

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
COLUMBIA DIVISION**

SOUTH CAROLINA STATE CONFERENCE
OF THE NAACP,

Plaintiff,

v.

TONNYA K. KOHN, in her official capacity as
South Carolina State Court Administrator;

DONALD W. BEATTY, in his official capacity
as Chief Justice of the South Carolina Supreme
Court,

Defendants.

C/A No.: 3:22-cv-01007-MGL

AFFIDAVIT OF JOEL B. HILKE

1. My name is Joel B. Hilke, and I am currently the Security Architect for the South Carolina Judicial Branch, Office of Information Technology. I have been the Security Architect since November 18, 2013. I possess current security certifications including CISSP and CISA, and previous certifications including Checkpoint CCSA, Microsoft MCSE, and Cisco CCNA.
2. In my capacity as the Security Architect, my responsibilities include reviewing the architecture of and access to the trial court Case Management System (CMS), which is used by court personnel to record information about court cases, and the online Public Index, from which members of the public may access case-related information about matters in the circuit and summary courts in South Carolina over the internet.
3. All 46 counties utilize the trial court CMS for the circuit and magistrates courts, and many of the municipal courts also use the CMS. While case information data is entered and

controlled by county and city clerks or other local officials, the Judicial Branch hosts this data in Judicial Branch servers pursuant to a contractual relationship with 44 of the 46 South Carolina Counties. Greenville and Charleston host their data in their own servers.

4. The online Public Index was implemented after the trial court CMS went live in November 2003 so that lawyers, litigants, and members of the public may access certain case-related information without having to physically visit or call a courthouse over the phone. The first county to use the trial court CMS and online Public Index was Greenville County. *See Statewide Court Case Management System Goes Live in Greenville County*, Nov. 17, 2003 (available at <https://www.sccourts.org/whatsnew/displaywhatsnew.cfm?indexID=189> and <https://www.sccourts.org/whatsnew/archivedItems.cfm?archYear=2003>). Before the online Public Index became available, this information was not available to the public; was only available to the public by visiting a county courthouse and using a public computer terminal, depending on the county's capabilities; or it did not exist because some courts relied on paper systems and had no CMS.

5. The online Public Index currently may be accessed via the "Records Search" link on the main web page for the Judicial Branch at www.sccourts.org. Once this link is clicked, the user must select a county from a map of South Carolina displayed at this page:

<https://sccourts.org/caseSearch/>. A user can also access the online Public Index from an alphabetical list of the counties, which is available on sccourts.org under the "County Information Lookup" link on www.sccourts.org.

6. Once in a selected county, a user must first accept a disclaimer page acknowledging statements about the data and that automated methods may not be used to access the data. A user may then search court records which are public and relate to the circuit and summary courts of

that county. Searches may be performed using a variety of fields, including by name, case type, or filing type. These searches can be customized and limited or expanded based on date ranges and other filters. Once a search is performed, the list of results can be further examined to review the details of a particular case.

7. Users are not required to personally register as users in order to access, view, or print information about cases, and there are no costs to access, view, or print information about cases.

8. I am informed and believe that the original architecture leveraged vendor database tables already in existence and was not designed with screen scraping or data mining in mind. The anticipation was that access would be initiated by users interactively through the web interface.

9. I am informed and believe that there were a number of intermittent data mining incidents prior to 2013, which degraded performance for users of CMS applications supported by the database as well as the general public using the public facing online Public Index. By 2013, these incidents were persistent enough that the South Carolina Judicial Branch was required to address the issue to ensure court personnel could access the CMS to record or review case information, and so the public could access court records using the online Public Index. During my tenure as Security Architect, there have been numerous instances of system degradation due to automated data mining. During these incidents various teams within IT (such as Security, Networking, Apps Development and Call Center) would collaborate on troubleshooting efforts to identify sources, correct abandoned database sessions, adjust security, and restore connectivity to the general public.

10. I am informed and believe that a read-only database replica was implemented in March of 2013 for the purpose of physically separating the database to be used by the Public Index from the database used by the CMS. While this action protected the CMS application in the case of

high utilization, this still left the Public Index unusable by the general public during data mining and screen scraping incidents. Further, judges and law enforcement accessing the Central Index were still affected by data mining and scraping.

11. In 2013 (sometime between August and December of 2013) the disclaimer page was updated to include the last substantive paragraph which excludes access by automated methods. The policy prohibiting access by automated methods was developed by former Office of Information Technology Director Joan Assey and approved by former Chief Justice Jean H. Toal.

