODIAN	dividual, or group/depart- ment for shared resources, from whose files the document origi- nated. Format: Last, First or ABC Dept. Use con- sistent naming and formatting across all pro- ductions.	Text	Created	Apper, Email, Non-Email, Social Media, Messaging Apps
ALLCUSTODIANS*	All custodians who were in pos- session of a deduplicated document, in- cluding the per- son or group identified in the CUSTODIAN field. Format: Last, First or ABC Dept. Use con- sistent naming and formatting across all pro- ductions.	Multi-En- try	Created	Email, Non-Email, Social Media, Messaging Apps
MEDIAID	The unique iden- tifier applied to each physical piece of media delivered (e.g., ABC001).	Note Text	Created	Paper, Email, Non-Email, Social Media, Messaging Apps
PRODUCTION VOLUME*	Unique produc- tion volume identifier applied (e.g., ABC001- 001).	Note Text	Created	Paper, Email, Non-Email, Social Media, Messaging Apps

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PRODBEG ATTACH*	Used for docu- ments in a family group (e.g. an email with at- tachments). Pop- ulated with the document con- trol number of the parent docu- ment. Populated for each child document as well as the par- ent document.	Note Text	Created	Paper*, Email, Non-Email, Social Media, Messaging Apps
PRODEND ATTACH*	Used for docu- ments in a family group (e.g. an email with at- tachments). Pop- ulated with the ENDDOC of the last child record in the family group. Popu- lated for each child document as well as the parent docu- ment.	Note Text	Created	Paper, Email, Non-Email, Social Media, Messaging Apps
ATTACHMENT DOCIDS	List of document IDs of all child items in a family group. Only populated for	Note Text	Created	Email, Non- Email

Note

Text

Extracted

the parent rec-

Names of all

group. Only populated for the parent rec-

child items in a

ord.

family

ord.

ATTACHMENT

NAMES

Email, Social

Media, Mes-

saging Apps

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ATTACHMENT COUNT	Number of at- tachments asso- ciated with a parent record	Note Text	Extracted	Email
RECORD TYPE*	Record Type: Edoc, Edoc At- tachment, Email, Email Attach- ment, Hard Copy, Calendar, Text Message, Text Attach- ment, IM, Chat, Chat Attach- ment, Audio, Video, Voicemail	Multi-En- try	Extracted	Paper, Email, Non-Email, Social Media, Messaging Apps
TIMEZONE*	The TimeZone in which the custo- dian is normally located.	Note Text	Created	Email, Social Media, Mes- saging Apps
EMAIL FOLDER PATH*	Full folder path of email within a mail store when collected, includ- ing file name; or full folder path of instant mes- sage or text mes- sage or text mes- sage when col- lected including file name; or Hard Copy folder/binder ti- tle/label. Pre- pend with Custo- dian Name (sample: Smith, James-Inbox\Ac- tive).	Multi-En- try	Extracted	Email

FROM*	Sender of the Email, Instant Message, Text Message, Chat, or Calendar item.	Note Text	Extracted	Social Media, Messaging Apps
TO*	Primary recipi- ents of the Email, Instant Message, Text Message, Chat, or Calendar Item. Separate multiple entries with a semi-co- lon followed by a space.	Multi-En- try	Extracted	Email, Social Media, Mes- saging Apps
CC*	Copyees of the Email, Instant Message, Text Message, Chat or Calendar Item. Separate multiple entries with a semi-co- Ion followed by a space.	Multi-En- try	Extracted	Email, Social Media, Mes- saging Apps
BCC*	Blind Copyees of the Email, In- stant Message, Text Message, Chat or Calendar Item. Separate multiple entries with a semi-co- Ion followed by a space.	Multi-En- try	Extracted	Email, Social Media, Mes- saging Apps
SUBJECT*	Subject line of the Email, In- stant Message, Text Message, Chat, calendar	Note Text	Extracted	Email

