
FORCEPOINT, LLC,
Defendant.

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CLAIM CONSTRUCTION ORDER

Before the Court are the Parties' claim construction briefs: Defendants AO Kaspersky Lab; Trend Micro, Inc.; Sophos Limited; Crowdstrike, Inc. and Crowdstrike Holdings, Inc.; and Forcepoint, LLC's Opening Claim Construction Brief (ECF No. 86), Plaintiffs Webroot, Inc. and Open Text Inc.'s Response Brief (ECF No. 98), Defendants' Reply Claim Construction Brief (ECF No. 110), Plaintiffs' Sur-Reply (ECF No. 147), and the Joint Claim Construction Statement (ECF No. 185). On March 13, 2023, the Court provided the parties with its Preliminary Claim Constructions, and on March 14, 2023, the Court held a *Markman* hearing.

The Court issues this Order to memorialize the Court's final claim construction rulings for the parties, and to inform the parties that the Court plans to issue a more-detailed Order explaining its analysis in due course. The deadline to file any objections to the undersigned's claim construction rulings (pursuant to Federal Rules of Civil Procedure 59 and 72) do not need to be filed until 14 days after that more fulsome Order is entered upon the docket.

SIGNED this 16th day of March, 2023


DEREK T. GILLILAND
UNITED STATES MAGISTRATE JUDGE

Term	Plaintiffs' Proposed Construction	Defendant['s/s'] Proposed Construction	Court's Preliminary Construction
#1: "similar objects" / "similar computer objects" U.S. Patent No. 8,418,250, Claims 1, 13; U.S. Patent No. 8,726,389, Claims 1, 15 Proposed by Defendants	Not indefinite. Plain and ordinary meaning.	Indefinite	Not indefinite. Plain-and-ordinary meaning.
#2: "behaviour of the object" / "behaviour of the computer object" "behavior information about the first computer object" / "object behavior information" U.S. Patent No. 8,418,250, Claims 1-30; U.S. Patent No. 9,413,721, Claims 1, 9, and 14) Proposed by CrowdStrike / Sophos	Plain and ordinary meaning	"actions performed by the [object / computer object / first computer object]"	Plain-and-ordinary meaning wherein the plain-and-ordinary meaning does not include the static attributes of the object

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#3: "automatically" U.S. Patent No. 8,418,250, Claims 1, 13, 25 Proposed by Sophos / CrowdStrike / Trend Micro / Kaspersky	Plain and ordinary meaning	"without human involvement"	Plain-and-ordinary meaning which includes, but is not limited to "without human involvement."
#4: "a mask for the computer object that defines acceptable behaviour for the computer object" / "a mask for an object ..., said mask defining acceptable behaviour for the object" / "a mask for the computer object, the mask defining acceptable behaviour for the object" / "a mask for said computer object that defines acceptable behaviour for the computer object" U.S. Patent No. 8,418,250, Claims 1, 13, 25; U.S. Patent No. 8,726,389, Claim 14 Proposed by Sophos / CrowdStrike / Trend Micro / Forcepoint	Plain and ordinary meaning	"a list of acceptable actions for the [object/computer object] to perform"	Plain-and-ordinary meaning ¹ ¹ – Note not for the jury: the plain-and-ordinary meaning of this term is not the inverse of a mask of unacceptable behavior

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#5: "running said object" / "executing the computer object" U.S. Patent No. 8,418,250, Claims 1-12, 25-30 Proposed by CrowdStrike	Plain and ordinary meaning	"carrying out the object's computer code"	Plain-and-ordinary meaning ¹ 1 – Note not for the jury: the plain-and-ordinary meaning of this term includes but is not limited to "carrying out the object's computer code."
#6: "events initiated [by] or involving the [computer] object" U.S. Patent No. 8,418,250, Claims 2, 10, 14, 22, 25-30; U.S. Patent No. 8,726,389, Claims 1-14, 26, and 30 Proposed by CrowdStrike / Forcepoint	Plain and ordinary meaning	"actions performed by or upon the object"	Plain-and-ordinary meaning ¹ 1 – the plain-and-ordinary meaning of "events" includes but is not limited to "actions or behaviours of an object acting upon another object or some other entity"
#7: "first remote computer" and "second remote computer" U.S. Patent No. 8,726,389, Claim 1 Proposed by CrowdStrike	Plain and ordinary meaning	The "first" and "second" remote computers are different computers	Plain-and-ordinary meaning

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#8: "correlating, by the base computer, at least a portion of the data about the computer object received from the first remote computer to at least a portion of the data about the computer object received from the second remote computer" U.S. Patent No. 8,726,389, Claim 1 Proposed by Kaspersky	Plain and ordinary meaning	"correlating, by the base computer, at least a portion of the data about the computer object received from the first remote computer to at least a portion of the data about the same computer object received from the second remote computer"	Plain-and-ordinary meaning

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#9: "correlating, by the base computer, at least a portion of the data about the computer object received from the first remote computer to at least a portion of the data about the computer object received from the second remote computer; comparing, by the base computer, the correlated data about the computer object received from the first and second remote computers to other objects or entities to identify relationships between the correlated data and the other objects or entities" U.S. Patent No. 8,726,389, Claim 1 Proposed by Forcepoint / Sophos	Plain and ordinary meaning	Order of Steps: comparing must follow correlating	The claim language recites that at least a portion of the data, but not all of the data, must be correlated before comparing.

