

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

Assignment ID: PATI433104

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
SEQUENCE:	1

CONVEYING PARTY DATA

Name	Execution Date
Musarubra US LLC	08/14/2024

RECEIVING PARTY DATA

Company Name:	Magenta Security Intermediate Holdings LLC
Street Address:	6000 Headquarters Drive
City:	Plano
State/Country:	TEXAS
Postal Code:	75024

PROPERTY NUMBERS Total: 491

Property Type	Number
Application Number:	17320129
Application Number:	17155318
Application Number:	17896812
Application Number:	18092083
Application Number:	16246691
Application Number:	18121543
Application Number:	17493364
Application Number:	16993660
Application Number:	17839747
Application Number:	17721038
Application Number:	17720860
Application Number:	17514437
Application Number:	17566758
Application Number:	17838973
Application Number:	17063618
Application Number:	17588097
Application Number:	18135635
Application Number:	18161682
Application Number:	18623333

PATENT

Property Type	Number
Application Number:	18732312
Application Number:	18755297
Application Number:	16231089
Application Number:	18456953
Application Number:	17894797
Patent Number:	8087065
Patent Number:	8671448
Patent Number:	9350760
Patent Number:	9917863
Patent Number:	7069581
Patent Number:	7308706
Patent Number:	10212188
Patent Number:	7051077
Patent Number:	7680890
Patent Number:	7953814
Patent Number:	8363793
Patent Number:	8484295
Patent Number:	8738708
Patent Number:	9160755
Patent Number:	9210111
Patent Number:	9560064
Patent Number:	7536456
Patent Number:	7627891
Patent Number:	8561175
Patent Number:	8789140
Patent Number:	9094434
Patent Number:	7451488
Patent Number:	7716719
Patent Number:	7114183
Patent Number:	7278163
Patent Number:	10027690
Patent Number:	10068091
Patent Number:	10097573
Patent Number:	10165000
Patent Number:	10284574
Patent Number:	10511614
Patent Number:	10567405
Patent Number:	10587636

Property Type	Number
Patent Number:	10623434
Patent Number:	10757120
Patent Number:	11082435
Patent Number:	11153341
Patent Number:	11637857
Patent Number:	8006305
Patent Number:	8171553
Patent Number:	8204984
Patent Number:	8291499
Patent Number:	8375444
Patent Number:	8516593
Patent Number:	8528086
Patent Number:	8539582
Patent Number:	8549638
Patent Number:	8561177
Patent Number:	8566946
Patent Number:	8584239
Patent Number:	8635696
Patent Number:	8689333
Patent Number:	8776229
Patent Number:	8793787
Patent Number:	8881282
Patent Number:	8898788
Patent Number:	8984638
Patent Number:	9027135
Patent Number:	9071638
Patent Number:	9106694
Patent Number:	9197664
Patent Number:	9282109
Patent Number:	9306960
Patent Number:	9356944
Patent Number:	9516057
Patent Number:	9591020
Patent Number:	9628498
Patent Number:	9661018
Patent Number:	9838411
Patent Number:	9838416
Patent Number:	9912684

Property Type	Number
Patent Number:	8010689
Patent Number:	8584195
Patent Number:	8069484
Patent Number:	7483861
Patent Number:	8484327
Patent Number:	8566476
Patent Number:	10146810
Patent Number:	8949257
Patent Number:	7937387
Patent Number:	8793278
Patent Number:	9106630
Patent Number:	8881271
Patent Number:	8850571
Patent Number:	8990939
Patent Number:	8997219
Patent Number:	9118715
Patent Number:	9438622
Patent Number:	11381578
Patent Number:	8832829
Patent Number:	8935779
Patent Number:	8306988
Patent Number:	8352930
Patent Number:	8352939
Patent Number:	8365276
Patent Number:	RE48043
Patent Number:	8839349
Patent Number:	9548994
Patent Number:	8411684
Patent Number:	10033697
Patent Number:	8726385
Patent Number:	9385991
Patent Number:	8516478
Patent Number:	10282548
Patent Number:	9519782
Patent Number:	10367786
Patent Number:	9253154
Patent Number:	8667121
Patent Number:	8621077

Property Type	Number
Patent Number:	9275229
Patent Number:	8954573
Patent Number:	8645949
Patent Number:	8955036
Patent Number:	9268936
Patent Number:	11025647
Patent Number:	9571507
Patent Number:	9536057
Patent Number:	9633134
Patent Number:	10380343
Patent Number:	10572665
Patent Number:	9459901
Patent Number:	9690935
Patent Number:	10103892
Patent Number:	9560014
Patent Number:	9824211
Patent Number:	9385747
Patent Number:	10505956
Patent Number:	9300686
Patent Number:	9888019
Patent Number:	10515214
Patent Number:	10713362
Patent Number:	9171160
Patent Number:	9910988
Patent Number:	10735458
Patent Number:	9628507
Patent Number:	11075945
Patent Number:	9736179
Patent Number:	10819804
Patent Number:	11418605
Patent Number:	10237303
Patent Number:	10142373
Patent Number:	10609088
Patent Number:	11005895
Patent Number:	11665205
Patent Number:	10484398
Patent Number:	10904269
Patent Number:	9009822

Property Type	Number
Patent Number:	9009823
Patent Number:	10129290
Patent Number:	10505972
Patent Number:	10616265
Patent Number:	11563769
Patent Number:	11985160
Patent Number:	10740456
Patent Number:	9292686
Patent Number:	9507935
Patent Number:	9740857
Patent Number:	9946568
Patent Number:	10534906
Patent Number:	9262635
Patent Number:	9916440
Patent Number:	9159035
Patent Number:	9594905
Patent Number:	10019338
Patent Number:	10296437
Patent Number:	10929266
Patent Number:	9176843
Patent Number:	9195829
Patent Number:	9225740
Patent Number:	9792196
Patent Number:	9189627
Patent Number:	9560059
Patent Number:	10084813
Patent Number:	10757134
Patent Number:	9462471
Patent Number:	10002252
Patent Number:	11244056
Patent Number:	9680862
Patent Number:	10432649
Patent Number:	9241010
Patent Number:	9912644
Patent Number:	10382454
Patent Number:	10122746
Patent Number:	10812513
Patent Number:	9311479

Property Type	Number
Patent Number:	9641546
Patent Number:	9807118
Patent Number:	10061914
Patent Number:	10198574
Patent Number:	9355247
Patent Number:	10027696
Patent Number:	10404725
Patent Number:	11019081
Patent Number:	9363280
Patent Number:	9609007
Patent Number:	9367681
Patent Number:	9798559
Patent Number:	9996690
Patent Number:	10075455
Patent Number:	10021137
Patent Number:	10178132
Patent Number:	9398028
Patent Number:	9661009
Patent Number:	9838408
Patent Number:	9426071
Patent Number:	9876701
Patent Number:	10200384
Patent Number:	9430646
Patent Number:	9432389
Patent Number:	9438613
Patent Number:	9438623
Patent Number:	10148693
Patent Number:	10666686
Patent Number:	9467460
Patent Number:	9787706
Patent Number:	9483644
Patent Number:	9846776
Patent Number:	10812466
Patent Number:	10417031
Patent Number:	11294705
Patent Number:	10050980
Patent Number:	10599662
Patent Number:	11429625

Property Type	Number
Patent Number:	9537972
Patent Number:	9674298
Patent Number:	10536484
Patent Number:	10986134
Patent Number:	11063985
Patent Number:	10467414
Patent Number:	9565202
Patent Number:	9934381
Patent Number:	9691278
Patent Number:	10454953
Patent Number:	11082436
Patent Number:	9591015
Patent Number:	9787700
Patent Number:	9594904
Patent Number:	10546131
Patent Number:	11126727
Patent Number:	11556652
Patent Number:	11971994
Patent Number:	10078753
Patent Number:	10769276
Patent Number:	11556641
Patent Number:	10104102
Patent Number:	10728263
Patent Number:	9654485
Patent Number:	10025927
Patent Number:	11210390
Patent Number:	9626509
Patent Number:	10129125
Patent Number:	10204384
Patent Number:	10825111
Patent Number:	10909638
Patent Number:	9917775
Patent Number:	10691739
Patent Number:	9912528
Patent Number:	10193858
Patent Number:	9690606
Patent Number:	10366231
Patent Number:	10902117