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	item, or Notes item.			
DATESENT*	Date and time the Email, In- stant Message, Text Message, Chat or Calendar Item was sent. Format: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for 1:32 pm); time zone indicators cannot be in- cluded).	Date- Time	Extracted	Email, Social Media, Mes- saging Apps
DATERECEIVED*	Date and time the Email, In- stant Message, Text Message, Chat or Calendar Item was re- ceived. Format: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for 1:32 pm); time zone indicators cannot be in- cluded.	Date- Time	Extracted	Email
HEADER	The internet header infor- mation from each Email.	Note Text	Extracted	Email

INTERNETMSGID	Internet mes- sage ID assigned by the outgoing mail server which typically includes mes- sageid and a do- main name. Ex- ample: <u>0E6648D558F33</u> <u>8179524D555@</u> m1p.innovy.net	Note Text	Extracted	Email
MESSAGEID	Unique identifier of email mes- sages in mail stores. EntryID for Microsoft Outlook, the UniqueID (UNID) for Lotus Notes, or equivalent value for other proprietary mail store formats.	Note Text	Extracted	Email
INREPLYTOID	Internet mes- sage ID of the Email being re- plied to.	Note Text	Extracted	Email
CONVERSATION INDEX	Conversation in- dex value for Mi- crosoft Exchange emails.	Note Text	Extracted	Email
DELIVERY RECEIPT	Delivery receipt request notifica- tion for Email messages.	Note Text	Extracted	Email
READRECEIPT	Read Receipt re- quest notifica- tion for Email messages.	Note Text	Extracted	Email

IMPORTANCE	Sensitivity field from Email mes- sages or calen- dar items.	Note Text	Extracted	Email
REVISION	Revision number extracted from metadata of na- tive file.	Note Text	Extracted	Email, Non- Email
DATECREATED*	Date and time the electronic file was created. Format: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for 1:32 pm); time zone indicators cannot be in- cluded).	Date- Time	Extracted	Non-Email
DATESAVED*	Date and time the electronic file was last modified. For- mat: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for 1:32 pm); time zone indicators cannot be in- cluded.	Date- Time	Extracted	Non-Email
COMPANY	"Company" field value pulled from the metadata of a native file.	Note Text	Created	Non-Email
AUTHOR*	Author field value pulled from the metadata of a native file.	Note Text	Extracted	Non-Email

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LASTSAVEDBY	Last Saved By field value pulled from metadata of a native file.	Note Text	Extracted	Non-Email
TITLE*	Title or Subject field value pulled from metadata from electronic file.	Note Text	Extracted	Email, Non-Email
FILENAME*	Original file name of the na- tive file, includ- ing file exten- sion.	Note Text	Extracted	Email, Non-Email
FILETYPE*	Application used to create or transmit the original native files, document, message, ap- pointment (e.g., WhatsApp, Ex- cel, Slack, Out- look, Snapchat, Word, Twitter, Gmail, Tango).	Note Text	Extracted	Email, Non-Email, Social Media, Messaging Apps
FILEEXTENSION*	File extension of original native file; e.g. XLSX, PDF, DOCX	Short Text	Extracted	Email, Non-Email, Social Media, Messaging Apps

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FILEPATH*	Full qualified original path to the native when collected, includ- ing original file name. Prepend with recogniza- ble Custodian Name; e.g. Smith, James- C\My Docu- ments\Sales Info\ACME\2017 -Monthly- Sales.xlsx	Multi-En- try	Extracted	Non-Email, Social Media, Messaging Apps
DUPFILEPATH*	Full qualified original path to the native when collected, includ- ing original file name for unpro- duced duplicate copies.	Multi-En- try	Extracted	Non-Email, Social Media, Messaging Apps
NATIVE LINK*	File path location to the current native file loca- tion on the deliv- ery medium.	Note Text	Created	Non-Email
DATETIMESTART (Calendar Items)*	Start date and time of calendar appointments, voice messages, chats, text mes- sage conversa- tions. Format: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for 1:32 pm); time zone indicators cannot be in- cluded.	Date- Time	Extracted	Non-Email

