

Executive Summary

PROOF™ is the first biosensor by Milo Sensors, Inc. PROOF™ detects blood alcohol content (BAC) by means of non-invasive transdermal sensing, and surpasses previous generations of transdermal sensing with liquid-phase collection of ethanol for improved accuracy and response time. The use of a disposable enzyme cartridge (US Patent Pending) eliminates fouling, improves reliability, and reduces cost. PROOF™ uses op-amps to amplify small currents created by enzymatic activity into voltages that can be read by an analog-to-digital converter and transmitted to a smartphone via Bluetooth LE. All the data collected by PROOF™ can be accessed at any time through the PROOF™ app.



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PROOF™ Wearable

PROOF™ is a working embodiment of our Patent Pending (US20160338627 A1) cartridge technology for the transdermal detection of ethanol and also includes our recently developed shelf-life technology (Application # 62500414).

PROOF™ demonstrates:

- Accurate transdermal measurement of BAC
- Continuous ethanol measurement over 12 hours at 1 data point per second
- Secure transmission of BAC data via Bluetooth LE to a smartphone
- Secure storage of BAC data on a smartphone

Milo Sensors, Inc. has optimized the chemical composition and design of the sensing cartridges to achieve maximum accuracy and reliability, and plans to protect this knowledge as a trade secret. Our initial process for cartridge manufacturing is to use our existing in-house assembly line combined with outsourced injection molded, die-cut, and other mass-produced cartridge components. The electronic components of PROOF™ are manufactured by Clarity Designs, Inc., an electronics manufacturing company in San Diego, California with 24 years of experience in mass-production and scale-up of electronic designs. Silicone pre-production wristbands are injection molded.

Our initial target market consists of U.S. individuals age 21 or over that consume alcohol regularly, own a smartphone, and use a health-tracking device (e.g. heart rate monitor, activity tracker). Our early adopters consist of the “quantified self” community, a segment of the population that tracks every aspect of their digital lives. Our go-to-market strategy consists of a pre-order phase. Milo Sensors, Inc. will have two primary revenue streams: 1) initial purchase of PROOF™, \$149 (80% margin, direct to consumer). This includes a wristband and 5 one-time-use disposable cartridges; and 2) purchase of refill cartridges (50% margin, direct to consumer). Refill cartridges will be a recurring revenue stream for Milo Sensors, Inc. Milo Inc.’s sensor technology is well suited for licensing opportunities in the wearables space, where the ubiquitous heart rate monitors and accelerometers have created an industry ripe for disruption.



PROOF™ Sensor Technology

PROOF™ performs real-time transdermal sensing of alcohol via disposable sensor cartridges. Each sensor cartridge contains enzymes that specifically react with ethanol. When the PROOF™ wearer drinks, molecules of ethanol diffuse through his/her skin and into the sensing cartridge. Once inside, the enzyme alcohol oxidase catalytically converts all ethanol molecules to acetaldehyde in a two-electron redox process. The byproduct of this reaction, hydrogen peroxide, is immediately decomposed and electrochemically detected by a functionalized electrode producing a current that changes monotonically with fluctuating concentrations of ethanol. In **Figure 1** is a titration of our sensor response as a function of ethanol concentration. The linear range of our sensor spans at least 0-50mM, (0.08 g/dL is equivalent to 17mM) and we thereby show that our sensor is linear over a relevant physiological range of alcohol concentration.