Property Type	Number
Patent Number:	9690933
Patent Number:	10192052
Patent Number:	10657251
Patent Number:	9690936
Patent Number:	10866940
Patent Number:	10467411
Patent Number:	9747446
Patent Number:	9773112
Patent Number:	9781144
Patent Number:	10181029
Patent Number:	9824209
Patent Number:	10445502
Patent Number:	9824216
Patent Number:	9825976
Patent Number:	10873597
Patent Number:	9825989
Patent Number:	9954805
Patent Number:	9888016
Patent Number:	9912681
Patent Number:	9921978
Patent Number:	10528726
Patent Number:	9934376
Patent Number:	10721273
Patent Number:	9973531
Patent Number:	11909769
Patent Number:	10382489
Patent Number:	10911496
Patent Number:	10027689
Patent Number:	10868818
Patent Number:	10025691
Patent Number:	10033753
Patent Number:	10637880
Patent Number:	9635039
Patent Number:	10033747
Patent Number:	10887328
Patent Number:	10033759
Patent Number:	10721275
Patent Number:	11575712

Property Type	Number
Patent Number:	11962622
Patent Number:	10050998
Patent Number:	10581898
Patent Number:	10554507
Patent Number:	10791138
Patent Number:	10798112
Patent Number:	10848397
Patent Number:	11399040
Patent Number:	10440037
Patent Number:	11336665
Patent Number:	11916934
Patent Number:	10089461
Patent Number:	10108446
Patent Number:	11200080
Patent Number:	10121000
Patent Number:	10133866
Patent Number:	10872151
Patent Number:	10601848
Patent Number:	10855700
Patent Number:	10169585
Patent Number:	10176321
Patent Number:	10191861
Patent Number:	10210329
Patent Number:	11244044
Patent Number:	10216927
Patent Number:	10242185
Patent Number:	11068587
Patent Number:	10805346
Patent Number:	11271955
Patent Number:	10341365
Patent Number:	10621338
Patent Number:	10395029
Patent Number:	10430586
Patent Number:	10447728
Patent Number:	10846117
Patent Number:	10454950
Patent Number:	10462173
Patent Number:	11240262

Property Type	Number
Patent Number:	10474813
Patent Number:	10476906
Patent Number:	10601863
Patent Number:	10616266
Patent Number:	10671721
Patent Number:	11632392
Patent Number:	10491627
Patent Number:	10503904
Patent Number:	10523609
Patent Number:	10552610
Patent Number:	10565378
Patent Number:	10581879
Patent Number:	10581874
Patent Number:	10587647
Patent Number:	10592678
Patent Number:	10601865
Patent Number:	10642753
Patent Number:	10671726
Patent Number:	10706149
Patent Number:	10715542
Patent Number:	10726127
Patent Number:	10747872
Patent Number:	10785255
Patent Number:	10795991
Patent Number:	10805340
Patent Number:	10817606
Patent Number:	10826933
Patent Number:	10893059
Patent Number:	10826931
Patent Number:	10834128
Patent Number:	10893068
Patent Number:	10902119
Patent Number:	10904286
Patent Number:	11570211
Patent Number:	11621965
Patent Number:	11003773
Patent Number:	11075930
Patent Number:	11113086

Property Type	Number
Patent Number:	11140179
Patent Number:	11651074
Patent Number:	11722295
Patent Number:	11182473
Patent Number:	11227047
Patent Number:	11228491
Patent Number:	11671371
Patent Number:	11240275
Patent Number:	11310238
Patent Number:	11750618
Patent Number:	11314859
Patent Number:	11316900
Patent Number:	11392700
Patent Number:	10476909
Patent Number:	11089057
Patent Number:	9306974
Patent Number:	9756074
Patent Number:	9591028
Patent Number:	10135845
Patent Number:	10447714
Patent Number:	10205798
Patent Number:	10148695
Patent Number:	10715556
Patent Number:	10171594
Patent Number:	11076003
Patent Number:	11902388
Patent Number:	10749843
Patent Number:	10218740
Patent Number:	9294501
Patent Number:	9912691
Patent Number:	10133863
Patent Number:	10033748
Patent Number:	10701091
Patent Number:	9413781
Patent Number:	11368475
Patent Number:	11665188
Patent Number:	10341363
Patent Number:	11297074

Property Type	Number
Patent Number:	9223972
Patent Number:	10848521
Patent Number:	9104867
Patent Number:	9912698
Patent Number:	9251343
Patent Number:	8990944
Patent Number:	10476900
Patent Number:	11089038
Patent Number:	10284575
Patent Number:	10834107
Patent Number:	10754703
Patent Number:	10798121
Patent Number:	9838417
Patent Number:	11416606
Patent Number:	11436327
Patent Number:	9870466
Patent Number:	10469512
Patent Number:	9495180
Patent Number:	10083302
Patent Number:	10335738
Patent Number:	9536091
Patent Number:	10505965
Patent Number:	8881289
Patent Number:	9058486
Patent Number:	9635047
Patent Number:	9648035
Patent Number:	8776230
Patent Number:	9594912
Patent Number:	11522884
Patent Number:	11552986
Patent Number:	11558401
Patent Number:	11856011
Patent Number:	11601444
Patent Number:	11636198
Patent Number:	11677786
Patent Number:	11966477
Patent Number:	11743290
Patent Number:	11763004

Property Type	Number
Patent Number:	11838300
Patent Number:	11863470
Patent Number:	11863581
Patent Number:	11868795
Patent Number:	11876836
Patent Number:	11886585
Patent Number:	11936666
Patent Number:	11985149
Patent Number:	8091117
Patent Number:	11997111
Patent Number:	11979428
Patent Number:	11882140
Patent Number:	11921851
Patent Number:	11947669
Patent Number:	11888875
Patent Number:	11949698

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 2129093078
Email: susan.zablocki@kirkland.com
Correspondent Name: SUSAN ZABLOCKI
Address Line 1: Kirkland & Ellis LLP
Address Line 2: 601 Lexington Avenue
Address Line 4: New York, NEW YORK 10022

NAME OF SUBMITTER:	SUSAN ZABLOCKI
SIGNATURE:	SUSAN ZABLOCKI
DATE SIGNED:	08/15/2024

Total Attachments: 47
source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page1.tiff
source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page2.tiff
source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page3.tiff
source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page4.tiff
source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page5.tiff
source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page33.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page34.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page35.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page36.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page37.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page38.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page39.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page40.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page41.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page42.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page43.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page44.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page45.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page46.tiff

source=Project Magenta (NewCo Facility) - IP Assignment Short Form - Musarubra US to NewCo Holdings (EXECUTED)#page47.tiff

INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

THIS INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT (this “Assignment Agreement”) is made and entered into as of August 14, 2024 (“Effective Date”) by and between Musarubra US LLC, a Delaware limited liability company (“Musarubra”), and Magenta Security Intermediate Holdings LLC, a Delaware limited liability company (“Assignee”) (each a “Party” and collectively the “Parties”).

WHEREAS, Musarubra and Assignee are parties to that certain Intellectual Property Assignment Agreement dated August 14, 2024 (the “Agreement”); and

WHEREAS, pursuant and subject to the terms and conditions of the Agreement, Musarubra wishes to assign to Assignee, and Assignee wishes to acquire from Musarubra, the United States issued patents set forth on Schedule I(A) attached hereto, the United States patent applications set forth on Schedule I(B) attached hereto, (collectively, the “Patents”), and the United States registered copyrights on Schedule I(C) attached hereto (the “Copyrights”).

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged:

- 1. **Terms.** Capitalized terms used in this Assignment Agreement and not otherwise defined herein have the meanings specified in the Agreement.
- 2. **Agreement.** The assignment granted herein is granted in furtherance, and not in limitation of, the assignment of the Assigned IP pursuant to the Agreement. In the event of any conflict between the terms of this Assignment Agreement and the Agreement, the terms of the Agreement will govern.
- 3. **Assignment of Intellectual Property.** Musarubra with effect on and from the Effective Date, hereby irrevocably and absolutely conveys, transfers, and assigns to Assignee and Assignee hereby accepts, all of Musarubra’s right, title, and interest in and to the following:
 - (a) All of the Patents and Copyrights and all rights within the Territory with respect to all issuances, registrations, extensions, and renewals with respect to such Patents and Copyrights;
 - (b) the right to receive and collect any and all income, royalties, fees and payments due and/or payable with respect to the same; and
 - (c) any and all claims and causes of action, including for past, present, or future infringements or violations, with respect to the same.
- 4. **Recordation.** Musarubra hereby requests the Commissioner of Patents and Trademarks and the Register of Copyrights to record Assignee as the assignee and owner of the Patents and Copyrights.

