

# Foresight

science & technology



Royalty Rate Analysis

Biometric Algorithm

SAMPLE

Developer's NAIC: 334119

Science/Technology Fields: Biometrics; Software Algorithms

Arena NAIC: 334119

Technology Type: Process

Supply Chain: Design and Development

International Patent Classification: G06K 9/00

Geographic Region: Global

Prepared by  
Foresight Science & Technology  
401-273-4844

Foresight Science & Technology, Inc. 34 Hayden Rowe St., Suite 300, Hopkinton, MA 01748  
Voice: 401-273-4844; Fax: 401-354-1301; Web: <http://www.foresightst.com/>

Foresight Science & Technology Royalty Rate Reports combine market research with expert interviews to provide a detailed estimate of an industry average royalty rate that will assist in the valuation of your technology.

<i>Description of Technology</i>
This technology is an algorithm for biometric software.

<i>Examples of Relevant Deals</i>		
<i>Parties</i>	<i>Key Terms</i>	<i>Date</i>
Licensor: Tacoma Technology, Inc.  And  Licensee: Sequiam Biometrics, Inc.	Exclusive technology, trademark and Software license for a biometric algorithm for fingerprint matching.  Royalty Rate: \$0.50 per unit of product manufactured and sold using this technology. (Actual percentage ranges based on type of device sold).  Territory: Worldwide Duration: 1 year Other Payment Terms: Monthly Fee of \$7,000 <sup>1</sup>	November 1, 2007
Licensor: Applied Cryptography, Inc  And  Licensee: Smartmetric, Inc.	Exclusive patent license agreement for technology to develop software for identity verification for home and office computers.  Royalty Rate: 2% of net sales from any product utilizing the associated patent(s) Territory: Worldwide Duration: Life of Patent <sup>2</sup>	December 1, 2004
Licensor: Synergistic Holdings  And  Licensee: Acclera Innovations	Exclusive technology license for a proprietary software platform including biometric integration technology.  Royalty Rate: 15% of gross revenues in the first year after products are sold on the market, 10% of gross revenue in second year, and 0.25% gross revenues each year following.  Territory: Worldwide Duration: 30 years Other Payment Terms: Licensee must raise a minimum of \$30 million in funding to develop and commercialize the technology or Licensee will lose rights to the technology. 18,250,000 stock issued at .0001 (\$1,825) <sup>3</sup>	2009

<sup>1</sup> “8-K for SEQUIAM CORP: Product License Agreement and Engineering Services Agreement.” SEC EDGAR web site. [http://google.brand.edgar-online.com/EFX\\_dll/EDGARpro.dll?FetchFilingHtmlSection1?SectionID=5576435-5896-14944&SessionID=aGwRFFsgRbOF247](http://google.brand.edgar-online.com/EFX_dll/EDGARpro.dll?FetchFilingHtmlSection1?SectionID=5576435-5896-14944&SessionID=aGwRFFsgRbOF247) (accessed October 1, 2012).

<sup>2</sup> “10-K Smartmetric, Inc SEC Filing.” September 28, 2012. Morningstar web site (subscription required). <http://www.10kwizard.com> (accessed October 1, 2012).

<sup>3</sup> “Form 10-K/A Acclera Innovations, Inc.” August 21, 2012. Morningstar web site (subscription required). <http://www.10kwizard.com> (accessed October 1, 2012).

Licensors: Cogent  And  Licensee: Northrup Grumman Corp	Non-Exclusive license agreement for fingerprint identification software related technology.  Royalty Rate: None Territory: Worldwide Duration: 3 years Other Payment Terms: \$15 million license fee to paid over the three years of the agreement at \$5 million each year. <sup>4</sup>	January 2008
--	--	--------------

Based on the deals revealed above it appears as though royalty rates for biometric technologies seem to vary quite a bit. This could be due to the type of recognition system licensed, whether that be fingerprint, facial, voice or iris.

Foresight would like to also note the deal between Synergistic Holdings and Accelera Innovations where the up-front was very minimal as well (provided as equity) due to the amount of development needed. While the royalties were high for the first couple of years, the rate significantly decreased after two years on the market.

<i>Expert Opinions on Industry Standard Terms</i>		
<b>Expert</b>	<b>Affiliation and Title</b>	<b>Key Terms</b>
Valene Skerpac	Director iBiometrics	Ms. Skerpac works mostly with voice biometrics, which is different than fingerprints as no sensor is required. This could reduce the royalties for a fingerprint algorithm as compared to a voice. Given that, an average rate of around 5% of net sales seems about right to Ms. Skerpac. She noted however, that in order to get this rate the technology has to be unique and mature enough to be installed directly into in an existing system without a lot of additional development required. Fees in the low million (\$5-\$10 million) could be seen as appropriate if the licensee was a large company in the field with access to a large customer base. <sup>5</sup>
Anonymous Expert	Development Manager Biometric Control Systems Company	This expert mentioned that for a fully mature technology that is already being sold in the market a royalty rate between 3% and 5% of net sales is about average. The expert went on to say that if the technology was a piece of an overall identification system, a smaller royalty is more likely and probably would be a price per unit.

When we look at the expert insights above and compare that to the one deal that specifically mentions fingerprint biometric identification between Tacoma Technology, Inc. and Sequiam Biometrics, Inc. we see some indication that fingerprint algorithms are not in high demand and may not yield significant fees in a license agreement. For immature technologies, the fees would be even lower. Most experts noted the fingerprint biometric market is crowded and a technology will need to show its added benefits and unique factors in order to obtain any kind of significant license fees.

<sup>4</sup> "Form 10-Q Cogent, Inc." November 8, 2010. Morningstar web site (subscription required).  
<http://www.10kwizard.com> (accessed October 1, 2012).

<sup>5</sup> Valene Skerpac, Director iBiometrics, in an email exchange ([valene@ibiometrics.com](mailto:valene@ibiometrics.com)) on October 11, 2012.

<i>Industry Average Royalty Rate</i>
--------------------------------------

4% of net sales for a mature, unique technology or 0.5 cents per unit.
--

The deal table and expert opinions revealed there are several parameters to consider for this specific area of fingerprint biometrics. Firstly, we would like to note the parameter of the licensee's ability to address the marketplace and their current position in the market. The position of the licensor also falls under this parameter. The second parameter is the uniqueness of the technology in regard to its application (i.e. fundamental improvements in effectiveness or speed). The third parameter is the how the technology would be incorporated into a product being sold (i.e. is the technology creating a significant market differentiation which facilitates sales of the product or overall system).

As such, there are two extremes to assess averages for this type of technology. On one extreme you have a mature technology that is really unique that is being licensed to a large, dominant market player with a significant customer base. This scenario suggests a royalty rate of between 3%-5% of net sales with up-front fees in the 7-figure range.

At other extreme you have an immature technology that is creating only an incremental improvement that is being licensed to a small market player. In this scenario the royalty could be as low as a fraction of a percent with up-front fees in the low thousands (under \$10,000).