

neuro-KINESIS  
CORPORATION  
2024 INVESTOR PRESENTATION

*“You can’t treat  
what you can’t see”*



Abbott

# SAFE HARBOR STATEMENT

*“The bravest are surely those who have the clearest vision of what is before them, glory and danger alike, and yet notwithstanding go out to meet it.”*

— Thucydides

THE STATEMENTS, PROJECTIONS AND ESTIMATES OF FUTURE PERFORMANCE OF THE COMPANY OR VARIOUS ELEMENTS OF THE COMPANY’S BUSINESS CONTAINED IN THIS PRESENTATION THAT ARE NOT HISTORICAL FACTS ARE FORWARD-LOOKING STATEMENTS. INVESTORS SHOULD EXPECT THAT ANTICIPATED EVENTS AND CIRCUMSTANCES MAY NOT OCCUR, THAT UNANTICIPATED EVENTS AND CIRCUMSTANCES WILL OCCUR, AND THAT ACTUAL RESULTS WILL LIKELY VARY FROM THE FORWARD-LOOKING STATEMENTS. INVESTORS SHOULD BE AWARE THAT A NUMBER OF FACTORS COULD CAUSE THE FORWARD-LOOKING STATEMENTS OR PROJECTIONS CONTAINED IN THIS MEMORANDUM OR OTHERWISE MADE BY OR ON BEHALF OF THE COMPANY TO BE INCORRECT OR TO DIFFER MATERIALLY FROM ACTUAL RESULTS. SUCH FACTORS MAY INCLUDE, WITHOUT LIMITATION, (i) THE ABILITY OF THE COMPANY TO COMPLETE THE DEVELOPMENT OF ITS PRODUCTS IN A TIMELY MANNER, (ii) THE DEMAND FOR AND TIMING OF DEMAND FOR SUCH PRODUCTS, (iii) COMPETITION FROM OTHER PRODUCTS AND COMPANIES, (iv) THE RESULTS OF THE COMPANY’S SAFETY AND EFFICACY STUDIES, (v) THE RESULTS OF THE REGULATORY APPROVAL PROCESS, (vi) THE COMPANY’S SALES AND MARKETING CAPABILITIES, (vii) THE COMPANY’S ABILITY TO SELL ITS PRODUCTS PROFITABLY, (viii) THE ABILITY OF THE COMPANY’S THIRD-PARTY SUPPLIERS TO PROVIDE PRODUCTS AND SERVICES IN A RELIABLE MANNER; (ix) AVAILABILITY OF ADEQUATE DEBT AND EQUITY FINANCING, AND (x) GENERAL BUSINESS AND ECONOMIC CONDITIONS. THESE IMPORTANT FACTORS AND CERTAIN OTHER FACTORS THAT MIGHT AFFECT THE COMPANY’S FINANCIAL AND BUSINESS RESULTS ARE DISCUSSED IN THIS PRESENTATION UNDER “RISK FACTORS.” THERE CAN BE NO ASSURANCE THAT THE COMPANY WILL BE ABLE TO ANTICIPATE, RESPOND TO OR ADAPT TO CHANGES IN ANY FACTORS AFFECTING THE COMPANY’S BUSINESS AND FINANCIAL RESULTS.

# WHO WE ARE

| Advanced Medical Technology Company

| Founded in 2013 as part of a spinoff from Pharmaco-Kinesis Corporation.

| Purpose to consolidate development of the various technology platforms created.

| 2015 Incorporated in Nevada.

| 2019 Changed incorporation to Delaware.



## WHAT WE DO

Developer of surgical tools and therapeutic devices that incorporate advanced electronics and SMART technologies to assist the physician in their diagnostic and therapeutic practices.

## WHAT WE HAVE DONE

20 years of development in redefining catheter navigation for the EP physician.

15 years of development in advancing the capabilities of the EP mapping catheter for cardio-ablation.

Created over 250 patents on various IPs related to their technologies.



The world's first robotic assisted catheter guidance system using magnetic fields for navigation.