* * * * *

IN WITNESS WHEREOF, the Parties have caused this Assignment Agreement to be duly executed as of the Effective Date.

MUSARUBRA

Musarubra US LLC



By: _____

Name: William Francis Chisholm

Title: President

ASSIGNEE

Magenta Security Intermediate Holdings LLC

By: _____

Name: Marc Bala

Title: Secretary

IN WITNESS WHEREOF, the Parties have caused this Assignment Agreement to be duly executed as of the Effective Date.


MUSARUBRA

Musarubra US LLC

By: _____
Name: William Francis Chisholm
Title: President

ASSIGNEE

Magenta Security Intermediate Holdings LLC

By:  _____
Name: Marc Bala
Title: Secretary

SCHEDULE I: ASSIGNED IP

(A) United States Issued Patents

Title	Application Number	Patent Number	Owner
Method and system for implementing mandatory file access control in native discretionary access control environments	US11/703778	US8087065	Musarubra US LLC
Method and system for implementing mandatory file access control in native discretionary access control environments	US13/323994	US8671448	Musarubra US LLC
Method and system for implementing mandatory file access control in native discretionary access control environments	US14/162549	US9350760	Musarubra US LLC
Method and system for implementing mandatory file access control in native discretionary access control environments	US15/161058	US9917863	Musarubra US LLC
Method and apparatus to facilitate cross-domain push deployment of software in an enterprise environment	US09/971333	US7069581	Musarubra US LLC
Associative policy model	US10/281843	US7308706	Musarubra US LLC
Trusted communication network	US14/830545	US10212188	Musarubra US LLC
Fuzzy logic voting method and system for classifying e-mail using inputs from multiple spam classifiers	US10/873882	US7051077	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Fuzzy logic voting method and system for classifying e-mail using inputs from multiple spam classifiers	US11/394890	US7680890	Musarubra US LLC
Stopping and remediating outbound messaging abuse	US11/365130	US7953814	Musarubra US LLC
Stopping and remediating outbound messaging abuse	US13/091011	US8363793	Musarubra US LLC
Subscriber reputation filtering method for analyzing subscriber activity and detecting account misuse	US11/315480	US8484295	Musarubra US LLC
Bounce management in a trusted communication network	US11/537432	US8738708	Musarubra US LLC
Trusted communication network	US11/465433	US9160755	Musarubra US LLC
Stopping and remediating outbound messaging abuse	US13/726607	US9210111	Musarubra US LLC
Stopping and remediating outbound messaging abuse	US14/954044	US9560064	Musarubra US LLC
System and method for applying a machine-processable policy rule to information gathered about a network	US10/778836	US7536456	Musarubra US LLC
Network audit and policy assurance system	US10/779190	US7627891	Musarubra US LLC
System and method for automated policy audit and remediation management	US10/778770	US8561175	Musarubra US LLC
System and method for interfacing with heterogeneous network data gathering tools	US13/312963	US8789140	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
System and method for automated policy audit and remediation management	US14/010498	US9094434	Musarubra US LLC
Policy-based vulnerability assessment	US10/835687	US7451488	Musarubra US LLC
System and method for providing application services with controlled access into privileged processes	US11/110747	US7716719	Musarubra US LLC
Network adaptive baseline monitoring system and method	US10/230844	US7114183	Musarubra US LLC
Security risk analysis system and method	US11/062409	US7278163	Musarubra US LLC
Electronic message analysis for malware detection	US14/745903	US10027690	Musarubra US LLC
System and method for malware containment	US14/949771	US10068091	Musarubra US LLC
Systems and methods for malware defense	US15/831312	US10097573	Musarubra US LLC
Systems and methods for malware attack prevention by intercepting flows of information	US14/552420	US10165000	Musarubra US LLC
System and method for threat detection and identification	US14/530474	US10284574	Musarubra US LLC
Subscription based malware detection under management system control	US15/451247	US10511614	Musarubra US LLC
System for detecting a presence of malware from behavioral analysis	US15/225669	US10567405	Musarubra US LLC
System and method for bot detection	US15/489661	US10587636	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
System and method for virtual analysis of network data	US15/912452	US10623434	Musarubra US LLC
Malicious network content detection	US16/036870	US10757120	Musarubra US LLC
System and method for threat detection and identification	US16/404522	US11082435	Musarubra US LLC
System and method for detecting malicious network content using virtual environment components	US14/444943	US11153341	Musarubra US LLC
System and method for detecting malicious traffic using a virtual machine configured with a select software environment	US16/791933	US11637857	Musarubra US LLC
Computer worm defense system and method	US11/152286	US8006305	Musarubra US LLC
Heuristic based capture with replay to virtual machine	US11/409355	US8171553	Musarubra US LLC
Systems and methods for detecting encrypted bot command and control communication channels	US11/998750	US8204984	Musarubra US LLC
Policy based capture with replay to virtual machine	US13/423057	US8291499	Musarubra US LLC
Dynamic signature creation and enforcement	US11/494990	US8375444	Musarubra US LLC
Systems and methods for computer worm defense	US13/651331	US8516593	Musarubra US LLC
System and method of detecting computer worms	US11/096287	US8528086	Musarubra US LLC
Malware containment and security analysis on connection	US11/717408	US8539582	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
System and method of containing computer worms	US11/151812	US8549638	Musarubra US LLC
Systems and methods for detecting communication channels of bots	US11/998605	US8561177	Musarubra US LLC
Malware containment on connection	US11/717475	US8566946	Musarubra US LLC
Virtual machine with dynamic data flow analysis	US11/471072	US8584239	Musarubra US LLC
System and method of detecting time-delayed malicious traffic	US13/931631	US8635696	Musarubra US LLC
Malware defense system and method	US13/629387	US8689333	Musarubra US LLC
System and method of detecting malicious traffic while reducing false positives	US14/012945	US8776229	Musarubra US LLC
Detecting malicious network content using virtual environment components	US12/359252	US8793787	Musarubra US LLC
Systems and methods for malware attack detection and identification	US11/717476	US8881282	Musarubra US LLC
Systems and methods for malware attack prevention	US11/717474	US8898788	Musarubra US LLC
System and method for analyzing suspicious network data	US14/078376	US8984638	Musarubra US LLC
Prospective client identification using malware attack detection	US11/709570	US9027135	Musarubra US LLC
System and method for malware containment	US14/059381	US9071638	Musarubra US LLC
Electronic message analysis	US13/089191	US9106694	Musarubra