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#10: "remote computer(s)" U.S. Patent No. 8,418,250, Claims 1, 2, 5, 7, 10, 12-14, 17, 19, 22, 24, 25, 28; U.S. Patent No. 8,726,389, Claims 1, 6, 8, 9, 12, 14, 30 Proposed by Trend Micro / Forcepoint	Plain and ordinary meaning	"local terminal(s) connected to the base computer via the Internet"	Plain-and-ordinary meaning
#11: "security appliance" U.S. Patent No. 8,348,386, Claims 1, 5, 7, 11 Proposed by Forcepoint	Plain and ordinary meaning	"a security device separate from, but on the same local area network as, the client-side device(s)"	Plain-and-ordinary meaning
#12: "global perspective" U.S. Patent No. 9,578,045, Claim 1; U.S. Patent No. 10,257,224, Claims 1, 10, 17 Proposed by Sophos	Not indefinite. Plain and ordinary meaning.	Indefinite	Not indefinite. Plain-and-ordinary meaning wherein the plain-and-ordinary meaning is "information about events related to the monitored even across a network"

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#13: "wherein the global perspective for one or more related events to the at least one event across a network" U.S. Patent No. 9,578,045, Claim 1 Proposed by Trend Micro / Sophos / Kaspersky / CrowdStrike	Not indefinite. "wherein the global perspective is for one or more related events to the at least one event across other devices on a network"	Indefinite	Not indefinite "wherein the global perspective [is] for one or more related events to the at least one event across [other devices on] a network"
#14: "event line" U.S. Patent No. 9,578,045, Claim 1; U.S. Patent No. 10,257,224, Claims 1, 10, 17 Proposed by Kaspersky	Plain and ordinary meaning	a line of data containing at least event, contextual state, and global perspective information	Plain-and-ordinary meaning

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#15: “gathering an event defining an action of a first object acting on a target, wherein the first object is executed on a device; generating contextual state information for the event by correlating the event to an originating object of the first object; obtaining a global perspective for the event based on the contextual state information, wherein the global perspective comprises information associated with one or more of the first object and the originating object, and wherein the global perspective relates to one or more other events related to the event across a network;” U.S. Patent No. 9,578,045, Claims 1, 8, 16; U.S. Patent No. 10,257,224, Claims 1, 10, 17 Proposed by Sophos / CrowdStrike	Plain and ordinary meaning	Order of steps: gathering, generating, and obtaining steps must be performed in order	'224 Patent, Claim 1: No order between [1A] and [1B], but the “contextual information” in [1B] must precede the obtaining of the “global perspective” in [1C]. '045 Patent, Claims 1, 8, and 16; '224 Patent, Claims 10 and 17: No order.

#16: “a sensor agent . . .” U.S. Patent No. 10,257,224, Claims 10, 14, 15, 17 Proposed by Sophos / Trend Micro / Kaspersky	Plain and ordinary meaning	This limitation is a means-plus-function limitation governed by 35 U.S.C. § 112(f). Functions: (Claim 10): gather an event defining an action of a first object acting on a target; generate contextual state information for the event by correlating the event to an originating object of the first object; obtain a global perspective for the event based on the contextual state information, wherein the global perspective comprises information associated with one or more of the first object and the originating object, and wherein the global perspective relates to one or more other events related to the event across a network; generate an event line comprising information relating to the event, wherein the information relates to at least one of the first object, the action of the first object, the target, and the originating object; and transmit the generated event	Not subject to § 112(f). Plain-and-ordinary meaning.
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		line utilizing the communication interface Additional functions recited in dependent claims 14-15, and separate functions recited in claim 17 (<i>see</i> Ex. V (Almeroth Decl.) pp. 19-21) Structure: Indefinite for failure to disclose corresponding structure or algorithm.	
#17: “a component for evaluating the at least one monitored function in the memory space” U.S. Patent No. 10,284,591, Claims 1, 9, 17 Proposed by Kaspersky	Not indefinite. Plain and ordinary meaning.	Indefinite	Not subject to § 112(f). Plain-and-ordinary meaning.