# Catheter Guidance Control and Imaging

WHAT WE HAVE DONE

CGCI

Filed over 50 patents globally on the IP

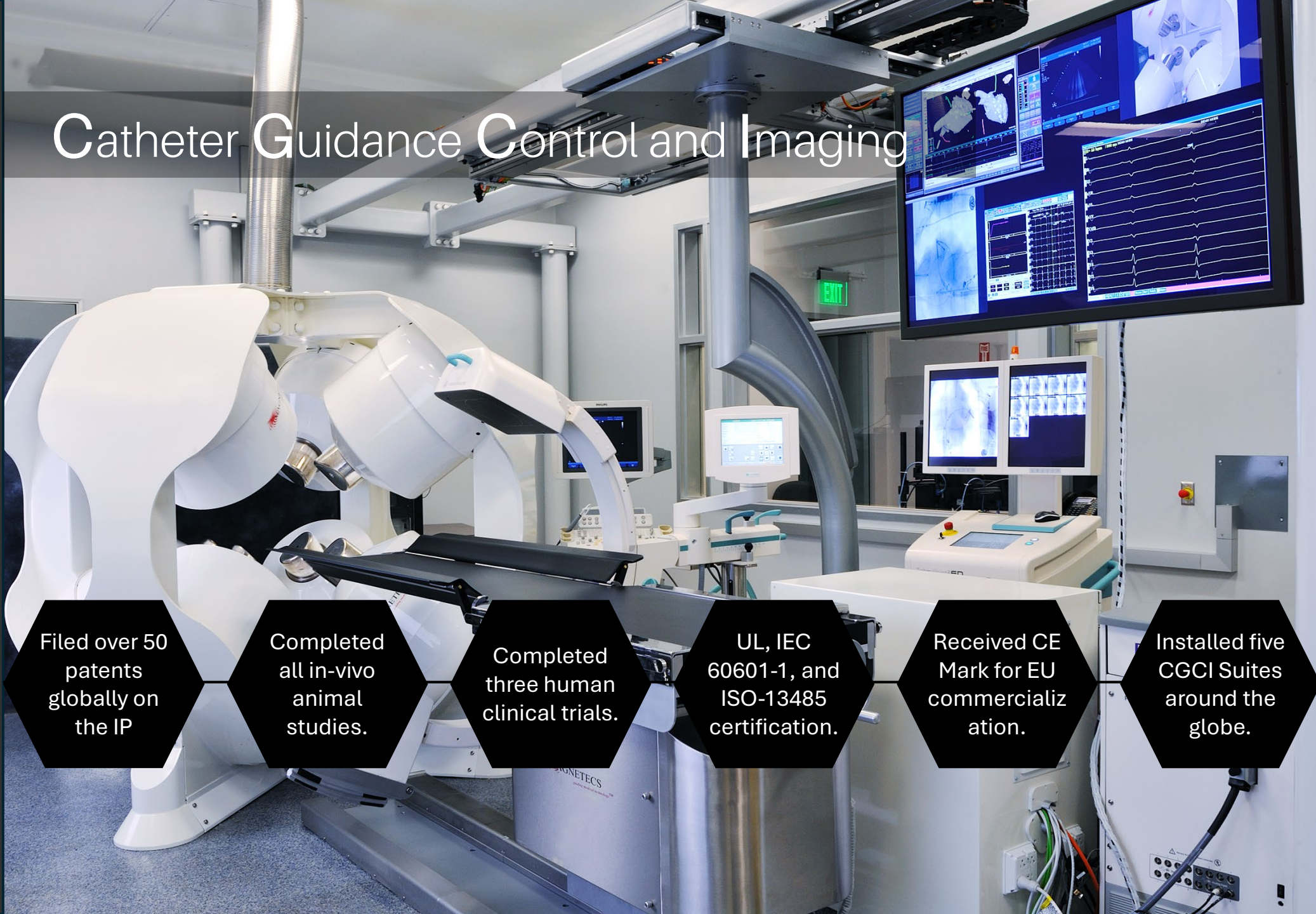
Completed all in-vivo animal studies.

Completed three human clinical trials.

UL, IEC 60601-1, and ISO-13485 certification.

Received CE Mark for EU commercialization.