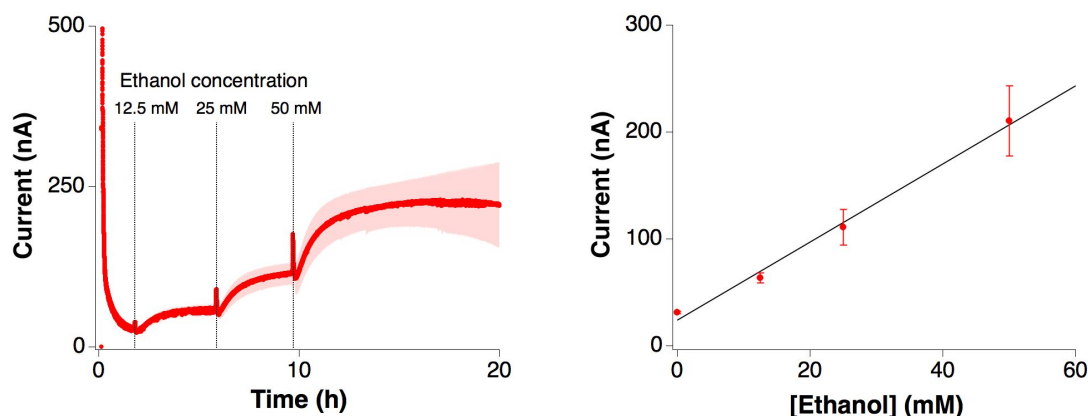


Figure 1. PROOF™ is a linear sensor for ethanol. To test and calibrate our sensing cartridges, we use a home-built temperature-controlled chamber at 30.5 °C that holds each cartridge with the membrane facing a stream of pH = 7.4 buffer. When the cartridge is electrically connected to PROOF™, a transient current is produced that quickly drops in magnitude to a baseline (*left*). Once this baseline is reached, we change the buffer stream to contain increasing concentrations of ethanol. Ethanol crosses the membrane at a concentration-driven rate and is detected inside the cartridge by enzyme-mediated reactions that cause an increase in current. We plot the current generated at specific time intervals vs. the concentration of ethanol in the stream to build calibration curves for each cartridge (*right*). The shaded area in the left and the error bars in the right correspond to the standard deviation from 3 independent cartridge tests. From this laboratory experiment we obtain the conversion factor of $i = C \cdot 3.65 \text{ nA}/(\text{mM ethanol}) + 24 \text{ nA}$.

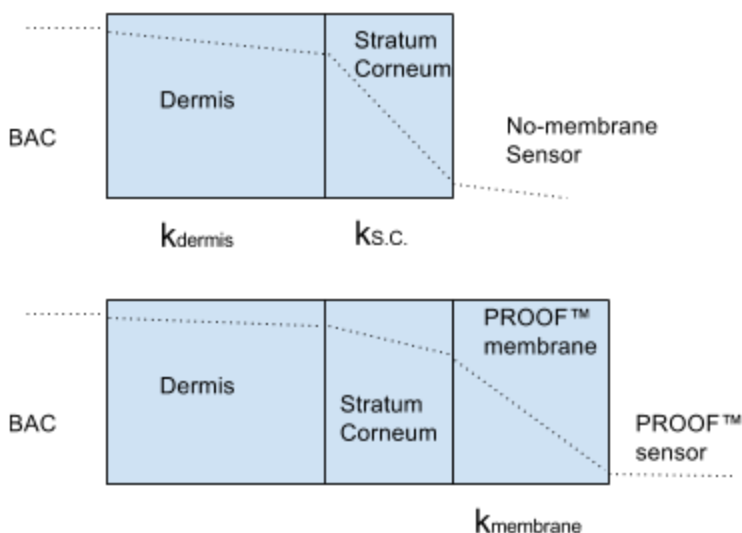
Accurate Transdermal Ethanol Sensing Independent of Sweat

Because ethanol is a small molecule, it can easily diffuse out of the blood stream through the many skin layers even when a person is not sweating. The flux of ethanol from the skin, however, varies strongly depending on skin hydration level and on whether a person is sweating or not.¹ This characteristic makes the transdermal detection of ethanol subject and activity-dependent. To address this issue, we have implemented proprietary membrane technology that selectively regulates the flux of ethanol to our cartridges, making PROOF™ a subject and activity-independent detection platform.

When a PROOF™ wearer drinks an alcoholic beverage, ethanol diffuses through his/her stomach and intestinal walls and into the bloodstream. The ethanol present in the bloodstream then diffuses through the dermis, and stratum corneum before reaching the sensor (**Figure 2**). The resulting flux J across each barrier can be related to the concentration gradient ΔC and permeability k of the respective layer by $J = \Delta C k$. The net steady-state flux of ethanol into the sensor, which is proportional to the measured signal, will be equal to:

$$J_{net} = BAC \left(\frac{1}{k_{dermis}} + \frac{1}{k_{s.c.}} + \frac{1}{k_{membrane}} \right)^{-1}$$

Figure 2. Concentration of ethanol across the skin and the PROOF™ membrane



¹ Swift, Robert M. "Transdermal measurement of alcohol consumption." *Addiction* 88.8 (1993): 1037-1039.

As shown in **Figure 2**: in the absence of a diffusion-limiting membrane the concentration of ethanol drops sharply across the stratum corneum. The resulting flux of ethanol is then limited by the permeability of stratum corneum k_{SC} , which is known to vary from person-to-person in thickness and state of hydration. With an added diffusion-limiting membrane that touches the skin, the concentration change is primarily across the diffusion-limiting membrane, and the resulting sensor response (proportional to flux) is then determined primarily by the permeability of the membrane. To test the variability of sensor response in the absence of a membrane, we used a PROOF™ sensor but removed the membrane.