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
for malware detection			US LLC
System and method for malware containment	US14/620060	US9197664	Musarubra US LLC
System and method for analyzing packets	US14/320195	US9282109	Musarubra US LLC
Systems and methods for unauthorized activity defense	US13/970248	US9306960	Musarubra US LLC
System and method for detecting malicious traffic using a virtual machine configured with a select software environment	US13/931633	US9356944	Musarubra US LLC
Systems and methods for computer worm defense	US15/090563	US9516057	Musarubra US LLC
System and method for signature generation	US14/189932	US9591020	Musarubra US LLC
System and method for bot detection	US14/052632	US9628498	Musarubra US LLC
System and method for detecting anomalous behaviors using a virtual machine environment	US15/167645	US9661018	Musarubra US LLC
Subscriber based protection system	US15/369714	US9838411	Musarubra US LLC
System and method of detecting malicious content	US14/042482	US9838416	Musarubra US LLC
System and method for virtual analysis of network data	US14/320201	US9912684	Musarubra US LLC
Locational tagging in a capture system	US11/439484	US8010689	Musarubra US LLC
Identities correlation infrastructure for passive network monitoring	US11/854392	US8584195	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
System and method for determining data entropy to identify malware	US11/657541	US8069484	Musarubra US LLC
System, method and computer program product for a network analyzer business model	US10/029591	US7483861	Musarubra US LLC
Method and system for generic real time management of devices on computers connected to a network	US11/979684	US8484327	Musarubra US LLC
Method and system for analyzing data related to an event	US12/024858	US8566476	Musarubra US LLC
Method and system for collecting and organizing data corresponding to an event	US13/957702	US10146810	Musarubra US LLC
Method and system for collecting and organizing data corresponding to an event	US12/024852	US8949257	Musarubra US LLC
System and method for data preservation and retrieval	US12/024827	US7937387	Musarubra US LLC
System and method for data preservation and retrieval	US13/073357	US8793278	Musarubra US LLC
Method and system for collaboration during an event	US12/024834	US9106630	Musarubra US LLC
System and method for forensic identification of elements within a computer system	US12/184898	US8881271	Musarubra US LLC
Systems and methods for detecting malicious network content	US12/263971	US8850571	Musarubra US LLC
Systems and methods for scheduling analysis of network content for malware	US13/925733	US8990939	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Systems and methods for detecting malicious pdf network content	US13/011344	US8997219	Musarubra US LLC
Systems and methods for detecting malicious pdf network content	US13/469046	US9118715	Musarubra US LLC
Systems and methods for analyzing malicious pdf network content	US14/673292	US9438622	Musarubra US LLC
Network-based binary file extraction and analysis for malware detection	US14/481801	US11381578	Musarubra US LLC
Network-based binary file extraction and analysis for malware detection	US12/571294	US8832829	Musarubra US LLC
Network-based binary file extraction and analysis for malware detection	US13/350645	US8935779	Musarubra US LLC
System, method, and computer program product for segmenting a database based, at least in part, on a prevalence associated with known objects included in the database	US12/605678	US8306988	Musarubra US LLC
Software modification by group to minimize breakage	US11/379953	US8352930	Musarubra US LLC
System, method and computer program product for performing a security or maintenance operation in association with virtual disk data	US11/949609	US8352939	Musarubra US LLC
System, method and computer program product for sending unwanted activity information to a central system	US11/953693	US8365276	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
System, method and computer program product for sending unwanted activity information to a central system	US14/583642	USRE48043	Musarubra US LLC
Integrating security policy and event management	US13/340597	US8839349	Musarubra US LLC
Integrating security policy and event management	US14/487927	US9548994	Musarubra US LLC
System, method, and computer program product for determining a hop count between network devices utilizing a binary search	US12/605695	US8411684	Musarubra US LLC
Distributed system and method for tracking and blocking malicious internet hosts	US15/194372	US10033697	Musarubra US LLC
Distributed system and method for tracking and blocking malicious internet hosts	US13/253266	US8726385	Musarubra US LLC
Distributed system and method for tracking and blocking malicious internet hosts	US14/276416	US9385991	Musarubra US LLC
Subsequent processing of scanning task utilizing subset of virtual machines predetermined to have scanner process and adjusting amount of subsequent VMS processing based on load	US12/138104	US8516478	Musarubra US LLC
Method for detecting malware within network content	US15/376531	US10282548	Musarubra US LLC
Detecting malicious network content	US13/405152	US9519782	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Configuration management for a capture/registration system	US15/012105	US10367786	Musarubra US LLC
Configuration management for a capture/registration system	US12/190536	US9253154	Musarubra US LLC
System and method for managing data and policies	US12/410905	US8667121	Musarubra US LLC
Distribution of security policies for small to medium-sized organizations	US09/962981	US8621077	Musarubra US LLC
System to bypass a compromised mass storage device driver stack and method thereof	US13/421843	US9275229	Musarubra US LLC
Network address repository management	US13/444459	US8954573	Musarubra US LLC
System, method, and computer program product for scanning data utilizing one of a plurality of virtual machines of a device	US12/132113	US8645949	Musarubra US LLC
System asset repository management	US13/444281	US8955036	Musarubra US LLC
Physical memory forensics system and method	US13/560415	US9268936	Musarubra US LLC
Providing a virtual security appliance architecture to a virtual cloud infrastructure	US15/400101	US11025647	Musarubra US LLC
Providing a virtual security appliance architecture to a virtual cloud infrastructure	US13/656730	US9571507	Musarubra US LLC
Premises aware security	US14/126707	US9536057	Musarubra US LLC
Timeline wrinkling system	US14/034672	US9633134	Musarubra

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
and method			US LLC
System and method for programmatic runtime de-obfuscation of obfuscated software utilizing virtual machine introspection and manipulation of virtual machine guest memory permissions	US15/284200	US10380343	Musarubra US LLC
System and method to create a number of breakpoints in a virtual machine via virtual machine trapping events	US13/869511	US10572665	Musarubra US LLC
System and method for the programmatic runtime de-obfuscation of obfuscated software utilizing virtual machine introspection and manipulation of virtual machine guest memory permissions	US13/892800	US9459901	Musarubra US LLC
Identification of obfuscated computer items using visual algorithms	US13/969879	US9690935	Musarubra US LLC
System and method for an endpoint hardware assisted network firewall in a security environment	US15/400311	US10103892	Musarubra US LLC
System and method for an endpoint hardware assisted network firewall in a security environment	US13/748578	US9560014	Musarubra US LLC
System and method to visualize user sessions	US14/028074	US9824211	Musarubra US LLC
Capacitance-to-digital converter utilizing digital feedback and auxiliary DAC	US14/575167	US9385747	Musarubra US LLC
System and method for detecting malicious links in	US15/889128	US10505956	Musarubra

