



Battling against counterfeit drugs

Description of solution

Sproxil's Mobile Product Authentication™ (MPA™) solution allows consumers to verify that the product they are buying is genuine, by using a mobile phone and a simple, free text message. The company uses a scratch card method, similar to that used for replenishing mobile talk-time, to allow users to reveal a one-time-use code on drugs and text the code to a "911 for fake drugs" number which is identical on all mobile networks within a country. A response is dispatched from Sproxil's servers, indicating whether the drug is genuine or fake. If a fake product is found, a consumer is given a hotline number to call in order to report the fake product, so the issue can be directed to the appropriate authorities.

Benefits of the solution

According to the World Health Organization (WHO), up to 30 percent of drugs sold in developing nations are counterfeit, with the counterfeit drug market estimated at \$200 billion by the World Customs Organization (WCO). In addition, up to 50 percent of some medicines in specific developing countries, including Ghana and Pakistan, are substandard. These substandard drugs – which do not have the correct potency of the legitimate drug – have led to a significant healthcare crisis, both in terms of number of deaths (700,000 deaths from fake malaria and TB drugs alone) and increased drug resistance in treating diseases, which will become an issue in

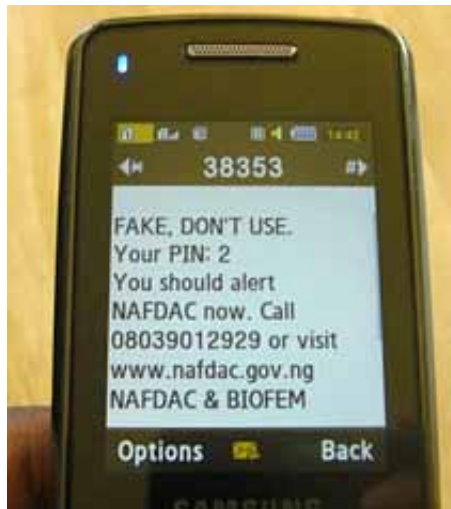


Image courtesy of Sproxil

the longer term. With the counterfeit drug market on the rise in Africa and elsewhere, Sproxil developed a simple, efficient and cost-effective way for customers to verify the authenticity of medication prior to purchasing them.

Given the prevalence of mobile technology throughout the world, it made sense to use a technology that was already in every customer's pocket. Through drug authentication, consumers can avoid purchasing counterfeit medication, while anonymously and passively providing key intelligence to law enforcement agencies regarding the location of fake drugs, anytime authentications fail repeatedly. This improves consumers' overall health and quality of life.

In most developing nations, government serves as the primary health care provider, and unknowingly pays for medication

that could be counterfeit. Patients return to hospitals, incurring more costs for illnesses that should be cured once but are instead paid for over and over again. With just a text message, Sproxil solves this problem.

Sproxil's solution also provides specific benefits to manufacturers, telecom networks, government and law enforcement and foreign donors.

Manufacturers

Legitimate manufacturers can now avoid brand-degrading lawsuits and costly media campaigns, while reclaiming critical market share and profitability lost to counterfeiters. Customizable authentication responses also enable manufacturers to administer product recalls quickly and cheaply – currently a very challenging and costly activity in developing nations. The solution also helps companies connect directly to their consumers through customized text message responses – such as disease management tips – that specifically target those demographics with known buying behaviors. Through a cost-efficient, scalable electronic system for capturing consumer purchasing behaviors in cash-based societies, we are able to generate advertising-ready consumer profiles in developing nations on a scale never before seen. We will sell our analytics and data set to allow advertisers to capitalize on new markets. Clients use our secure Sproxil Visualization Portal to generate real-time market intelligence based on our aggregate SMS authentication data.

"I am extremely honored and excited to have the opportunity to serve as an Advisor to Sproxil, a company that has combined cutting edge technology and very creative approaches to tackle a range of difficult brand protection challenges. I've been inspired and impressed by Sproxil's leadership, and I look forward to lending my expertise and experience to their efforts." **Chris Israel**, Partner at American Continental Group and member of Sproxil Advisory Board

“Sproxil teams with world class partners, like IBM, to provide a user-friendly solution to consumers, one that requires minimal education and training to use, so it’s easy to access and understand. As someone who has been actively involved with the FDA’s anti-counterfeiting initiative since 2003, I am looking forward to parlaying that experience into an opportunity to advise Sproxil on further improvements to the technology behind its MPA solution.”

Paul W. Chang, Global Business Strategy Lead, Emerging Technologies for IBM Software Group, and member of Sproxil’s Board of Advisors

Telecom Networks

Mobile phone operators benefit from the increased SMS traffic from drug authentication requests. Our service fits well with their strategic focus on Value Added Services (VAS) as a means to draw consumers into using features that lead to a greater Average Revenue Per User (ARPU).