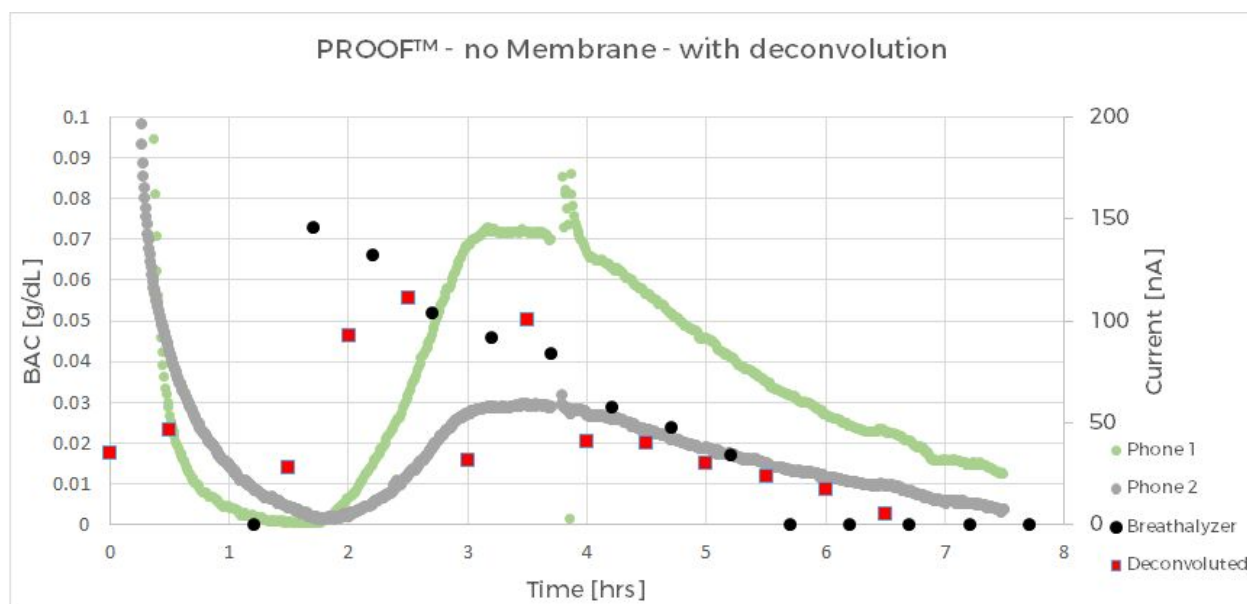


Figure 3. PROOF™ sensor response in the absence of a diffusion-limiting membrane. A 195 lb male test subject consumed 4.5oz of Sailor Jerry's (46%) at t=1 hour. Electrical current was converted to BAC using the calibration from Figure 1.

As shown in **Figure 3**, the amplitude of the signal did vary from sensor to sensor in the absence of a diffusion-limiting membrane. This experiment proves that a diffusion-limiting membrane is necessary to mitigate fluctuations in skin hydration and stratum corneum thickness.

To test how close we might come to a real-time BAC measurement using our transdermal sensor, we performed deconvolution on the BAC data (see attached USB drive with more details). Using deconvolution (assuming

diffusion coefficient $D=10^{-10}\text{cm}^2/\text{s}$, $L=15\mu\text{m}$), we were able to successfully improve the PROOF™ sensor response-time to near real-time (see **Figure 3**).

As we continue to refine the deconvolution algorithm, we will integrate it into the PROOF™ app.

In **Table 1**, we illustrate why it is important to have a diffusion-limiting membrane.

Table 1 Transdermal alcohol with and without diffusion limiting membrane.

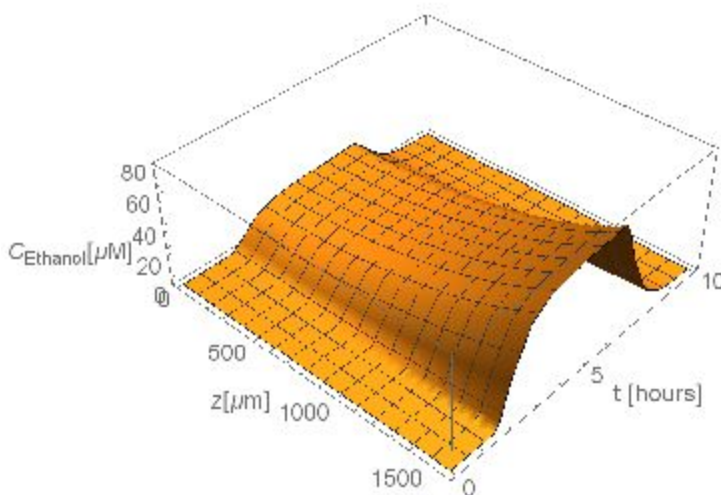
No membrane	With diffusion-limiting membrane
Not accurate: signal amplitude determined by skin hydration	Accurate: signal amplitude determined by membrane permeability
Sweat will saturate the sensor	Sweat does not affect sensor reading
Biology-based response time of 40 minutes	Biology-based response time of 40 minutes plus a membrane response time

A diffusion-limiting membrane is critical to ensure accuracy in all conditions. Our existing membrane is functional for this purpose, but has a characteristic response time of one hour. We are working on reducing membrane response time to less than 15 minutes by reducing thickness while maintaining permeability. This is a major focus of our R&D efforts. However, in the attached submission package, we sent cartridges with a diffusion limiting membrane that still has a 1 hour response time, since accuracy was of primary concern.