			-	
DATETIMEEND (Calendar Items)*	End date and time of calendar appointments, voice messages, chats, text mes- sage conversa- tions. Format: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for 1:32 pm); time zone indicators cannot be in- cluded.	Date- Time	Extracted	Non-Email
DURATION	The elapsed time of the audio, video, voice message. Format HH:MM:SS	Note Text	Extracted	Non-Email
DIRECTION	Identifies direc- tion of commu- nication or other routing infor- mation; Out- going, Incoming.	Note Text	Extracted	Email
ROOM ID	The space, group chart or DM identifier tht the message belongs to	Note Text	Extracted	Social Media, Messaging Apps
CHATROOM NAME*	Name of chat room or channel used in the com- munications. Can be the private or public channel or room that the messaging took place.	Note Text	Extracted	Non-Email, Social Media, Messaging Apps

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MESSAGEEDIT	Indicates if the message was ed- ited after it was first posted.	Note Text	Extracted	Social Media, Messaging Apps
MENTIONS	List of users that were mentioned or "@"'d in the message or post.	Multi-En- try	Extracted	Social Media, Messaging Apps
PARTICIPANTS*	List of partici- pant names, email addresses and/or tele- phone numbers.	Note Text	Extracted	Email, Social Media, Mes- saging Apps
USERID	The unique, pro- vider assigned ID value given to a user.	Note Text	Extracted	Social Media, Messaging Apps
USERNAME	The user name- created by the user.	Note Text	Extracted	Social Media, Messaging Apps
OWNERPHONE NUMBERS	The value in- cludes multiple phone numbers when the user's number changed over time.	Multi-En- try	Extracted	Messaging Apps
LABELS	Any labels on the coversation, for example, de- leted conver- satins have the DELETED label.	Note Text	Extracted	Social Media, Messaging Apps
DATEFIRST MESSAGESENT	The timestamp for when the first chat mes- sage, text, voicemail, and call log was sent.	Date- Time	Extracted	Messaging Apps

DATELAST MESSAGESENT	The timestamp for when the last chat message, text, voicemail, and call log was sent.	Date- Time	Extracted	Messaging Apps
DATEFIRST MESSAGE RECEIVED	The timestamp for when the first chat mes- sage, text, voicemail, and call log was re- ceived.	Date- Time	Extracted	Messaging Apps
DATELAST MESSAGE RECEIVED	The timestamp for when the last chat message, text, voicemail, and call log was received.	Date- Time	Extracted	Messaging Apps
BODY	Body of text messages, in- stant messages, notes, or chats. Do not populate for emails or cal- endar items.	Note Text	Extracted	Social Media, Messaging Apps
STATUS	Indicates whether text was Sent or Read on the device.	Note Text	Extracted	Non-Email, Social Media, Messaging Apps
THREAD-GROUP	Populate with the DOCID of the first text in a conversation or chat.	Note Text	Extracted	Email, Social Media, Mes- saging Apps
HASH*	Document hash value (used for deduplication or other pro- cessing).	Note Text	Created	Email, Non-Email, Social Media, Messaging Apps

SPECNO	Subpoena/re- quest paragraph number to which the document is responsive.	Multi-En- try	Created	Paper, Email, Non-Email, Social Media, Messaging Apps
SEARCHVALUES	Specific search terms used to identify the rec- ord as respon- sive (if used).	Multi-En- try	Created	Paper, Email, Non-Email, Social Media, Messaging Apps
CONFIDENTIAL*	Confidentiality designation, if any, of the docu- ment assigned under any Pro- tective Order in the Action. Field should be popu- lated with spe- cific designation; if NO designa- tion, field should be left blank.	Note Text	Created	Paper, Email, Non-Email, Social Media, Messaging Apps
REDACTION*	User-generated field that will in- dicate the basis for redactions.	Note Text	Created	Paper, Email, Non-Email, Social Media, Messaging Apps
TEXTPATH*	Relative file path to each ex- tracted text/OCR text file on the Production Me- dia.	Note Text	Created	Paper, Email, Non-Email, Social Media, Messaging Apps
EXCEPTIONS	To the extent ex- tracted in pro- cessing, popu- late with exception	Note Text	Created	Email, Non-Email, Social Media, Messaging Apps

reasoning from processing soft- ware.		