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
electronic messages			US LLC
System and method for detecting malicious links in electronic messages	US13/945394	US9300686	Musarubra US LLC
System and method for detecting malicious links in electronic messages	US15/083171	US9888019	Musarubra US LLC
System and method for classifying malware within content created during analysis of a specimen	US14/922030	US10515214	Musarubra US LLC
Dynamically adaptive framework and method for classifying malware using intelligent static, emulation, and dynamic analyses	US15/912474	US10713362	Musarubra US LLC
Dynamically adaptive framework and method for classifying malware using intelligent static, emulation, and dynamic analyses	US14/042420	US9171160	Musarubra US LLC
Malware analysis in accordance with an analysis plan	US14/922024	US9910988	Musarubra US LLC
Detection center to detect targeted malware	US15/489659	US10735458	Musarubra US LLC
Advanced persistent threat (apt) detection center	US14/042483	US9628507	Musarubra US LLC
System, apparatus and method for reconfiguring virtual machines	US15/676859	US11075945	Musarubra US LLC
System, apparatus and method for using malware analysis results to drive adaptive instrumentation of virtual machines to improve exploit detection	US14/042489	US9736179	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Efficient request-response routing over a data exchange layer	US14/912913	US10819804	Musarubra US LLC
Efficient request-response routing over a data exchange layer	US17/080896	US11418605	Musarubra US LLC
Prevalence-based reputations	US14/913437	US10237303	Musarubra US LLC
Security-connected framework	US14/912540	US10142373	Musarubra US LLC
Location services on a data exchange layer	US14/913101	US10609088	Musarubra US LLC
Location services on a data exchange layer	US16/835054	US11005895	Musarubra US LLC
Location services on a data exchange layer	US17/244279	US11665205	Musarubra US LLC
Threat intelligence on a data exchange layer	US14/912743	US10484398	Musarubra US LLC
Threat intelligence on a data exchange layer	US16/684756	US10904269	Musarubra US LLC
Framework for multi-phase analysis of mobile applications	US13/775166	US9009822	Musarubra US LLC
Framework for efficient security coverage of mobile software applications installed on mobile devices	US13/775169	US9009823	Musarubra US LLC
Dynamic adaptive defense for cyber-security threats	US15/089170	US10129290	Musarubra US LLC
Dynamic adaptive defense for cyber-security threats	US15/581471	US10505972	Musarubra US LLC
Dynamic adaptive defense for cyber-security threats	US16/185865	US10616265	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Dynamic adaptive defense for cyber-security threats	US16/841383	US11563769	Musarubra US LLC
Dynamic adaptive defense for cyber-security threats	US18/158350	US11985160	Musarubra US LLC
Threat-aware architecture	US15/954449	US10740456	Musarubra US LLC
Micro-virtualization architecture for threat-aware microvisor deployment in a node of a network environment	US14/229626	US9292686	Musarubra US LLC
Exploit detection system with threat-aware microvisor	US14/229580	US9507935	Musarubra US LLC
Threat-aware microvisor	US14/229533	US9740857	Musarubra US LLC
Micro-virtualization architecture for threat-aware module deployment in a node of a network environment	US15/009664	US9946568	Musarubra US LLC
Detection efficacy of virtual machine-based analysis with application specific events	US15/919085	US10534906	Musarubra US LLC
Detection efficacy of virtual machine-based analysis with application specific events	US14/173765	US9262635	Musarubra US LLC
Detection efficacy of virtual machine-based analysis with application specific events	US15/043392	US9916440	Musarubra US LLC
Framework for computer application analysis of sensitive information tracking	US13/775170	US9159035	Musarubra US LLC
Framework for efficient security coverage of mobile software applications using machine learning	US14/881074	US9594905	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
User interface with real-time visual playback along with synchronous textual analysis log display and event/time index for anomalous behavior detection in applications	US14/949770	US10019338	Musarubra US LLC
Framework for efficient security coverage of mobile software applications	US15/785208	US10296437	Musarubra US LLC
Real-time visual playback with synchronous textual analysis log display and event/time indexing	US16/030759	US10929266	Musarubra US LLC
Framework for efficient security coverage of mobile software applications	US13/775168	US9176843	Musarubra US LLC
User interface with real-time visual playback along with synchronous textual analysis log display and event/time index for anomalous behavior detection in applications	US13/775174	US9195829	Musarubra US LLC
Framework for iterative analysis of mobile software applications	US14/495762	US9225740	Musarubra US LLC
Framework for efficient security coverage of mobile software applications	US14/930385	US9792196	Musarubra US LLC
System, apparatus and method for conducting on-the-fly decryption of encrypted objects for malware detection	US14/086842	US9189627	Musarubra US LLC
System, apparatus and method for conducting on-the-fly decryption of encrypted objects for malware detection	US14/942327	US9560059	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Intrusion prevention and remedy system	US14/313934	US10084813	Musarubra US LLC
System and method for detecting and remediating a cybersecurity attack	US16/140328	US10757134	Musarubra US LLC
Identification of call participants	US14/317929	US9462471	Musarubra US LLC
Verification of trusted threat-aware microvisor	US14/615798	US10002252	Musarubra US LLC
Verification of trusted threat-aware visualization layer	US16/011495	US11244056	Musarubra US LLC
Trusted threat-aware microvisor	US14/602023	US9680862	Musarubra US LLC
System and method for classifying an object based on an aggregated behavior results	US14/997443	US10432649	Musarubra US LLC
System and method for network behavior detection	US14/221199	US9241010	Musarubra US LLC
System and method to communicate sensitive information via one or more untrusted intermediate nodes with resilience to disconnected network topology	US14/452147	US9912644	Musarubra US LLC
Data mining algorithms adopted for trusted execution environment	US14/498266	US10382454	Musarubra US LLC
Correlation and consolidation of analytic data for holistic view of malware attack	US15/583725	US10122746	Musarubra US LLC
Correlation and consolidation holistic views of analytic data pertaining to a malware attack	US16/181250	US10812513	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Correlation and consolidation of analytic data for holistic view of a malware attack	US13/828785	US9311479	Musarubra US LLC
Electronic device for aggregation, correlation and consolidation of analysis attributes	US15/096088	US9641546	Musarubra US LLC
Security orchestration framework	US14/752867	US9807118	Musarubra US LLC
Account recovery protocol	US14/928443	US10061914	Musarubra US LLC
System and method for analysis of a memory dump associated with a potentially malicious content suspect	US15/167636	US10198574	Musarubra US LLC
File extraction from memory dump for malicious content analysis	US13/801545	US9355247	Musarubra US LLC
System and method for determining a threat based on correlation of indicators of compromise from other sources	US15/470816	US10027696	Musarubra US LLC
System and method of detecting delivery of malware using cross-customer data	US16/036876	US10404725	Musarubra US LLC
System and method of detecting delivery of malware using cross-customer data	US16/557757	US11019081	Musarubra US LLC
System and method of detecting delivery of malware using cross-customer data	US14/466898	US9363280	Musarubra US LLC
System and method of detecting delivery of malware based on indicators of compromise from different sources	US15/174827	US9609007	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Framework for efficient security coverage of mobile software applications using symbolic execution to reach regions of interest within an application	US13/775171	US9367681	Musarubra US LLC
Trusted binary translation	US14/583616	US9798559	Musarubra US LLC
Binary translation of a trusted binary with input tagging	US14/583620	US9996690	Musarubra US LLC
Zero-day rotating guest image profile	US14/788450	US10075455	Musarubra US LLC
Real-time mobile security posture	US14/583687	US10021137	Musarubra US LLC
Real-time mobile security posture	US15/425208	US10178132	Musarubra US LLC
System, device and method for detecting a malicious attack based on communications between remotely hosted virtual machines and malicious web servers	US14/316714	US9398028	Musarubra US LLC
Network-based malware detection	US15/213306	US9661009	Musarubra US LLC
System, device and method for detecting a malicious attack based on direct communications between remotely hosted virtual machines and malicious web servers	US15/600320	US9838408	Musarubra US LLC
Storing network bidirectional flow data and metadata with efficient processing technique	US14/463226	US9426071	Musarubra US LLC
Arrangement for efficient search and retrieval of indexes used to locate	US15/215277	US9876701	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
captured packets			
Distributed systems and methods for automatically detecting unknown bots and botnets	US15/250770	US10200384	Musarubra US LLC
Distributed systems and methods for automatically detecting unknown bots and botnets	US13/830573	US9430646	Musarubra US LLC
System, apparatus and method for detecting a malicious attack based on static analysis of a multi-flow object	US14/231260	US9432389	Musarubra US LLC
Dynamic content activation for automated analysis of embedded objects	US14/673535	US9438613	Musarubra US LLC
Computer exploit detection using heap spray pattern matching	US14/311035	US9438623	Musarubra US LLC
Exploit detection system	US14/739921	US10148693	Musarubra US LLC
Virtualized exploit detection system	US16/208378	US10666686	Musarubra US LLC
Modularized database architecture using vertical partitioning for a state machine	US14/580501	US9467460	Musarubra US LLC
Modular architecture for analysis database	US15/254902	US9787706	Musarubra US LLC
Methods for detecting file altering malware in VM based analysis	US14/675648	US9483644	Musarubra US LLC
System and method for detecting file altering behaviors pertaining to a	US15/339459	US9846776	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
malicious attack			
Using trusted platform module to build real time indicators of attack information	US14/704510	US10812466	Musarubra US LLC
Selective virtualization for security threat detection	US15/081775	US10417031	Musarubra US LLC
Selective virtualization for security threat detection	US16/572537	US11294705	Musarubra US LLC
Enterprise reputations for uniform resource locators	US14/752909	US10050980	Musarubra US LLC
Query engine for remote endpoint information retrieval	US14/751560	US10599662	Musarubra US LLC
Query engine for remote endpoint information retrieval	US16/813547	US11429625	Musarubra US LLC
Efficient access to sparse packets in large repositories of stored network traffic	US14/614985	US9537972	Musarubra US LLC
Efficient access to sparse packets in large repositories of stored network traffic	US15/368352	US9674298	Musarubra US LLC
Methods and apparatus for graphical user interface environment for creating threat response courses of action for computer networks	US15/190028	US10536484	Musarubra US LLC
Methods and apparatus for graphical user interface environment for creating threat response courses of action for computer networks	US16/718928	US10986134	Musarubra US LLC
Methods and apparatus for graphical user interface environment for creating threat response courses of action for computer networks	US16/718990	US11063985	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
System and method for detecting exfiltration content	US15/943406	US10467414	Musarubra US LLC
System and method for detecting exfiltration content	US13/801573	US9565202	Musarubra US LLC
System and method for detecting malicious activity based on at least one environmental property	US15/425954	US9934381	Musarubra US LLC
Systems and methods for traffic control	US14/811413	US9691278	Musarubra US LLC
System and method for separated packet processing and static analysis	US15/728436	US10454953	Musarubra US LLC
System and method for offloading packet processing and static analysis operations	US16/659461	US11082436	Musarubra US LLC
System and method for offloading packet processing and static analysis operations	US14/229541	US9591015	Musarubra US LLC
System and method for offloading packet processing and static analysis operations	US15/451243	US9787700	Musarubra US LLC
Detecting malware based on reflection	US14/694796	US9594904	Musarubra US LLC
End-point visibility	US15/089021	US10546131	Musarubra US LLC
End-point visibility	US16/751471	US11126727	Musarubra US LLC
End-point visibility	US17/479721	US11556652	Musarubra US LLC
End-point visibility	US18/092058	US11971994	Musarubra US LLC
Advanced threat protection cross-product security	US14/757782	US10078753	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
controller			
Advanced threat protection cross-product security controller	US16/133485	US10769276	Musarubra US LLC
Advanced threat protection cross-product security controller	US16/985920	US11556641	Musarubra US LLC
Analytic-based security with learning adaptability	US15/594049	US10104102	Musarubra US LLC
Analytic-based security monitoring system and method	US16/160913	US10728263	Musarubra US LLC
Analytics-based security monitoring system and method	US14/685475	US9654485	Musarubra US LLC
Malicious content analysis with multi-version application support within single operating environment	US15/489665	US10025927	Musarubra US LLC
Multi-version application support and registration within a single operating system environment	US16/036873	US11210390	Musarubra US LLC
Malicious content analysis with multi-version application support within single operating environment	US13/801557	US9626509	Musarubra US LLC
Identifying a source device in a software-defined network	US14/974756	US10129125	Musarubra US LLC
Data loss prevention of social media content	US14/976397	US10204384	Musarubra US LLC
Verified social media content	US16/236087	US10825111	Musarubra US LLC
Verified social media content	US16/235828	US10909638	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Intelligent devices in a software-defined network	US14/978604	US9917775	Musarubra US LLC
Multi-label content recategorization	US14/977875	US10691739	Musarubra US LLC
Security content over a management band	US14/978324	US9912528	Musarubra US LLC
Attestation device custody transfer protocol	US14/978658	US10193858	Musarubra US LLC
Selective system call monitoring	US14/668601	US9690606	Musarubra US LLC
Framework for classifying an object as malicious with machine learning for deploying updated predictive models	US15/633072	US10366231	Musarubra US LLC
Framework for classifying an object as malicious with machine learning for deploying updated predictive models	US16/525455	US10902117	Musarubra US LLC
Framework for classifying an object as malicious with machine learning for deploying updated predictive models	US14/579896	US9690933	Musarubra US LLC
System, apparatus and method for classifying a file as malicious using static scanning	US14/042505	US10192052	Musarubra US LLC
Multistage system and method for analyzing obfuscated content for malware	US15/633058	US10657251	Musarubra US LLC
Multistage system and method for analyzing obfuscated content for malware	US14/321636	US9690936	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Method, apparatus, and computer-readable medium for ingesting semi-structured data in a columnar format	US15/164287	US10866940	Musarubra US LLC
System and method for generating a malware identifier	US15/688727	US10467411	Musarubra US LLC
System and method for run-time object classification	US14/228094	US9747446	Musarubra US LLC
Exploit detection of malware and malware families	US14/500594	US9773112	Musarubra US LLC
Determining duplicate objects for malware analysis using environmental/context information	US14/502866	US9781144	Musarubra US LLC
Security cloud service framework for hardening in the field code of mobile software applications	US15/816996	US10181029	Musarubra US LLC
Framework for efficient security coverage of mobile software applications that is usable to harden in the field code	US13/775172	US9824209	Musarubra US LLC
Susceptible environment detection system	US15/817009	US10445502	Musarubra US LLC
Susceptible environment detection system	US14/986428	US9824216	Musarubra US LLC
Detection and classification of exploit kits	US14/871830	US9825976	Musarubra US LLC
Cyber attack early warning system	US15/817006	US10873597	Musarubra US LLC
Cyber attack early warning system	US14/872003	US9825989	Musarubra US LLC
Graymail filtering-based on	US15/232585	US9954805	Musarubra