Calibration-free sensing

Our sensing cartridges are designed to catalytically convert the totality of ethanol molecules entering them to electrons. This approach ensures a direct, absolute correlation between the electrical current we measure and the flux of

Figure 4 - Numerical simulation of ethanol concentration as a function of time and space in the PROOF™ cartridge



ethanol. Because the flux is determined solely by our diffusion-limiting membrane and the BAC of the wearer, we effectively eliminate user-dependent signal amplitude, and minimize cartridge-to-cartridge variations in our signal output. We perform simulations of membrane diffusion, liquid diffusion, enzymatic activity, and electrochemistry, to guide experimental efforts. **Figure 4** shows a screenshot from one of our combined diffusion and enzymatic activity simulations.

Sensors immune to fouling

Sweat is known to contain fats, proteins and other biomolecules that may degrade the performance of our sensors over time. To eliminate the deleterious effects of biofouling on the sensor response, we have designed and fabricated low manufacturing cost, disposable cartridges that run with optimal accuracy for 12 hours. When the lifetime of the cartridge ends, the PROOF™ wearer can simply swap the cartridge for a new one to achieve another 12 hours of tracking.

Long shelf-life with an enzymatic biosensor

PROOF™ uses enzymatic chemistry to specifically convert ethanol into a readable electrical signal, even in the presence of interferents such as acetone and uric acid. However, due to the fact that enzymes degrade in liquid,

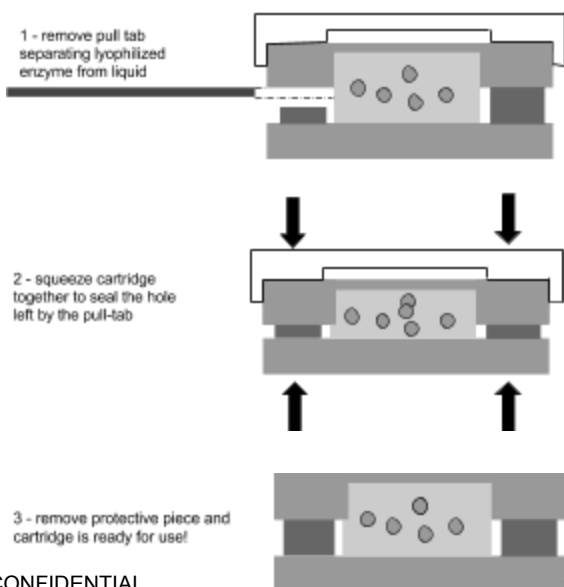
PROOF™ utilizes a patent-pending mixing mechanism to keep lyophilized (freeze-dried) enzymes separate from the

liquid phase during long-term storage.

This enables long-term storage of the cartridge for greater than six months on the shelf. A user simply pulls the tab separating the liquid from enzyme, and squeezes the cartridge together to fluidically seal it (see **Figure 5**).

Once the liquid and dry compartments are combined, the enzymes are stable for at least 12 hours of continuous use.

Figure 5- Schematic of our patent-pending mechanism to enable long-term storage of our enzymes for use in a biosensor.



From transdermal alcohol concentration to BAC

PROOF™ detects ethanol in real time as soon as the molecule exudes through the human skin. However, the permeation of ethanol through the skin is subject to the natural physical laws of diffusion. Although transdermal alcohol concentration is often described as “delayed” with respect to BAC, it is more accurately a convolution of BAC with the skin response function. This is an important distinction, because whereas there is no way to compensate for a delay in a real-time sensor response, the effects of a convolution can be reversed through a mathematical technique known as deconvolution.²

As we described above, the permeability of the membrane is chosen to be lower than human skin, so that PROOF™ eliminates user variability and always gives a reliable reading that depends only on the membrane permeability k_{membrane} . However, the disadvantage of an added membrane is a characteristic layer response time of $\tau = \frac{L}{\pi^2 k}$ where L is the thickness of the membrane and k is the permeability. Thus, PROOF™ suffers from biology-based delay in the same way as every transdermal sensor, and also device-based delay due to the diffusion-limiting membrane.

To reduce both biology-based and device-based delays in ethanol detection, we are:

1. Implementing deconvolution to eliminate the membrane contribution to delay. We have not yet incorporated deconvolution in the PROOF™ app, but our software proves the principle. In this submission package, we have included software to deconvolute PROOF readings to achieve closer to real-time BAC values based on a model of the underlying physics.
2. Developing predictive algorithms that learn the biology-based delay observed in each user-specific drinking session and use it to numerically correct BAC values in future sessions. For example, estimating the stratum corneum permeability of a given user based on previous

² Dumett, MA et al. "Deconvolving blood-alcohol concentration and alcohol beverage consumption from sensor measurements of transdermal alcohol." *PAMM* 7.1 (2007): 1061007-1061008.

drinking data, estimating skin hydration based on built-in temperature sensors in the PROOF™ wearable.