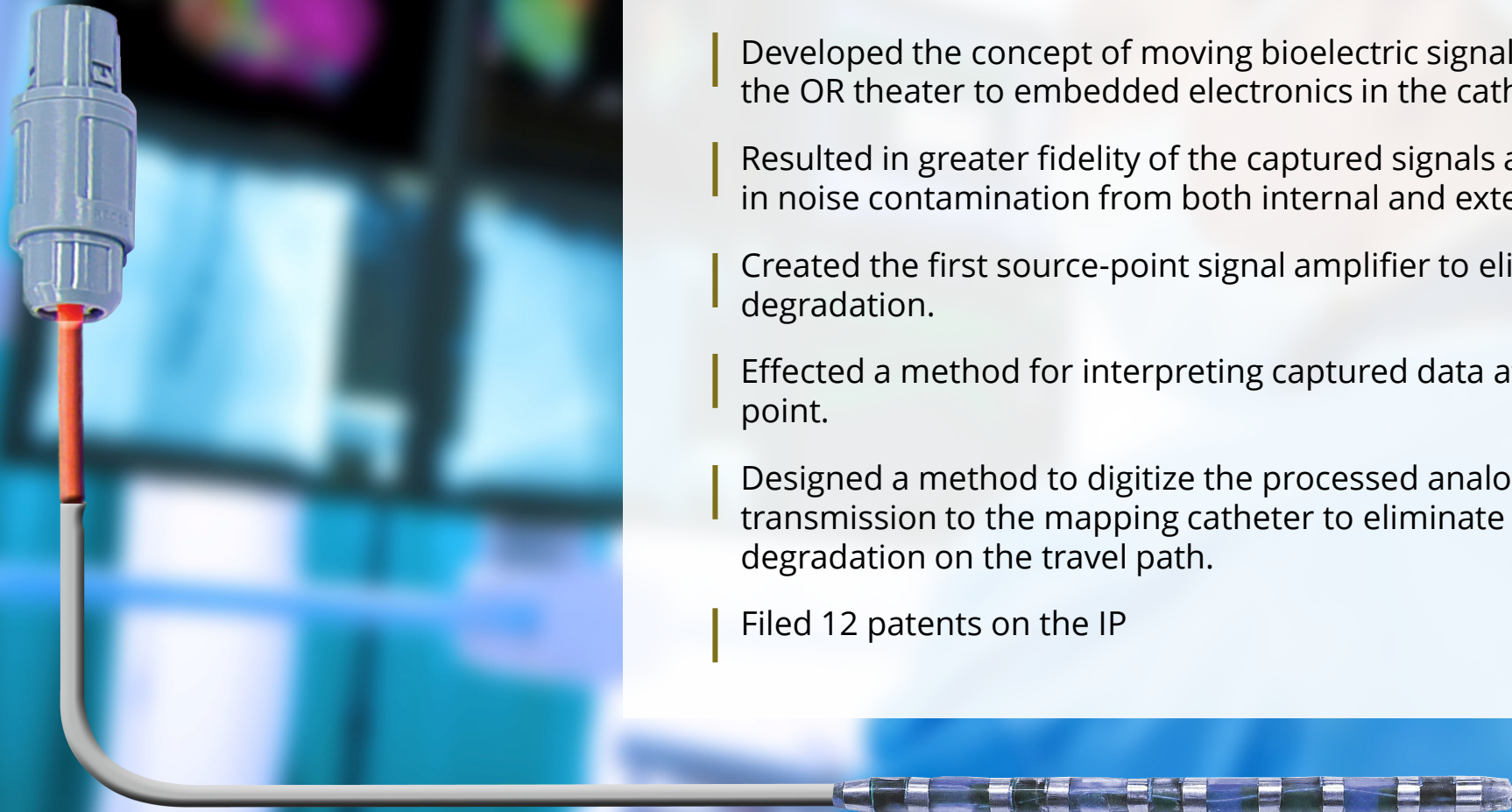
Installed five CGCI Suites around the globe.



The first source – point signal capture and processing catheter for EP cardio-mapping.