IV. APPENDIX B: TECHNICAL PRODUCTION SPECIFICATIONS

These technical production specifications are intended to be used by the parties to produce paper and Electronically Stored Information ("ESI"). These specifications are not intended to broaden or limit the scope of production, rather they are provided as a logistical guide for the parties as they prepare their productions.

Definitions: For any needed definitions, please see *The Sedona Conference Glossary: eDiscovery & Digital Information Management (Fifth Edition).* 21 SEDONA CONF. J. 263 (2020).

1. Production of Document Origination as Paper

A. Production format

Image Files: Except as otherwise specified herein, each Hard Copy Document will be electronically scanned and produced as single-page, black and white, CCITT Group IV TIFF image file with 300 dpi resolution. Each image file will use the Bates number of the page as its unique file name. Page size shall be 8.5 x 11 inches unless, in the reasonable judgment of the Producing Party, a particular item requires a larger page size. Original document orientation as displayed in hard copy document shall be maintained in the TIFF image (e.g., portrait to portrait and landscape to landscape).

OCR & OCR-Text File: Each scanned hard copy document shall be subject to OCR and accompanied by a document-level OCR-text file containing all of the text for that item, rather than one text file per page. Each text file shall be named using the Bates number of the first page of the corresponding Production item. OCR Text files should be provided in a "Text" folder on the production media.

Preservation of Original: Following production, the original hard copy documents shall be preserved according to applicable record retention requirements.

Color: If the information in a scanned hard copy document is not fully usable or understandable when produced in black and white (for example, lines in graphs or portions of pie charts that cannot be discerned from the legend when produced in black and white), the requesting party may request the document be reproduced in color, and the request shall not be unreasonably denied. If the documents are produced in color, .jpg files should be produced with associated extracted text and other document-level metadata.

Oversize Original: If the information in a scanned hard copy document is not fully usable or understandable when produced with a page size of 8.5 x 11 inches, the requesting party may request the document be reproduced in larger size or in large paper format, and the request shall not be unreasonably denied.

Unitization: In scanning Hard Copy Documents, distinct documents shall not be merged into a single record, and single documents shall not be split into multiple records. The Producing Party shall take reasonable steps to physically and logically unitize Hard Copy Documents. Pages that are stapled or clipped shall be produced as a single document and not multiple one-page documents. The Producing Party shall undertake reasonable efforts to, or have its vendors, logically unitize (i.e., use cues such as consecutive numbering, report titles, appendices, headers and footers, and other logical cues that indicate the pages belong together) Hard Copy Documents that are not otherwise bound.

Compilations: In the case of an organized compilation of separate documents (for example, a binder containing several separate documents behind numbered tabs), each of the Hard Copy Documents should be separately scanned, but the relationship among and order of the documents in the compilation should be reflected in the proper coding of the beginning and ending documents and attachment fields. The Producing Party shall make reasonable best efforts to unitize Hard Copy Documents correctly.

Scanned Paper Metadata Load File: Please see Appendix A for a list of metadata fields appropriate for a load file that accompanies scanned documents. The fields that should be produced for scanned documents are indicated in the Paper Column.

2. Production of Electronically Stored Information

A. Production Format

Electronic stored information (ESI) should be produced in such fashion as to identify the original location (i.e., the network file folder, hard drive, or other location) where the documents are stored and, where applicable, the natural person in whose possession they were found (or on whose hardware device they reside or are stored). If the storage location was a file share or work group folder, that file path should be specified as well. Attachments to any parent documents should also be produced and linked via the appropriate metadata field to the respective parent documents containing the attachments.

B. Form of Production Option

Image Files: Except as noted below, ESI should be produced as single-page, black and white, CCITT Group IV TIFF image files of at least 300 dpi resolution. Each image file will use the Bates number of the page as its unique file name. Page size shall be 8.5 x 11 inches unless, in the reasonable judgment of the Producing Party, a particular item requires a larger page size.