3. Tuning the physical properties of our membranes (reducing thickness L while maintaining permeability k_{membrane}) to make cartridges with faster response times.

PROOF™ Performance on the Wrist

We have performed thousands of laboratory tests on various combinations of PROOF™ cartridge designs and membrane materials. Our extensive lab-scale efforts have culminated in the development of a fully integrated PROOF™ prototype. We have used this prototype to carry out several tens of on-skin tests to demonstrate the applicability of our technology to the transdermal determination of BAC levels.

We report results from a PROOF™ test performed on a consenting test subject (**Figure 6**). We convert from measured electrical current to BAC by using the lab-based conversion factor (see Figure 1).

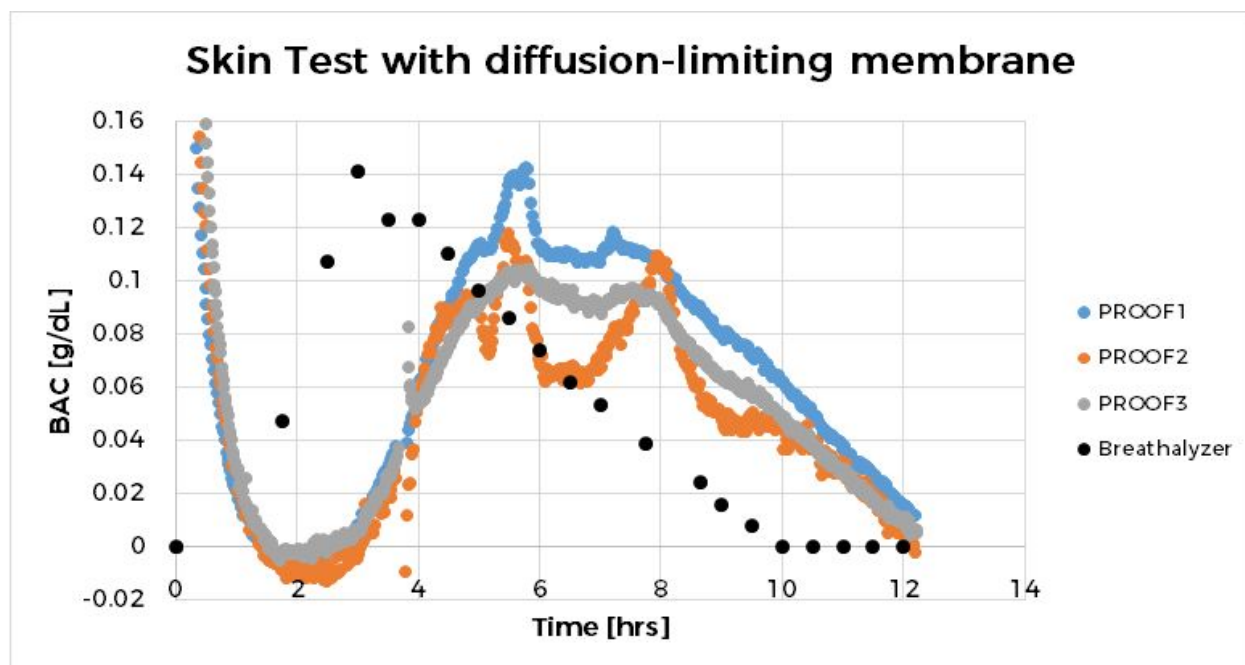


Figure 6. PROOF™ achieves transdermal alcohol detection and determines BAC values. Three “On skin” tests of PROOF™ on a 155 lb male subject. Subject ingested 4x 1.5 oz shots of a 40% alcoholic beverage at $t = 1.5$ hours, and his BAC was continuously

monitored using both PROOF™ and an breathalyzer as a reference. The data collected with PROOF™ was transmitted wirelessly from the wearable sensor via Bluetooth LE and retrieved on an iPhone via our proprietary PROOF™ App.

PROOF™ successfully determines BAC levels: upon ingestion of alcohol, the sensor quickly increased in measured BAC to peaks at approximately 0.13 g dL⁻¹, followed by a slow decline to sobriety. By using an online calculator,³ and considering the volume of alcohol used in our test, we can theoretically estimate a BAC of 0.12 g/dL for our test subject. The peak BAC value determined by PROOF™ is agreement with both the theoretical estimate and the peak value measured with a breathalyzer (peak 0.14). From these results we can conclude that PROOF™ is capable of accurately determining BAC levels from transdermal measurements of alcohol.