## WHAT WE HAVE DONE MOSFET

# Metal Oxide Semiconductor Field Effect Transistor



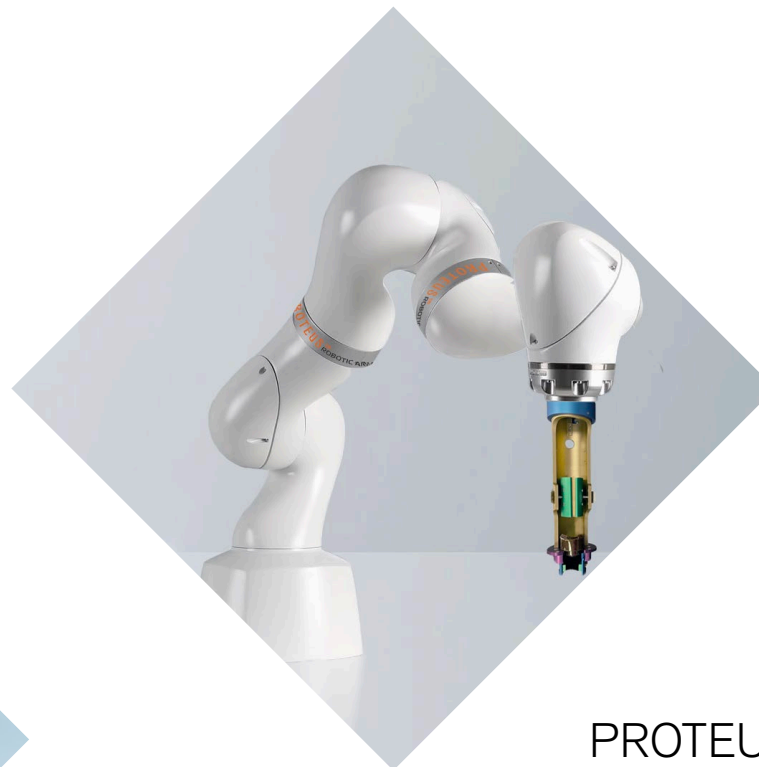
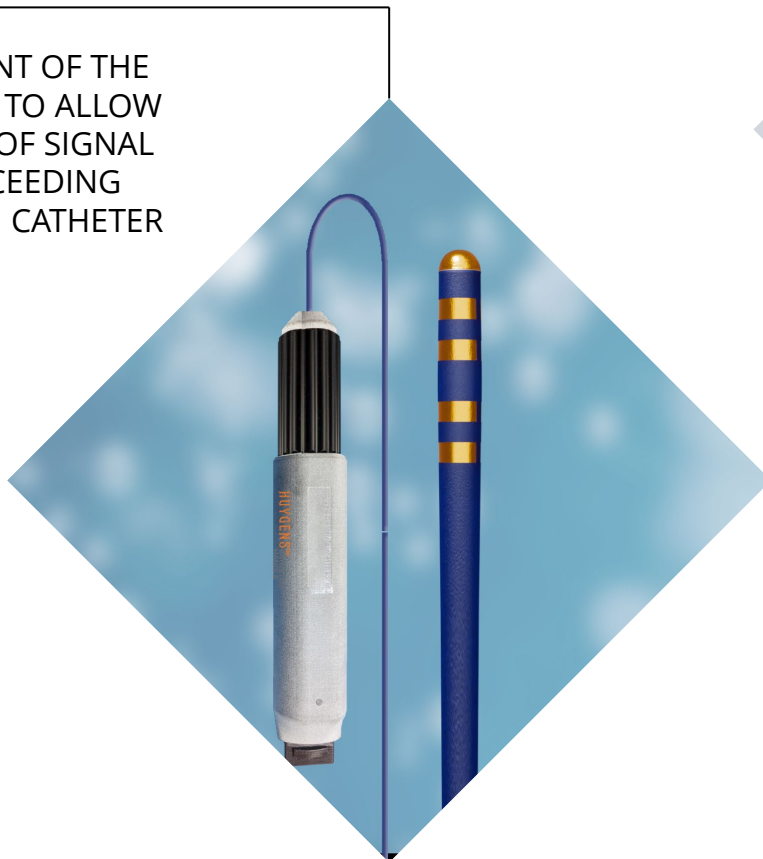
- | Developed the concept of moving bioelectric signal capture from the OR theater to embedded electronics in the catheter tip.
- | Resulted in greater fidelity of the captured signals and reduction in noise contamination from both internal and external sources.
- | Created the first source-point signal amplifier to eliminate signal degradation.
- | Effected a method for interpreting captured data at the sensor point.
- | Designed a method to digitize the processed analog signal for transmission to the mapping catheter to eliminate signal degradation on the travel path.
- | Filed 12 patents on the IP

# OUR LEAD PRODUCT TECHNOLOGIES

NKC's current focus is on developing two technology platforms to advance the science of Electrophysiology as it relates to catheter-based procedures.

## HUYGENS™ CATHETER

NEXT-GEN DEVELOPMENT OF THE EP MAPPING CATHETER TO ALLOW FOR GREATER FIDELITY OF SIGNAL CAPTURE AT LEVELS EXCEEDING ALL CURRENT MAPPING CATHETER TECHNOLOGIES.



