## Pirate research-paper sites play hide-and-seek with publishers

Millions of scientific articles remain freely accessible despite copyright violations.

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Operators of Internet repositories that provide illicit free access to millions of research papers seem determined to keep up their services, despite being barred by an injunction.

A New York district court ruled on 28 October that online services such as Sci-Hub and the Library Genesis Project (Libgen) violate US copyright law. The court ruled in favour of academic publisher Elsevier, which in June filed a complaint against the main operators of the sites for unlawfully accessing and distributing its copyrighted papers.

Sci-Hub downloads articles by aping university IP addresses and stores them in a repository that now contains more than 46 million papers.

Access to the site's web domain was suspended following the injunction. But Sci-Hub, which is advertised as a service "to remove all barriers in the way of science", has since moved to a different domain. Its revamped site continues to provide unauthorized free access to millions of papers.

Other pirate services, including Libgen, which also allows users to freely download audiobooks, and BookFi, a free repository of more than 2 million books, have also resurfaced on different Internet domains.

## Hide and seek

Sci-Hub had an average of 80,000 visitors per day before its previous domain was blocked, says Alexandra Elbakyan, a former neuroscientist who started the site in 2011. The number of users has since dropped to about 30,000 per day, she says.

It is just a matter of time until Sci-Hub's new domain name, which is administered by a UK-based Internet company, will be suspended, thinks Eli Dourado, who researches Internet governance and intellectual property at George Mason University's Mercatus Center in Arlington, Virginia.

But the site also has an alternative anonymous address that can be reached by users of the Tor network, a group of servers that encrypts Internet traffic and disguises its origins. "I could see the site staying up quite a long time through the use of Tor," Dourado says.

Elbakyan, who was born and educated in Kazakhstan and is now based in Russia, says she doesn't think that reviving her site violates the New York court ruling, because Sci-Hub is not a US-based company, and she is not a US citizen or resident of New York. That is incorrect, as Sci-Hub infringes US copyright law simply by serving its content to US citizens, says Toby Butterfield, a lawyer with the firm Frankfurt Kurnit Klein & Selz in New York.

In principle, foreigners can be fined by US courts, Dourado adds — but if they do not have any assets in the United States, there is no simple way for the government to collect the fines.

## Copyright clash

"We are definitely not going to stop spreading the knowledge," says Elbakyan, who believes that any limitation on the free distribution of scientific knowledge is unacceptable. She says she hopes that the case will raise awareness of a lack of access to relevant literature faced by many scientists.

In his October ruling, New York district judge Robert Sweet argued that "Elbakyan's solution to the problems she identifies, simply making copyrighted content available for free via a foreign website, disserves the public interest".

In a statement on the case made before the court ruling, the Association of American Publishers (AAP) in Washington DC said: "Sci-

Hub's and Libgen's scheme to reproduce and distribute copyrighted works poses a significant threat to book and journal publishing and to authors and scholarly societies reliant on the royalties derived from sales and subscription income." On concerns about lack of access for less privileged researchers, the AAP added that scientific publishers, including Elsevier, grant academic institutions in more than 100 developing countries free or very cheap access to scientific literature.

Sci-Hub's approach has parallels with people who set up sites to illegally distribute music, notes Butterfield. "Scientific publishers are finding themselves in the same spot that record companies faced a few years ago," he says. "It was only when iTunes and other services made it swift, easy and cheap to buy individual songs that people began turning away from infringement to get their music. So publishers, like record companies before them, have little choice but to get redress from blatant infringers in whatever ways the courts will allow."

Asked for comment, an Elsevier spokesperson said that the lawsuit was supported by the wider publishing industry and referred *Nature*'s news team to the AAP.

Tom Allen, president of the AAP, says that his organization will use all available legal means to block access to pirated papers and that the group will continue to support Elsevier's New York lawsuit. "We will continue to make domain administrators aware of the Sci-Hub enterprise, and urge all service providers to refrain from supporting the sites, which both the operator has admitted and the court found to be illegal," Allen says.

Elsevier is not the only publisher whose copyrighted papers are available on Sci-Hub. *Nature's* parent company – Springer Nature – is another; it says it does not wish to comment on the case. (*Nature's* news team is editorially independent of *Nature's* research editorial team.)

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