PROOF™ Electronics

The Milo electronics use an op-amp integrated circuit in order to amplify the small ($<1\mu\text{A}$) currents created by the Milo sensor into voltages readable by an analogue-to-digital converter ($\sim 1\text{V}$) inside a microcontroller. The microcontroller transmits the signals with Bluetooth LE via an antenna on the circuit board. A 3D rendering of the electronics, battery, and cartridge, enclosure, and wristband are shown in **Figure 7**. PROOF™ hardware has been successfully miniaturized into a sleek wearable design.

Figure 7. Schematic rendering of PROOF™.



³ "BAC Calculator - Center for Student Well-Being - University ..." 2015. 1 Dec. 2015
<<http://mcwell.nd.edu/your-well-being/physical-well-being/alcohol/blood-alcohol-concentration/bac-calculator/>>

PROOF™ App

PROOF™ communicates with a smartphone and sends BAC levels to the PROOF™ App to:

- a) Display BAC⁴ at any time
 - Users will be able to access their BAC level at any time just by glancing at their phone.
- b) Estimate time to sobriety (0.0 BAC)
 - Our predictive algorithm will estimate when a user will return to zero BAC, allowing them to make safer, more educated decisions while consuming alcohol.



- c) Alert users when they reach certain self-determined BAC levels
 - Users will be able to set “alarms” for themselves and be notified when they hit their desired limit. The PROOF™ wearable contains a vibration motor, so future software updates will enable vibration functionality.
- d) Allow users to designate family/friends to be notified when a predetermined BAC is reached
 - Users will be able to pre-select family/friends with whom they may share data.



⁴ The version of the PROOF™ app attached to this submission displays values in raw electrical current not BAC

Milestones Achieved

Towards our goal of making PROOF™ the leading alcohol sensing wearable in the market we have worked hard to achieve the following milestones:

Accuracy

PROOF™ reports BAC levels in real-time. In stark contrast to breathalyzers, PROOF™ does not require a user to stop drinking and wait 30 mins before blowing into a device. The elimination of user-intervention removes any user-originated errors and bias, and thereby ensures that PROOF™ provides a BAC measurement with constant accuracy over time.

Additionally, the use of a diffusion-limiting membrane results in accuracy that is subject and activity-independent.

Reliability

PROOF™ sensor cartridges are made of components produced by well-established manufacturing suppliers. Although our team currently assembles each cartridge from these components by hand, our unit-to-unit variability in the determination of alcohol in our simulated skin environment is 15%. We believe that the variability will improve to below 10% when we transfer to robotic assembly.

Adding to the reliability of our measurements over extended drinking sessions, PROOF™ uses disposable sensing cartridges to avoid the negative effect of biofouling on our measurements. Each PROOF™ cartridge can reliably run uninterrupted for 12 h without loss of accuracy. This unique feature is complemented by our proprietary cartridge packing approach that extends the shelf-life of each cartridge to 6 months. With PROOF™, the user can strap on, insert a cartridge and enjoy a worry-free, educated drinking experience without interacting with the device for half a day. Furthermore, with PROOF™ there is no need to send the device in for recalibration every few months.

Integration of data collection, transmission and storage

PROOF™ measures BAC data continuously and in real time. BAC data is wirelessly transmitted to our proprietary App via bluetooth low energy (BLE) using industry-standard encryption. The PROOF™ App stores the data and makes it accessible to the user in the form of a single read-out value or in charts of BAC over time. Because no intervention from the user is necessary for data acquisition, the PROOF™ App provides a quick and discreet way to check BAC in public settings.

User Identity Identification

PROOF™ does not currently include user identity recognition mechanisms. However, the electronics used in PROOF™ are compatible with identity recognition approaches such as the use of multi-point wrist impedance measurements. This identification approach would work as follows: a series of electrodes would be embedded in the wearable strap of PROOF™ measure skin impedance across different sections of the user's wrist. The impedance data collected would report user-specific biometric features that could be set as identification elements and be wirelessly transmitted to the PROOF™ App. These credentials could then be used to set security and privacy restrictions on the data stored, or on how many devices a given PROOF™ device can pair to.

Data Sampling Frequency

The electronics used in PROOF™ enable the continuous measurement of sweat alcohol levels with a sampling frequency of up to one point per second. The PROOF™ App then converts these data to BAC in real time using our proprietary algorithms. The seamless nature of our data acquisition and signal-to-BAC conversion process makes of PROOF™ the first wearable to truly empower the user with BAC data reported while drinking.

Data Functionality

The PROOF™ App stores BAC data locally on the smartphones of users. Once the data is available in the device, the users can

- read BAC values at any time
- study their drinking patterns and how they compare to the general population
- share BAC data with friends and relatives



- set BAC alerts and notifications.