12. In 2014-2015, the Judicial Branch began using a firewall connection monitoring console to filter for and identify clients by Internet Protocol (IP) address that had comparatively high connection rates to the Public Index. After review over time and confirmation of IP ownership via standard resources such as WHOIS and ARIN.NET, we were able to block offending IP addresses via firewall rules. However, these methods merely provided temporary relief since the data mining entities could obtain different IP addresses.

13. At the same time, the Judicial Branch began examining whether to supply information about cases to interested organizations that might have otherwise attempted to gather these records via scraping or data mining. On March 11, 2015, the Supreme Court of South Carolina promulgated new Rule 610 of the South Carolina Appellate Court Rules (SCACR), which, for the first time, permitted the Supreme Court to authorize the bulk distribution of, and compiled information from, court records such as those in the online Public Index. *Re: Amendment to the South Carolina Appellate Court Rules*, S.C. Sup. Ct. filed March 11, 2015, 411 S.C. at XVI (2015) (available at <https://sccourts.org/whatsnew/displaywhatsnew.cfm?indexID=1006>).

14. In November 2015 the Judicial Branch purchased a website protection service at an

annual cost of approximately \$9,000. This web application firewall, which came with a flexible rule base, helped identify and automatically prevent automated data miner activity. We used this system for three years to defend against data miners. We successively wrote more customized rules within this system, since the data miners eventually got around most rate limiting restrictions. After three years we determined to find an alternative technology due to the time spent customizing rules.

15. In 2016, we started integrating the web logs from all our web servers. The ability to analyze these web logs in our logging system has been instrumental in identifying statistics and anomalies, including high volume traffic from sources that we have high confidence are likely data miners. We have implemented policies for the web servers hosting the Public Index that restrict or rate limit traffic that is likely data mining. We currently have twelve policies in place, developed over time to apply as both general rate limits and to specific data mining behaviors.

16. On December 20, 2017, the Supreme Court of South Carolina amended Rule 610, SCACR. *Re: Amendments to Rule 610, South Carolina Appellate Court Rules*, S.C. Sup. Ct. filed Dec. 20, 2017, 421 S.C at XII (2017) (available at <https://sccourts.org/whatsnew/displaywhatsnew.cfm?indexID=2252>).

17. In November 2018, after many discussions and tests, the Judicial Branch purchased a new service, which was built from the ground-up to prevent automation using artificial intelligence to identify non-human behavior in web connections. The Judicial Branch continues to use this service for effective rate limiting and blocking of automation, as well as blocking automated credential attacks against our websites which require authentication. As we presented our analyzed web log data to the vendor to help defeat new attacks, the vendor used our situation to improve the product, because we were being targeted by very sophisticated bot networks.

18. This security service runs as a "software as a service" (SAAS) model in the vendor's cloud infrastructure. As such, there are a number of configuration options provided to us so that we may create and configure the protection for one of our websites in self-service manner. Once configured, tested, and in operation, there is no further need to alter the configuration. As with any SAAS service, it does not have unlimited control or programmability by the customer.

19. The online Public Index contains the following term:

Access to the South Carolina Judicial Department Public Index web sites by a site data scraper or any similar software intended to discover and extract data from a website through automated, repetitive querying for the purpose of collecting such data is expressly prohibited.

20. As noted above, the Judicial Branch uses technical means to enforce this term and prevent or halt screen scraping or data mining.

21. After a comprehensive review of our trial court CMS, the Judicial Branch began the process of soliciting proposals to replace the current trial court CMS in 2019. Pioneer Technology Group was awarded the bid on January 19, 2021, and the project was kicked off in February 2021.

<https://webprod.cio.sc.gov/SCSolicitationWeb/contractSearch.do?solicitnumber=5400017828>.

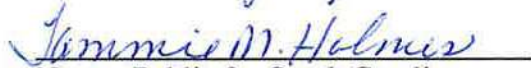
The Judicial Branch is partnering with Pioneer Technology Group to develop a modern, web-based replacement CMS. The project is currently on track for starting the pilot in 2023.

[SIGNATURE PAGE TO FOLLOW]


Joel B. Hilke

Sworn to or affirmed and subscribed before me this the

8th day of July, 2022


Notary Public for South Carolina
My Commission Expires 7/10/30