Spreadsheets: should be produced in their native format. Extracted full text should also be delivered for each spreadsheet. The extracted full text should be delivered on a document level according to the specifications above similar to paper documents. The produced files should be renamed to reflect the Bates number of the file being produced and also to include the confidentiality designation assigned to the file. For example: XXX000001-CONFIDENTIAL.

Foreign language text files and metadata: should be delivered with the correct encoding to enable the preservation and presentation of the documents' original language. Encoding is the process of creating a text file with the correct technical information included in the file so that the displaying computer is instructed as to which character set to use. For example, a text file that contains Chinese characters would not display correctly if the computer wasn't informed as to which character set to use.

Metadata Load File for Produced ESI: Attached below is a table that lists the metadata fields to be produced.

C. Production Formats of Other Forms of ESI

Structured Data: As defined in The Sedona Conference Glossary, Structured Data is "Data stored in a structured format, such as databases or data sets according to specific form and content rules as defined by each field of the database. Contrast to Unstructured Data."

To the extent a response to discovery requires production of electronic information stored in a database or other structured data repository, the parties should meet and confer regarding methods and format of production. Parties should consider whether all relevant information may be provided by querying the database for discoverable information and generating a report in a reasonably usable and exportable electronic file. The discussions will generally include some or all of the following:

- Fields and Field definitions
- Mutually agreeable exchange format
- Proprietary databases
- Number of Records
- The type of database, i.e., relational

Messaging Applications: The parties agree that responsive messages shall be produced in context with the messages coming 12 hours before and 12 hours after the responsive message being produced with the responsive message.

Messages: Messages should be produced as rendered by a document review or other discovery software to mimic how the messages would appear in their native form, i.e., with message bubbles for each individual message, with an indication of the author, recipient, and the date \ time of each individual message. Separations for date should also be included.

Social Media: Provide the native export from the Social Media site as it was exported using the tools available from within the program. Data should not be edited or culled in any way.

Hyperlinked Data: Linked files should be produced as standalone files and include a designation in the Custodian field of the metadata to indicate they are a linked file. For example, if the Custodian is Smith, the Custodian field should be populated by Smith-Hyperlinked File.

If technologically feasible, the party should also produce a cross-reference file that provides the Bates number of the file that originally contained the link with a list of the files to which original file linked.

Websites: Website data should be produced in a fixed image format, with linked files associated via the PRODBEGATTACH and PRODENDATTACH fields, with appropriate metadata captured from the website at time of collection.

Field Name (with Aliases)	Field Descrip- tion	Field Type	Field – Extracted OR Created	ESI Type
PRODBEG*	The unique se- quential docu- ment control number of the first page of the document. Cannot contain spaces or spe- cial characters.	Note Text	Created	Paper, Email, Non-Email, Social Me- dia, Messag- ing Apps
PRODEND*	The unique se- quential control number of the last page of the document. Cannot contain spaces or spe- cial characters.	Note Text	Created	Paper, Email, Non- Email, So- cial Media, Messaging Apps
SOURCE*	Globally popu- lated field con- taining the name of pro- ducing party (not the law firm or vendor name). Not pulled from metadata.	Multi- Entry	Created	Paper, Email, Non-Email, Social Me- dia, Messag- ing Apps

Appendix B: Sample Metadata Fields

CUSTODIAN*	Name of the in- dividual, or group/depart- ment for shared re- sources, from whose files the document orig- inated Format:	Note Text	Created	Paper, Email, Non-Email, Social Me- dia, Messag- ing Apps
	Last, First or ABC Dept. Use consistent nam- ing and format- ting across all productions.			
ALLCUSTODIA NS*	All custodians who were in possession of a deduplicated document, in- cluding the person or group identi- fied in the CUSTODIAN field. Format: Last, First or ABC Dept. Use consistent nam- ing and format- ting across all productions.	Multi- Entry	Created	Email, Non-Email, Social Me- dia, Messag- ing Apps
PRODUCTION VOLUME*	Unique pro- duction volume identifier ap- plied (e.g., ABC001-001).	Note Text	Created	Paper, Email, Non-Email, Social Me- dia, Messag- ing Apps