Although Milo Sensors, Inc. does not collect any user BAC data, our future business plan may expand to collecting data with user consent after careful consideration of all relevant regulatory frameworks. This anonymous data, with no link to the original user other than demographics, would be used to continuously improve our BAC prediction algorithms, among other uses.

Data Security and Privacy

The PROOF™ App uses encrypted Bluetooth between PROOF™ and a smartphone to ensure the user's privacy. Each PROOF™ device receives a unique encryption key during the pairing process.

Energy Source and Charging Capabilities

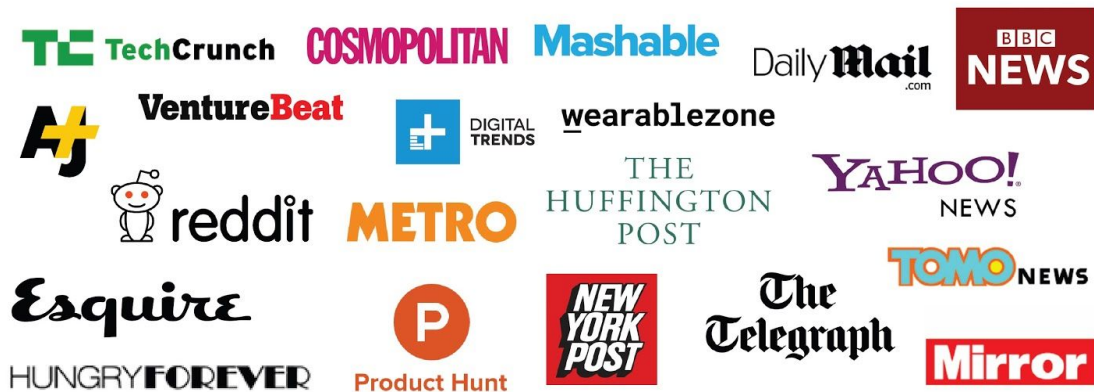
PROOF™ uses a lithium-polymer battery of 12mAh capacity. With a total average power consumption of 200 μ A (due primarily to the power-hungry bluetooth antenna), the battery life is approximately 60 hours on a single charge. The battery can be easily recharged by plugging the PROOF™ charger into any available USB port for a period of four hours. PROOF™ displays a red LED light when charging, and blinking blue when the battery is fully charged and ready for use.

Appeal and Acceptability to Wearers

At the Consumer Electronics Show (CES 2017), the PROOF™ team had the opportunity to talk to thousands of potential customers. The response was



overwhelmingly positive, with media coverage in the following outlets:



At CES we tested the hypothesis that the added friction of a disposable cartridge would not be an obstacle to adoption of our technology. When we explained that cartridges last for 12 hours, it was greeted with understanding, and a sense of relief when it was explained that a single cartridge would give more than a single reading!

PROOF™ vs BACTrack Skyn

The most technically similar product to PROOF™ is the BACTrack Skyn. Both PROOF™ and Skyn measure transdermal alcohol to estimate BAC. However, there are numerous important distinctions that make PROOF™ the more accurate and user-friendly solution.

The team at Milo Sensors, Inc. has developed a novel disposable enzymatic sensor that is unlike anything on the market. BACTrack has taken the unimaginative approach of placing a platinum fuel-cell from a breathalyzer and placing it in a wristband. Technologically, the Skyn sensor technology is identical to the SCRAM bracelet that has existed for twenty years. However, simplicity is not always best, and as we will demonstrate, their technology will not lend itself to accurate detection.

Taking inspiration from coffee machines, inkjet printers, and lab-on-a-chip applications, PROOF™ uses disposable one-time-use cartridges. As a result, the PROOF™ sensor will always be refreshed before every use and there will be no fouling. Furthermore, the consumer will benefit from the continuing development on the critical sensor element in updated versions of the cartridge. As we continue to improve the sensor cartridge, consumers will receive the latest hardware for just a few dollars! In contrast, the BACTrack Skyn will have to be sent in for recalibration every few months, which will make for a nightmarish consumer experience.

Humidity changes have plagued previous generations of transdermal alcohol systems⁵. BACTrack Skyn does not overcome the humidity problem, and the Skyn will therefore generate measurements that swing wildly as humidity above the skin changes. Since PROOF™ relies entirely on liquid-phase detection in a contained liquid environment behind the membrane, there is no possibility for humidity interference.