## PROTEUS™ ROBOTIC NAVIGATION SYSTEM

REFINEMENT OF THE ROBOTIC-ASSISTED CATHETER NAVIGATION SYSTEM TO BRING AI PRECISION IN COMBINATION WITH TRUE HUMAN-IN-THE-LOOP CONTROL FOR EP DIAGNOSTIC AND THERAPEUTIC PROCEDURES.



# THE EP MARKET - OVERVIEW



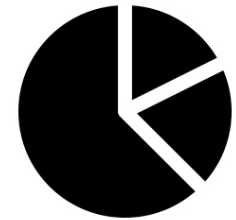
Currently market size globally is \$8.2 billion.<sup>1</sup>



Projected market is \$15.8 billion by 2028.<sup>1</sup>



CAGR is projected to grow at 13%/per year.<sup>1</sup>



North America holds 38% of the market.<sup>1</sup>

<sup>1</sup> [https://www.marketsandmarkets.com/Market-Reports/electrophysiology-market-200003281.html?gad\\_source=1&gclid=CjwKCAjwgpCzBhBhEiwAOSQWQeuvk0sT2xxXVQi93P8R9oXjL5NlqhWurSWnwcZ71A6WXbVJFZRTORoC2rIQAvD\\_BwE](https://www.marketsandmarkets.com/Market-Reports/electrophysiology-market-200003281.html?gad_source=1&gclid=CjwKCAjwgpCzBhBhEiwAOSQWQeuvk0sT2xxXVQi93P8R9oXjL5NlqhWurSWnwcZ71A6WXbVJFZRTORoC2rIQAvD_BwE)

# THE EP MARKET – CATHETER USE



- 1089.68 procedures per 100,000 beneficiaries (2019)<sup>2</sup>
- Catheter based procedures had largest sector growth in EP by more than 50% in the time period (2013 to 2019)<sup>2</sup>
- Currently \$4.07 billion<sup>3</sup>
- Projected \$14.51 billion by 2033<sup>3</sup>
- CAGR 13.57%<sup>3</sup>
- 360,000 Ablation performed each year in US<sup>4</sup> (2/3rds to treat AFib)
- Device cost for AFib average \$10,500 per procedure.<sup>4</sup>
- Catheters make up 75% of the cost<sup>4</sup> ablation catheters (~\$3,456), ICE catheters (~\$2,650) and mapping catheters (~\$1,750)
- \$2.5B market for disposable catheters.

2 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9767878/#:~:text=Results,decreased%20from%20494.18%20to%20414.67.>

3 <https://www.precedenceresearch.com/cardiac-ablation-market#:~:text=The%20U.S.%20cardiac%20ablation%20market,share%20of%2038%25%20in%202023.>

4 [https://innovative-health.com/wp-content/uploads/2014/10/EP-Single-Use-Device-Reprocessing-by-the-Numbers\\_ART0139-Rev.-1.pdf](https://innovative-health.com/wp-content/uploads/2014/10/EP-Single-Use-Device-Reprocessing-by-the-Numbers_ART0139-Rev.-1.pdf)

# THE EP CARDIAC PROCESS

The current state of the art in EP catheter procedures for treating cardio-based arrhythmia issues has not dramatically changed in over 20 years.

- The manual guidance of various catheters inside the living dynamic of the human heart.
- Ability to create an accurate map of the heart that describes the health and ability of the myocardial tissue to conduct the electrical signals that control pacing.
- Ability to define the best way to ablate the cardiac tissue to restore normal cardio-rhythm.
- Ability to perform the various defined ablations needed for rhythm correction.
- Ability to see that the ablation procedures are effective and lasting.



## THE PROBLEM

- Current mapping technologies provide an incomplete picture resulting in more guesswork than data-based decision making.
- Current cardio ablation is effective for patients with simple arrhythmia issues such as Paroxysmal Afib and Ventricular Tachycardia.
- Success rates drop to 65% for patients with complex arrhythmia issues.
- These patients are subject to:
  - Additional ablation procedures
  - Pharma-therapeutic regimens.
  - Continued arrhythmia issues leading to lower quality of life and even early death.

Therapeutic treatment advances when diagnostic science can see and understand the interrelationships of all the physiological mechanisms that create disorder.



## OUR SOLUTION

# HUYGENS<sup>TM</sup> CATHETER



Our EP mapping catheter and robotic navigation system were created to provide solutions to the two fundamental issues with cardiac-based electrophysiology.

# PROTEUS<sup>TM</sup>

ROBOTIC  
NAVIGATION  
SYSTEM



# HUYGENS™ CATHETER

Developed to provide the EP physician better data for their diagnostic and therapeutic decisions.