PRODBEG ATTACH*	Used for docu- ments in a fam- ily group (e.g.	Note Text	Created	Paper*, Email, Non-Email,
	an email with attachments). Populated with the document control number of the parent document. Populated for each child doc- ument as well as the parent document.			Social Me- dia, Messag- ing Apps
PRODEND ATTACH*	Used for docu- ments in a fam- ily group (e.g. an email with attachments). Populated with the ENDDOC of the last child record in the family group. Populated for each child doc- ument as well as the parent document.	Note Text	Created	Paper, Email, Non-Email, Social Me- dia, Messag- ing Apps
RECORD TYPE*	Record Type: Edoc, Edoc At- tachment, Email, Email Attachment, Hard Copy, Calendar, Text Message, Text Attachment,	Multi- Entry	Extracted	Paper, Email, Non-Email, Social Me- dia, Messag- ing Apps

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	IM, Chat, Chat Attachment, Audio, Video, Voicemail			
TIMEZONE*	The TimeZone in which the custodian is normally lo- cated.	Note Text	Created	Email, So- cial Media, Messaging Apps
EMAIL FOLDER PATH*	Full folder path of email within a mail store when collected, including file name; or full folder path of instant mes- sage or text message when collected in- cluding file name; or Hard Copy folder/binder title/label. Pre- pend with Cus- todian Name (sample: Smith, James-In- box\Active).	Multi- Entry	Extracted	Email

FROM*	Sender of the Email, Instant Message, Text Message, Chat, or Calendar item.	Note Text	Extracted	Social Me- dia, Messag- ing Apps
TO*	Primary recipi- ents of the Email, Instant Message, Text Message, Chat, or Calendar Item. Separate multiple entries with a semi-co- lon followed by a space.	Multi- Entry	Extracted	Email, So- cial Media, Messaging Apps
CC*	Copyees of the Email, Instant Message, Text Message, Chat or Calendar Item. Separate multiple entries with a semi-co- lon followed by a space.	Multi- Entry	Extracted	Email, So- cial Media, Messaging Apps
BCC*	Blind Copyees of the Email, Instant Mes- sage, Text Mes- sage, Chat or Calendar Item. Separate multi- ple entries with a semi-colon followed by a space.	Multi- Entry	Extracted	Email, So- cial Media, Messaging Apps

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SUBJECT*	Subject line of the Email, In- stant Message, Text Message, Chat, calendar item, or Notes item.	Note Text	Extracted	Email
DATESENT*	Date and time the Email, In- stant Message, Text Message, Chat or Calen- dar Item was sent. Format: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for 1:32 pm); time zone indicators cannot be in- cluded).	Date- Time	Extracted	Email, So- cial Media, Messaging Apps
DATERECEIVE D*	Date and time the Email, In- stant Message, Text Message, Chat or Calen- dar Item was received. For- mat: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for 1:32 pm); time zone indicators	Date- Time	Extracted	Email

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	cannot be in- cluded.			
DATECREATED	Date and time the electronic file was cre- ated. Format: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for 1:32 pm); time zone indicators cannot be in- cluded).	Date- Time	Extracted	Non-Email
DATESAVED*	Date and time the electronic file was last modified. For- mat: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for 1:32 pm); time zone indicators cannot be in- cluded.	Date- Time	Extracted	Non-Email

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AUTHOR*	Author field value pulled from the metadata of a native file.	Note Text	Extracted	Non-Email
TITLE*	Title or Subject field value pulled from metadata from electronic file.	Note Text	Extracted	Email, Non-Email
FILENAME*	Original file name of the na- tive file, includ- ing file exten- sion.	Note Text	Extracted	Email, Non-Email
FILETYPE*	Application used to create or transmit the original native files, docu- ment, message, appointment (e.g., WhatsApp, Ex- cel, Slack, Out- look, Snapchat, Word, Twitter, Gmail, Tango).	Note Text	Extracted	Email, Non-Email, Social Me- dia, Messag- ing Apps
FILEEXTENSIO N*	File extension of original na- tive file; e.g. XLSX, PDF, DOCX	Short Text	Extracted	Email, Non-Email, Social Me- dia, Messag- ing Apps