Government and Law Enforcement

Increased visibility to drug usage and movement data provided by large scale anonymous authentication statistics gives agencies new levels of oversight and metrics of accountability at a granular level. Law enforcers can now see where counterfeit “hot spots” are in real-time by tracking the “fake product” text message responses sent in a geographic area over time. Such intelligence allows law enforcement to make targeted store inspections instead of the highly inefficient random sampling currently carried out with low success rates.

Foreign Donors

Foreign donors have increasingly become the most prominent private sector clients for drug companies, but they currently have no easy way to track the impact of their donations. Using Sproxil’s analytics they could see the uptake of their donated medicines online, as a chart or overlaid on a map, offering assurance that they



Image courtesy of Sproxil

are not supporting corrupt government activities through the resale of their donations. Our solution can also allow them to push governments for more transparency. Donors like the Gates and Clinton Foundations can also pay for text messages reminding patients when they should be taking their drugs, in an effort to help solve the drug adherence problem.

to make it harder for pharmaceutical counterfeiters to operate.

Sproxil actively monitors the incidents of counterfeiting worldwide and is very sensitive to the plight of countries affected by fake products and manufacturers who have large needs for brand protection. Depending on the clients and the needs of patients, Sproxil will roll out across the developing world, and already has operations in East and West Africa and India.

Timescales

Sproxil was founded in 2008, and incorporated in 2009, with the mission



President Clinton congratulates Sproxil CEO Dr. Ashifi Gogo at the 2010 Clinton Global Initiative Meeting in New York City.



Core technologies and standards

Sproxil's MPA – which runs on regular mobile phones and does not require any special device to use - operates on MAS technology, based on asymmetric encryption, which also underpins bank transfers and e-commerce. With Cascading Authentication™, the company ensures only trusted agents handle its clients' products, while each supply chain agent can individually verify the authenticity of products as they disperse through the distribution network. It's more secure than holograms; in fact, the booming multi-billion dollar mobile phone market has been using a method similar to Sproxil's for the last 15 years without any major flaws.

Success to date

To date, Sproxil has already sold millions of anti-counterfeit labels in Nigeria and has set up the first national mobile-based anti-counterfeit service in Africa, beginning in Nigeria with a partnership with NAFDAC. The Kenyan PPB has also endorsed the solution and customers include both local companies as well as

global pharmaceutical companies such as GSK and Johnson & Johnson.

Following our growth strategy, we will continue to launch in multiple countries in Asia and Africa that have a large population with more than 50 percent mobile phone penetration, so there is no need to ask consumers to buy new equipment.

Business model

In rolling out Sproxil's MPA, the company found a willing government with a progressive regulatory body and a burning social need for an anti-counterfeiting solution that will engage the public. Because of the explosion in mobile phone adoption and the market demand for pay-as-you-go subscription plans, scratch-off technology had already been used successfully for more than a decade in the markets Sproxil examined, so consumer testing had already been done, and the cost of technology inputs for nation-wide supply had already been minimized! By listening to the needs of patients, pharmaceutical executives and the government, Sproxil built upon

this foundation to craft a multi-pronged serialization program that is successfully being replicated in multiple countries to serve 1.3 billion people just 12 months after the first pilot ended in 2010.

Signing on to MPA is entirely optional, yet bears large business benefits. Pharmaceutical companies pay service fees to Sproxil for the increase in sales of genuine pharmaceutical products, so there is no cost to consumers.

Overview of company

Sproxil provides world-class brand protection for emerging markets through software and services that work anywhere there are mobile phones. Delivering automatic protection, simple labels and robust back-end analytics with its Mobile Product Authentication (MPA) solution, Sproxil offers a comprehensive anti-counterfeiting strategy for cash-based societies, one that enables consumers to text message an item-unique code for a rapid response that confirms a brand's genuineness. Simple, easy to use and with no consumer capital investment, the Acumen Fund-backed solution - provisioned on three continents - offers the world's only patented, consumer SMS verification service. Our solution also helps companies connect directly to their consumers through customized text message responses and ads that specifically target those demographics with known buying behaviour. Learn more at www.sproxil.com



Image courtesy of Sproxil

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"For pharmaceuticals, the market opportunity in Africa, Latin America and Asia is remarkable. Consumers in that band of the world who for so long have had little opportunity to provide feedback directly to big manufacturers in an easy, scalable way are thrilled at the opportunity to connect with manufacturers directly. With their own mobile phones and a free SMS on Sproxil's platform, such consumers can provide feedback on product genuineness as well as other comments they may have about the product, allowing companies to make even better drugs and devices for consumers in those regions."

Ashifi Gogo, Ph.D., CEO of Sproxil



Mobile
Health