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#18: "invoking one of the plurality of functions" U.S. Patent No. 10,284,591, Claims 1, 9, 17 Proposed by Sophos	Plain and ordinary meaning	"running one of the plurality of functions in kernel mode, such that it can manipulate system resources"	Plain-and-ordinary meaning.
#19: "stack walk processing" U.S. Patent No. 10,284,591, Claims 1, 3, 5, 9, 11, 13, 17, 18 Proposed by Trend Micro	Plain and ordinary meaning	"a process that walks a stack for a hooked function from a lowest level user mode function to an address of the invoked/originating caller function"	Plain-and-ordinary meaning
#20: "before an address of an originating caller function is reached" U.S. Patent No. 10,284,591, Claims 1, 9, 17 Proposed by Sophos	Plain and ordinary meaning	"before the originating address of the invoked function is reached"	Plain-and-ordinary meaning

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#21: "low level user mode function" U.S. Patent No. 10,284,591, Claims 3, 11 Proposed by CrowdStrike	Not indefinite. Plain and ordinary meaning.	Indefinite	Plain-and-ordinary meaning wherein the plain-and-ordinary meaning is "user mode function that is low level with respect to its layer of abstraction."

#22: “at least one processor . . .” U.S. Patent No. 10,284,591, Claims 9-16 Proposed by Trend Micro	Plain and ordinary meaning	Means-plus-function Functions: (1) monitoring a memory space of a process for execution of at least one monitored function of a plurality of functions, wherein monitoring the memory space comprises loading a component for evaluating the at least one monitored function in the memory space; (2) invoking one of the plurality of functions as a result of receiving a call from an application programming instance; (3) executing stack walk processing upon the invocation of one of the plurality of functions in the monitored memory space; and (4) performing, during the executing of the stack walk processing before an address of an originating caller function is reached, a memory check for a plurality of stack entries identified during the stack walk processing to detect suspicious behavior, wherein an alert of suspicious behavior is triggered when the performing of the memory	Not subject to § 112(f). Plain-and-ordinary meaning.
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Term	Plaintiffs' Proposed Construction	Defendant[s]' Proposed Construction	Court's Preliminary Construction
		check detects at least one of the following: code execution is attempted from non-executable memory, a base pointer is identified as being invalid, an invalid stack return address is identified, attempted execution of a return-oriented programming technique is detected, the base pointer is detected as being outside a current thread stack, and a return address is detected as being inside a virtual memory area, wherein when an alert of suspicious behavior is triggered, (5) the method further comprising preventing execution of a payload for the invoked function Additional functions recited in dependent claims 10-16 (see Ex. V (Almeroth Decl.) pp. 36-39) Structure: Indefinite for failure to disclose corresponding structure or algorithm.	

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#23: "The system according to claim 9, further comprising identifying an address associated with the invoked function; and when the address of the invoked function is found in a cache, and wherein the processor further executing an operation of preventing execution of a payload for the invoked function" U.S. Patent No. 10,284,591, Claim 10 Proposed by Trend Micro	Not indefinite. Plain and ordinary meaning.	Indefinite	Not indefinite. Plain-and-ordinary meaning.
#24: "an executable file" U.S. Patent No. 10,599,844, Claims 1-20 Proposed by CrowdStrike	Plain and ordinary meaning	"an encrypted or packed computer file or program"	Plain-and-ordinary meaning

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#25: The terms relating to whether “character strings” are “within a predetermined range” U.S. Patent No. 10,599,844, Claims 1, 10, 17 Proposed by Forcepoint / Sophos / Trend Micro	Not indefinite. Plain and ordinary meaning.	Indefinite	Not indefinite. Plain-and-ordinary meaning
#26: “within a predetermined range” U.S. Patent No. 10,599,844, Claims 1, 10, 17 Proposed by Forcepoint / Sophos	Plain and ordinary meaning	“between a predefined lower and upper limit”	Plain-and-ordinary meaning, wherein the plain-and-ordinary meaning of “range” is a numerical range or a subset of a “particular scale” with at least a lower limit or an upper limit, but not necessarily both.
#27: “support vector processing” U.S. Patent No. 10,599,844, Claims 1-20 Proposed by Defendants	Plain and ordinary meaning	“processing with a support vector machine”	Plain-and-ordinary meaning wherein the plain-and-ordinary meaning is “processing that involves a support vector.”

#28: “at least one processor . . .” U.S. Patent No. 10,599,844, Claims 17-20 Proposed by Trend Micro	Plain and ordinary meaning	Means-plus-function Functions: (1) extracting a plurality of predefined character strings from an executable file without decrypting or unpacking the executable file; (2) generating a feature vector from the plurality of predefined character strings using a classifier trained to classify the plurality of predefined character strings based on a collection of data comprising known malicious executable files, known benign executable files and known unwanted executable files, wherein the collection of data comprises at least a portion of one or more of the plurality of predefined character strings, and wherein one or more features of the feature vector are selectively turned on or off based on whether a value of one or more predefined character strings from the plurality of predefined character strings is within a predetermined range; and (3) evaluating the feature vector using support vector	Not subject to § 112(f). Plain-and-ordinary meaning.
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Term	Plaintiffs' Proposed Construction	Defendant[s/s'] Proposed Construction	Court's Preliminary Construction
		processing to determine whether the executable file is harmful. Additional functions recited in dependent claims 18-20 (see Ex. V (Almeroth Decl.) pp. 48-49) Structure: Indefinite for failure to disclose corresponding structure or algorithm.	