FILEPATH*	Full qualified original path to the native when collected, including origi- nal file name. Prepend with recognizable Custodian Name; e.g. Smith, James- C\My Docu- ments\Sales Info\ACME\2 017-Monthly- Sales.xlsx	Multi- Entry	Extracted	Non-Email, Social Me- dia, Messag- ing Apps
DUPFILEPATH*	Full qualified original path to the native when collected, including origi- nal file name for unproduced duplicate cop- ies.	Multi- Entry	Extracted	Non-Email, Social Me- dia, Messag- ing Apps
NATIVE LINK*	File path loca- tion to the cur- rent native file location on the delivery me- dium.	Note Text	Created	Non-Email

DATETIMESTA	Start date and	Date-	Extracted	Non-Email
RT (Calendar	time of calen-	Time		
Items)*	dar appoint-			
	ments, voice			
	messages,			
	chats, text mes-			
	sage conversa-			
	tions. Format:			
	MM/DD/YYYY			
	HH:MM:SS			
	(use 24 hour			
	times, e.g.,			
	13:32:00 for			
	1:32 pm); time			
	zone indicators			
	cannot be in-			
	cluded.			
DATETIMEEND	End date and	Date-	Extracted	Non-Email
DATETIMEEND (Calendar	End date and time of calen-	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint-	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint- ments, voice	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint- ments, voice messages,	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint- ments, voice messages, chats, text mes-	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint- ments, voice messages, chats, text mes- sage conversa-	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint- ments, voice messages, chats, text mes- sage conversa- tions. Format:	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint- ments, voice messages, chats, text mes- sage conversa- tions. Format: MM/DD/YYYY	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint- ments, voice messages, chats, text mes- sage conversa- tions. Format: MM/DD/YYYY HH:MM:SS	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint- ments, voice messages, chats, text mes- sage conversa- tions. Format: MM/DD/YYYY HH:MM:SS (use 24 hour	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint- ments, voice messages, chats, text mes- sage conversa- tions. Format: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g.,	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint- ments, voice messages, chats, text mes- sage conversa- tions. Format: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint- ments, voice messages, chats, text mes- sage conversa- tions. Format: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for 1:32 pm); time	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint- ments, voice messages, chats, text mes- sage conversa- tions. Format: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for 1:32 pm); time zone indicators	Date- Time	Extracted	Non-Email
DATETIMEEND (Calendar Items)*	End date and time of calen- dar appoint- ments, voice messages, chats, text mes- sage conversa- tions. Format: MM/DD/YYYY HH:MM:SS (use 24 hour times, e.g., 13:32:00 for 1:32 pm); time zone indicators cannot be in-	Date- Time	Extracted	Non-Email

CHATROOM NAME*	Name of chat room or chan- nel used in the communica- tions. Can be the private or public channel or room that the messaging took place.	Note Text	Extracted	Non-Email, Social Me- dia, Messag- ing Apps
PARTICIPANTS *	List of partici- pant names, email ad- dresses and/or telephone num- bers.	Note Text	Extracted	Email, So- cial Media, Messaging Apps
HASH*	Document hash value (used for deduplication or other pro- cessing).	Note Text	Created	Email, Non-Email, Social Me- dia, Messag- ing Apps
CONFIDENTIA L*	Confidentiality designation, if any, of the doc- ument assigned under any Pro- tective Order in the Action. Field should be populated with specific desig- nation; if NO designation, field should be left blank	Note Text	Created	Paper, Email, Non-Email, Social Me- dia, Messag- ing Apps

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REDACTION*	User-generated field that will indicate the ba- sis for redac- tions.	Note Text	Created	Paper, Email, Non-Email, Social Me- dia, Messag- ing Apps
TEXTPATH*	Relative file path to each ex- tracted text/OCR text file on the Pro- duction Media.	Note Text	Created	Paper, Email, Non-Email, Social Me- dia, Messag- ing Apps