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
user preferences			US LLC
System and method for detecting phishing using password prediction	US13/931664	US9888016	Musarubra US LLC
Injection of content processing delay in an endpoint	US14/929693	US9912681	Musarubra US LLC
System and method for enhanced security of storage devices	US14/536498	US9921978	Musarubra US LLC
Microvisor-based malware detection appliance architecture	US15/943357	US10528726	Musarubra US LLC
Malware detection appliance architecture	US14/962497	US9934376	Musarubra US LLC
Automated security policy	US15/791840	US10721273	Musarubra US LLC
Shellcode detection	US14/311000	US9973531	Musarubra US LLC
Technologies for privacy-preserving security policy evaluation	US17/153708	US11909769	Musarubra US LLC
Technologies for privacy-preserving security policy evaluation	US15/394370	US10382489	Musarubra US LLC
Technologies for privacy-preserving security policy evaluation	US16/538434	US10911496	Musarubra US LLC
Interactive infection visualization for improved exploit detection and signature generation for malware and malware families	US14/500587	US10027689	Musarubra US LLC
Systems and methods for generation of signature	US16/036879	US10868818	Musarubra

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
generation using interactive infection visualizations			US LLC
Verification of complex software code using a modularized architecture	US15/261327	US10025691	Musarubra US LLC
System and method for detecting malicious activity and classifying a network communication based on different indicator types	US15/495629	US10033753	Musarubra US LLC
Classifying sets of malicious indicators for detecting command and control communications associated with malware	US16/043013	US10637880	Musarubra US LLC
Classifying sets of malicious indicators for detecting command and control communications associated with malware	US13/895271	US9635039	Musarubra US LLC
System and method for detecting interpreter-based exploit attacks	US14/869901	US10033747	Musarubra US LLC
System and method for detecting interpreter-based exploit attacks	US16/042998	US10887328	Musarubra US LLC
System and method of threat detection under hypervisor control	US15/197634	US10033759	Musarubra US LLC
Automated enforcement of security policies in cloud and hybrid infrastructure environments	US15/878386	US10721275	Musarubra US LLC
Automated enforcement of security policies in cloud and hybrid infrastructure environments	US16/908681	US11575712	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Automated enforcement of security policies in cloud and hybrid infrastructure environments	US18/165171	US11962622	Musarubra US LLC
Malicious message analysis system	US14/985266	US10050998	Musarubra US LLC
Malicious message analysis system	US16/102595	US10581898	Musarubra US LLC
Multi-level control for enhanced resource and object evaluation management of malware detection system	US15/721630	US10554507	Musarubra US LLC
Subscription-based malware detection	US15/940410	US10791138	Musarubra US LLC
Attribute-controlled malware detection	US15/940307	US10798112	Musarubra US LLC
System and method for enforcing compliance with subscription requirements for cyber-attack detection service	US15/721621	US10848397	Musarubra US LLC
Subscription-based malware detection	US17/035538	US11399040	Musarubra US LLC
Identifying malware-suspect end points through entropy changes in consolidated logs	US15/476212	US10440037	Musarubra US LLC
Identifying malware-suspect end points through entropy changes in consolidated logs	US16/588642	US11336665	Musarubra US LLC
Identifying malware-suspect end points through entropy changes in consolidated logs	US17/745366	US11916934	Musarubra US LLC
Page replacement code injection	US14/042465	US10089461	Musarubra US LLC
Late load technique for deploying a virtualization layer underneath a running	US15/229770	US10108446	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
operating system			
Late load technique for deploying a virtualization layer underneath a running operating system	US16/160923	US11200080	Musarubra US LLC
System and method to detect premium attacks on electronic networks and electronic devices	US15/195909	US10121000	Musarubra US LLC
System and method for triggering analysis of an object for malware in response to modification of that object	US14/985287	US10133866	Musarubra US LLC
System and method for triggering analysis of an object for malware in response to modification of that object	US16/193231	US10872151	Musarubra US LLC
Cyber-security system and method for weak indicator detection and correlation to generate strong indicators	US15/638262	US10601848	Musarubra US LLC
Post-intrusion detection of cyber-attacks during lateral movement within networks	US16/024685	US10855700	Musarubra US LLC
System and methods for advanced malware detection through placement of transition events	US15/189993	US10169585	Musarubra US LLC
Leveraging behavior-based rules for malware family classification	US14/967180	US10176321	Musarubra US LLC
Technique for implementing memory views using a layered virtualization architecture	US15/257704	US10191861	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Method to detect application execution hijacking using memory protection	US14/871987	US10210329	Musarubra US LLC
Method to detect application execution hijacking using memory protection	US16/277907	US11244044	Musarubra US LLC
System and method for protecting memory pages associated with a process using a virtualization layer	US15/199879	US10216927	Musarubra US LLC
Dynamic guest image creation and rollback	US14/222524	US10242185	Musarubra US LLC
Dynamic guest image creation and rollback	US16/363986	US11068587	Musarubra US LLC
Phishing attack detection	US15/721948	US10805346	Musarubra US LLC
Platform and method for retroactive reclassification employing a cybersecurity-based global data store	US16/222501	US11271955	Musarubra US LLC
Methods and system for hiding transition events for malware detection	US15/199812	US10341365	Musarubra US LLC
Method to detect forgery and exploits using last branch recording registers	US15/197656	US10621338	Musarubra US LLC
Virtual system and method with threat protection	US15/199871	US10395029	Musarubra US LLC
Methods of identifying heap spray attacks using memory anomaly detection	US15/258993	US10430586	Musarubra US LLC
Technique for protecting guest processes using a layered virtualization architecture	US15/230215	US10447728	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Technique for establishing secure communication between host and guest processes of a virtualization architecture	US15/237377	US10846117	Musarubra US LLC
Centralized aggregation technique for detecting lateral movement of stealthy cyber-attacks	US15/087570	US10454950	Musarubra US LLC
Malware detection verification and enhancement by coordinating endpoint and malware detection systems	US15/633226	US10462173	Musarubra US LLC
Malware detection verification and enhancement by coordinating endpoint and malware detection systems	US16/666335	US11240262	Musarubra US LLC
Code injection technique for remediation at an endpoint of a network	US14/921672	US10474813	Musarubra US LLC
System and method for managing formation and modification of a cluster within a malware detection system	US15/283126	US10476906	Musarubra US LLC
System and method for managing sensor enrollment	US15/283209	US10601863	Musarubra US LLC
Distributed malware detection system and submission workflow thereof	US15/283206	US10616266	Musarubra US LLC
Timeout management services	US15/390930	US10671721	Musarubra US LLC
Distributed malware detection system and submission workflow thereof	US16/840584	US11632392	Musarubra US LLC
Advanced malware detection using similarity analysis	US15/280854	US10491627	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Ransomware detection and mitigation	US15/658278	US10503904	Musarubra US LLC
Multi-vector malware detection and analysis	US15/390947	US10523609	Musarubra US LLC
Adaptive virtual machine snapshot update framework for malware behavioral analysis	US15/627272	US10552610	Musarubra US LLC
Exploit of privilege detection framework	US15/197661	US10565378	Musarubra US LLC
Enhanced malware detection for generated objects	US15/627270	US10581879	Musarubra US LLC
Malware detection system with contextual analysis	US14/986417	US10581874	Musarubra US LLC
Technique for malware detection capability comparison of network security devices	US15/358688	US10587647	Musarubra US LLC
Secure communications between peers using a verified virtual trusted platform module	US15/261104	US10592678	Musarubra US LLC
Detection of credential spearphishing attacks using email analysis	US14/872016	US10601865	Musarubra US LLC
System and method for protecting a software component running in virtual machine using a virtualization layer	US15/199876	US10642753	Musarubra US LLC
System and method for malware analysis using thread-level event monitoring	US14/493201	US10671726	Musarubra US LLC
Detecting delayed activation malware using a primary controller and plural time	US15/197643	US10706149	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
controllers			
Mobile application risk analysis	US15/199900	US10715542	Musarubra US LLC
System and method for protecting a software component running in a virtual machine through virtual interrupts by the virtualization layer	US15/199882	US10726127	Musarubra US LLC
System and method for preventing malware evasion	US15/717547	US10747872	Musarubra US LLC
Cluster configuration within a scalable malware detection system	US15/283128	US10785255	Musarubra US LLC
Enterprise search	US15/803669	US10795991	Musarubra US LLC
Infection vector and malware tracking with an interactive user display	US14/316716	US10805340	Musarubra US LLC
Detecting delayed activation malware using a run-time monitoring agent and time-dilation logic	US15/197647	US10817606	Musarubra US LLC
Technique for verifying exploit/malware at malware detection appliance through correlation with endpoints	US15/258656	US10826933	Musarubra US LLC
Verification and enhancement using detection systems located at the network periphery and endpoint devices	US15/473154	US10893059	Musarubra US LLC
System and method for predicting and mitigating cybersecurity system misconfigurations	US15/940854	US10826931	FireEye, Inc.