⁵ Jalal, Ahmed Hasnain, et al. "Multimodal technique to eliminate humidity interference for specific detection of ethanol." *Biosensors and Bioelectronics* 87 (2017): 522-530



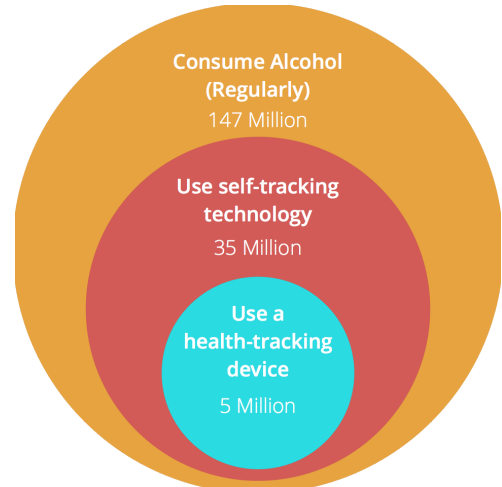
PROOF™ uses an enzymatic pathway to specifically detect ethanol, even in the presence of interferents. The non-specific electrochemical detection of the BACTrack Skyn makes it prone to false positives from acetone and other organic molecules that may interfere with readings.

Whereas BACTrack Skyn uses expensive Platinum-based electrodes, PROOF™ uses a silver-chloride electrode in combination with an inexpensive carbon-based enzyme electrode. The low manufacturing cost of the Milo electrodes allows them to be disposable, which overcomes the limitations of existing platinum fuel-cell technology.

Market Strategy

Our initial target market consists of U.S. individuals age 21 or over, that consume alcohol regularly, own a smartphone and use a health-tracking device (e.g. heart rate monitor, activity tracker).

We expect that our early adopters will consist of the “quantified self” community, a \$2 Billion market of people that track every aspect of their digital lives. We will promote our product locally and gather testing data needed for our pre-order phase (existing email list with 5100 potential customers). As we increase our online presence, we will execute a crowdfunding campaign.



Plan for Mass Production

Milo Sensors, Inc. has partnered with Clarity Designs, Inc., an electronics manufacturing company in San Diego, California with 24 years of experience in mass-production and scale-up of designs. Clarity Electronics is capable of scaling up to 200,000 units/year and is backed by Arrow Electronics (ARW, NYSE), one of the largest electronic components sourcing companies in the United States. Together, we have designed and built fully functional miniaturized electronics.



We will begin to scale up cartridge manufacturing using a mass-production friendly cartridge design. Including in this submission package is a prototype high-volume sensor cartridge which demonstrates the form-factor and size of our eventual sensor cartridge.

We have a two-stage plan for mass production:

Stage 1: Pre-orders - Online orders, Crowdfunding campaign

We plan to promote to the online tech community to access our early adopters; individuals who identify as “quantified self.” This is traditionally an extremely active crowdfunding customer segment and will heed well for crowdfunding for Milo. A crowdfunding campaign will allow us to gain feedback, traction, and capital to fund our first production order. Our partnership with Clarity Designs, Inc. allows us to scale up to 200,000 units per year.

Stage 2: Manufacturing Purchase Order - 10,000 units

At this stage, we will be in a strategic position for a Series A investment round. Venture capital funding will allow us to offer our device to the mass consumer space. We have already identified and made connections with future strategic partners such as Total Wine, Diageo, Bacardi, Jawbone, and Striiv, to name a few. With backing from Arrow Electronics, we have the necessary manufacturing and supply chain capability to support large orders from wholesale retailers.



About Us

Milo Sensors, Inc. was created by founders Evan Strenk, Bob Lansdorp, and Netz Arroyo in June 2015. Team Milo took home top honors at the 2015 UCSB New Venture Competition; winning Grand Prize, 1st Place in Technology, and People's Choice. After formation of Milo Sensors, Inc and participation in the Citrix Startup Accelerator, Milo Sensors, Inc. was awarded the \$100,000 award in the 2016 NIAAA Challenge Prize. The fruitful efforts since the last submission are largely due to the funding we received previously.

Team

Milo Sensors, Inc. has a team of chemists, engineers, designers and business leaders working around the clock to perfect the design and function of the sensor cartridge technology and find strategic partners in the local eco-system to mass-produce the various components.

Evan Strenk	CEO, Co-Founder Market & Business Strategy
Bob Lansdorp, PhD	CTO, Co-Founder Materials Engineering
Shari Howard	Mechanical Engineer
Rashad Hamid	Electrochemical Test Engineer
Shubhaditya Majumdar, PHD	Materials Researcher

Advisory Board

In addition to a core team, Milo Sensors, Inc. has expert advisors in business strategy, sales, and industrial design.

Netz Arroyo, PhD	Electrochemistry
Christian Felipe	Investment Strategy
Joseph Kerr	Industrial Design
Prof. R. Dan Little	Science
Greg Decker	Finance
David Lunn, PhD	Materials
Jacob Serup, PhD	Statistics



Conclusion

Milo Sensors has developed PROOF™: the first consumer wearable for BAC. PROOF™ can detect BAC via a novel disposable enzymatic cartridge, with patent-pending extended shelf-life technology.