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
System and method for identifying phishing cyber-attacks through deep machine learning via a convolutional neural network (CNN) engine	US16/003727	US10834128	Musarubra US LLC
Ransomware file modification prevention technique	US16/024708	US10893068	Musarubra US LLC
Data extraction system for malware analysis	US15/627266	US10902119	Musarubra US LLC
Detection of phishing attacks using similarity analysis	US15/469400	US10904286	Musarubra US LLC
Detection of phishing attacks using similarity analysis	US17/157968	US11570211	Musarubra US LLC
Analysis of endpoint detect and response data	US16/586804	US11621965	Musarubra US LLC
System and method for automatically generating malware detection rule recommendations	US15/942082	US11003773	Musarubra US LLC
System and method for detecting repetitive cybersecurity attacks constituting an email campaign	US16/020896	US11075930	Musarubra US LLC
Virtual system and method for securing external network connectivity	US15/199873	US11113086	Musarubra US LLC
Cybersecurity investigation tools utilizing information graphs	US16/232296	US11140179	Musarubra US LLC
Methods and apparatus to accelerate security threat investigation	US16/864102	US11651074	Musarubra US LLC
Methods, apparatus, and articles of manufacture to securely audit	US16/864107	US11722295	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
communications			
System and method for mitigating cyberattacks against processor operability by a guest process	US16/130944	US11182473	Musarubra US LLC
System and method for improved end-to-end cybersecurity machine learning and deployment	US16/049687	US11227047	Musarubra US LLC
System and method for distributed cluster configuration monitoring and management	US16/022644	US11228491	Musarubra US LLC
Synchronization of multi-stack nodes	US16/941877	US11671371	Musarubra US LLC
Platform and method for performing cybersecurity analyses employing an intelligence hub with a modular architecture	US16/223107	US11240275	Musarubra US LLC
System and method for retrieval and analysis of operational data from customer, cloud-hosted virtual resources	US16/557512	US11310238	Musarubra US LLC
System and method for retrieval and analysis of operational data from customer, cloud-hosted virtual resources	US17/710909	US11750618	Musarubra US LLC
Cyber-security system and method for detecting escalation of privileges within an access token	US16/353984	US11314859	Musarubra US LLC
System and method for automatically prioritizing rules for cyber-threat detection and mitigation	US16/353988	US11316900	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
System and method for supporting cross-platform data verification	US16/457573	US11392700	Musarubra US LLC
System, apparatus and method for automatically verifying exploits within suspect objects and highlighting the display information associated with the verified exploits	US15/298159	US10476909	Musarubra US LLC
System, apparatus and method for automatically verifying exploits within suspect objects and highlighting the display information associated with the verified exploits	US16/679030	US11089057	Musarubra US LLC
System, apparatus and method for automatically verifying exploits within suspect objects and highlighting the display information associated with the verified exploits	US14/620055	US9306974	Musarubra US LLC
System and method for IPS and VM-based detection of suspicious objects	US14/228073	US9756074	Musarubra US LLC
Visualization and analysis of complex security information	US14/780533	US9591028	Musarubra US LLC
Context-aware network on a data exchange layer	US14/912750	US10135845	Musarubra US LLC
Context-aware network on a data exchange layer	US16/163362	US10447714	Musarubra US LLC
Merging multiple system trees over a data exchange layer	US14/913196	US10205798	Musarubra US LLC
Real-time policy distribution	US14/913149	US10148695	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Real-time policy distribution	US16/208237	US10715556	Musarubra US LLC
Service-oriented architecture	US14/913427	US10171594	Musarubra US LLC
Service-oriented architecture	US16/236406	US11076003	Musarubra US LLC
Service-oriented architecture	US17/383775	US11902388	Musarubra US LLC
One-click reputation adjustment	US14/913394	US10749843	Musarubra US LLC
Fuzzy hash of behavioral results	US15/912456	US10218740	Musarubra US LLC
Fuzzy hash of behavioral results	US14/042454	US9294501	Musarubra US LLC
Fuzzy hash of behavioral results	US15/076322	US9912691	Musarubra US LLC
Zero-day discovery system	US13/925688	US10133863	Musarubra US LLC
System and method employing structured intelligence to verify and contain threats at endpoints	US15/226839	US10033748	Musarubra US LLC
System and method for verifying a cyberthreat	US16/043004	US10701091	Musarubra US LLC
System and method employing structured intelligence to verify and contain threats at endpoints	US14/216453	US9413781	Musarubra US LLC
System and method for scanning remote services to locate stored objects with malware	US16/231074	US11368475	Musarubra US LLC
System and method for scanning remote services to locate stored objects with	US17/844644	US11665188	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
malware			
Dynamically remote tuning of a malware content detection system	US14/981765	US10341363	Musarubra US LLC
Dynamically remote tuning of a malware content detection system	US16/459536	US11297074	Musarubra US LLC
Dynamically remote tuning of a malware content detection system	US14/231216	US9223972	Musarubra US LLC
Malicious content analysis using simulated user interaction without user involvement	US15/912455	US10848521	Musarubra US LLC
Malicious content analysis using simulated user interaction without user involvement	US13/801532	US9104867	Musarubra US LLC
Malicious content analysis using simulated user interaction without user involvement	US14/804086	US9912698	Musarubra US LLC
Detecting bootkits resident on compromised computers	US13/841633	US9251343	Musarubra US LLC
Systems and methods for automatically detecting backdoors	US13/775175	US8990944	Musarubra US LLC
Safe sharing of sensitive data	US15/282659	US10476900	Musarubra US LLC
Safe sharing of sensitive data	US16/681235	US11089038	Musarubra US LLC
Launcher for setting analysis environment variations for malware detection	US14/937802	US10284575	Musarubra US LLC
Launcher for setting analysis environment variations for	US16/404546	US10834107	Musarubra

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
malware detection			US LLC
Trusted computing resource meter	US14/977952	US10754703	Musarubra US LLC
Intelligent context aware user interaction for malware detection	US15/831311	US10798121	Musarubra US LLC
Intelligent context aware user interaction for malware detection	US14/586233	US9838417	Musarubra US LLC
Agent presence for self-healing	US15/513783	US11416606	Musarubra US LLC
System and method for circumventing evasive code for cyberthreat detection	US17/133379	US11436327	Musarubra US LLC
Hardware-enforced code paths	US14/866928	US9870466	Musarubra US LLC
Optimized resource allocation for virtual machines within a malware content detection system	US15/351112	US10469512	Musarubra US LLC
Optimized resource allocation for virtual machines within a malware content detection system	US13/892193	US9495180	Musarubra US LLC
System and method for detecting time-bomb malware	US15/394681	US10083302	Musarubra US LLC
System and method for detecting time-bomb malware	US16/140327	US10335738	Musarubra US LLC
System and method for detecting time-bomb malware	US13/925737	US9536091	Musarubra US LLC
User behavioral risk assessment	US15/253263	US10505965	Musarubra US LLC
User behavioral risk assessment	US13/334304	US8881289	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
User behavioral risk assessment	US13/334474	US9058486	Musarubra US LLC
User behavioral risk assessment	US14/723192	US9635047	Musarubra US LLC
User behavioral risk assessment	US14/531881	US9648035	Musarubra US LLC
Master security policy server	US09/969686	US8776230	Musarubra US LLC
Return-oriented programming detection	US14/311014	US9594912	Musarubra US LLC
Subscription and key management system	US17/133411	US11522884	Musarubra US LLC
Cyber-security framework for application of virtual features	US15/197653	US11552986	Musarubra US LLC
Multi-vector malware detection data sharing system for improved detection	US16/353982	US11558401	Musarubra US LLC
Multi-vector malware detection data sharing system for improved detection	US18/097091	US11856011	Musarubra US LLC
Automated system for triage of customer issues	US16/726723	US11601444	Musarubra US LLC
System and method for cybersecurity analyzer update and concurrent management system	US16/796541	US11636198	Musarubra US LLC
System and method for detecting and protecting against cybersecurity attacks on servers	US16/557483	US11677786	Musarubra US LLC
Methods and apparatus for generic process chain entity mapping	US17/573506	US11966477	Musarubra US LLC
System and method for detecting cyberattacks	US16/725674	US11743290	Musarubra

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
impersonating legitimate sources			US LLC
System and method for bootkit detection	US16/144781	US11763004	Musarubra US LLC
Run-time configurable cybersecurity system	US17/133397	US11838300	Musarubra US LLC
Systems and methods for delivery using a message queue	US17/523849	US11863470	Musarubra US LLC
Subscription-based malware detection	US17/872854	US11863581	Musarubra US LLC
Selective virtualization for security threat detection	US17/712176	US11868795	Musarubra US LLC
System and method for automatically prioritizing rules for cyber-threat detection and mitigation	US17/710882	US11876836	Musarubra US LLC
System and method for identifying and mitigating cyberattacks through malicious position-independent code execution	US16/586794	US11886585	Musarubra US LLC
Risk analyzer for ascertaining a risk of harm to a network and generating alerts regarding the ascertained risk	US17/146417	US11936666	Musarubra US LLC
System and method for automated system for triage of cybersecurity threats	US18/118077	US11985149	Musarubra US LLC
System and method for interfacing with heterogeneous network data gathering tools	US10/778779	US8091117	Musarubra US LLC
Attribute-controlled malware detection	US17/063648	US11997111	Musarubra US LLC

[Schedule I to Assignment Agreement]

Title	Application Number	Patent Number	Owner
Technique for verifying exploit/malware at malware detection appliance through correlation with endpoints	US17/087550	US11979428	Musarubra US LLC
System and method for detecting repetitive cybersecurity attacks constituting an email campaign	US17/385835	US11882140	Musarubra US LLC
System and method for improved end-to-end cybersecurity machine learning and deployment	US17/576558	US11921851	Musarubra US LLC
System and Method for Circumventing Evasive Code for Cyberthreat Detection	US17/902878	US11947669	Musarubra US LLC
Subscription and key management system	US18/075140	US11888875	Musarubra US LLC
Dynamically remote tuning of a malware content detection system	US17/710349	US11949698	Musarubra US LLC

[Schedule I to Assignment Agreement]

(B) United States Patent Applications

Description	Application Number	Owner
Providing a virtual security appliance architecture to a virtual cloud infrastructure	US17/320129	Musarubra US LLC
Threat intelligence on a data exchange layer	US17/155318	Musarubra US LLC
Query engine for remote endpoint information retrieval	US17/896812	Musarubra US LLC
Advanced threat protection cross-product security controller	US18/092083	Musarubra US LLC
Attestation device custody transfer protocol	US16/246691	Musarubra US LLC
Analysis of endpoint detect and response data	US18/121543	Musarubra US LLC
Cybersecurity investigation tools utilizing information graphs	US17/493364	Musarubra US LLC
One-click reputation adjustment	US16/993660	Musarubra US LLC
Agent presence for self-healing	US17/839747	Musarubra US LLC
Distributed hybrid model for security as a service	US17/721038	Musarubra US LLC
Heuristic model to self-manage and auto-update containerized services	US17/720860	Musarubra US LLC
Method and apparatus to identify creator of com process created using ole automation	US17/514437	Musarubra US LLC
Methods and apparatus to implement a deterministic indicator and confidence scoring model	US17/566758	Musarubra US LLC
Apparatus and methods to classify malware with explainability with artificial intelligence models	US17/838973	Musarubra US LLC
[Redacted]	US17/063618 (Unpublished)	Musarubra US LLC
[Redacted]	US17/588097 (Unpublished)	Musarubra US LLC

[Schedule I to Assignment Agreement]

Description	Application Number	Owner
[Redacted]	US18/135635 (Unpublished)	Musarubra US LLC
[Redacted]	US18/161682 (Unpublished)	Musarubra US LLC
[Redacted]	US18/623333 (Unpublished)	Musarubra US LLC
[Redacted]	US18/732312 (Unpublished)	Musarubra US LLC
[Redacted]	US18/755297 (Unpublished)	Musarubra US LLC
[Redacted]	US16/231089 (Unpublished)	Musarubra US LLC
System and method for detecting cyberattacks impersonating legitimate sources	US18/456953 (Unpublished)	Musarubra US LLC
Methods and apparatus to mitigate firmware malware	US17/894797 (Unpublished)	Musarubra US LLC

[Schedule I to Assignment Agreement]

(C) United States Copyright Registrations

Title	Registration Number	Registration Date	Owner
FireEye.	VAu001176481	2014-06-03	Musarubra US LLC
McAfee email and web security (EWS)	TX0007250679	2010-04-07	Musarubra US LLC
McAfee groupshield version 7.0 for lotus domino on Microsoft Windows	TX0006601227	2007-06-21	
McAfee host intrusion prevention 7.0.0	TX0007250609	2010-04-07	
McAfee quarantine manager 5.0	TX0006982933	2007-10-18	
Hercules 3.0	TXu001166483	2004-10-15	

[Schedule I to Assignment Agreement]