*"We can't treat what we can't see."*

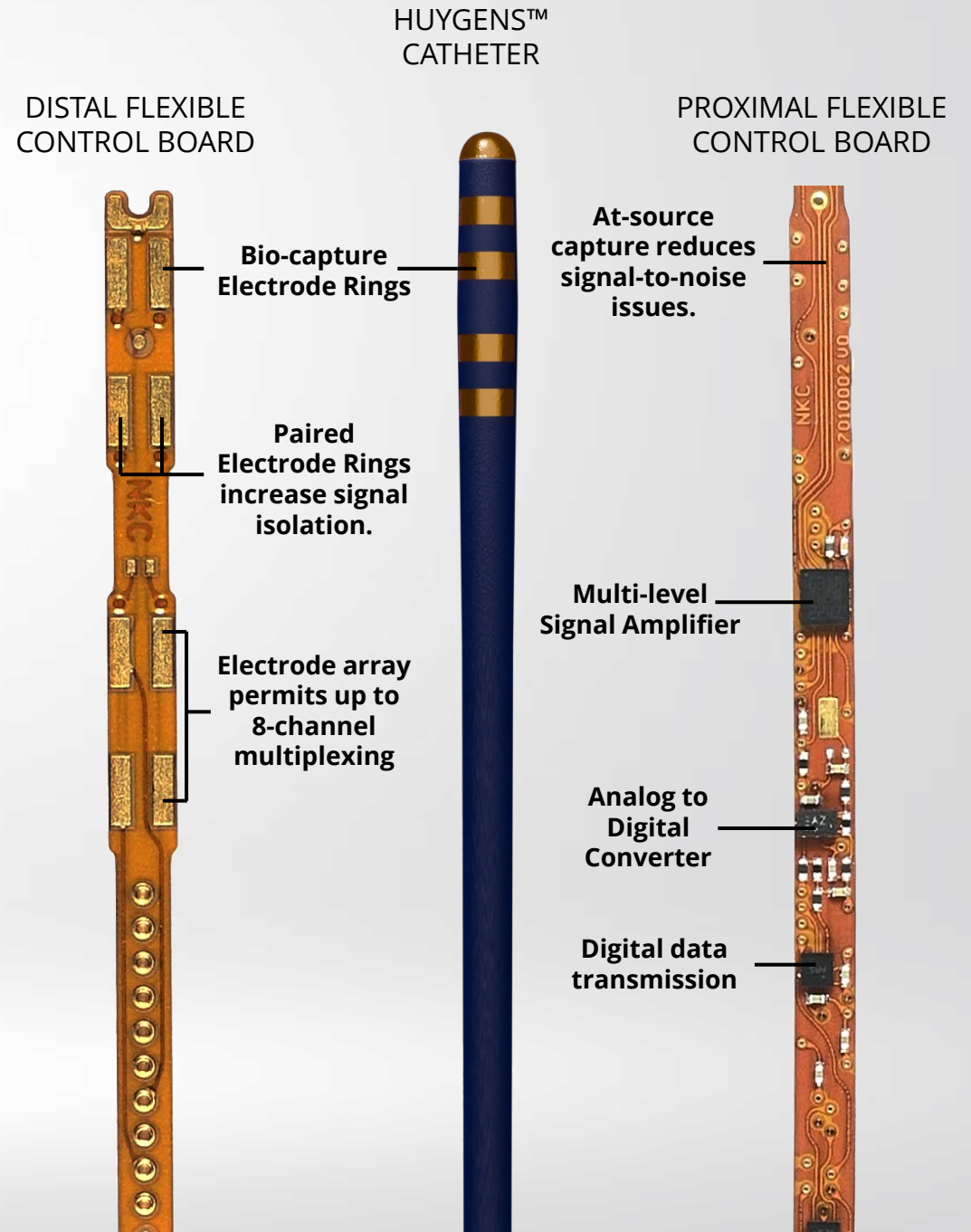
— Josh Shachar  
NKC CEO and CTO



■ THE HUYGENS™ CATHETER DELIVERS AN ADVANCED IMPEDANCE MICROSCOPY USING A PATENTED EMBEDDED SIGNAL CAPTURE AND DATA TRANSMISSION TECHNOLOGY THAT PROVIDES A 3D HEARTMAP WITH 200X THE RESOLUTION OF CURRENT MAPPING CATHETERS.

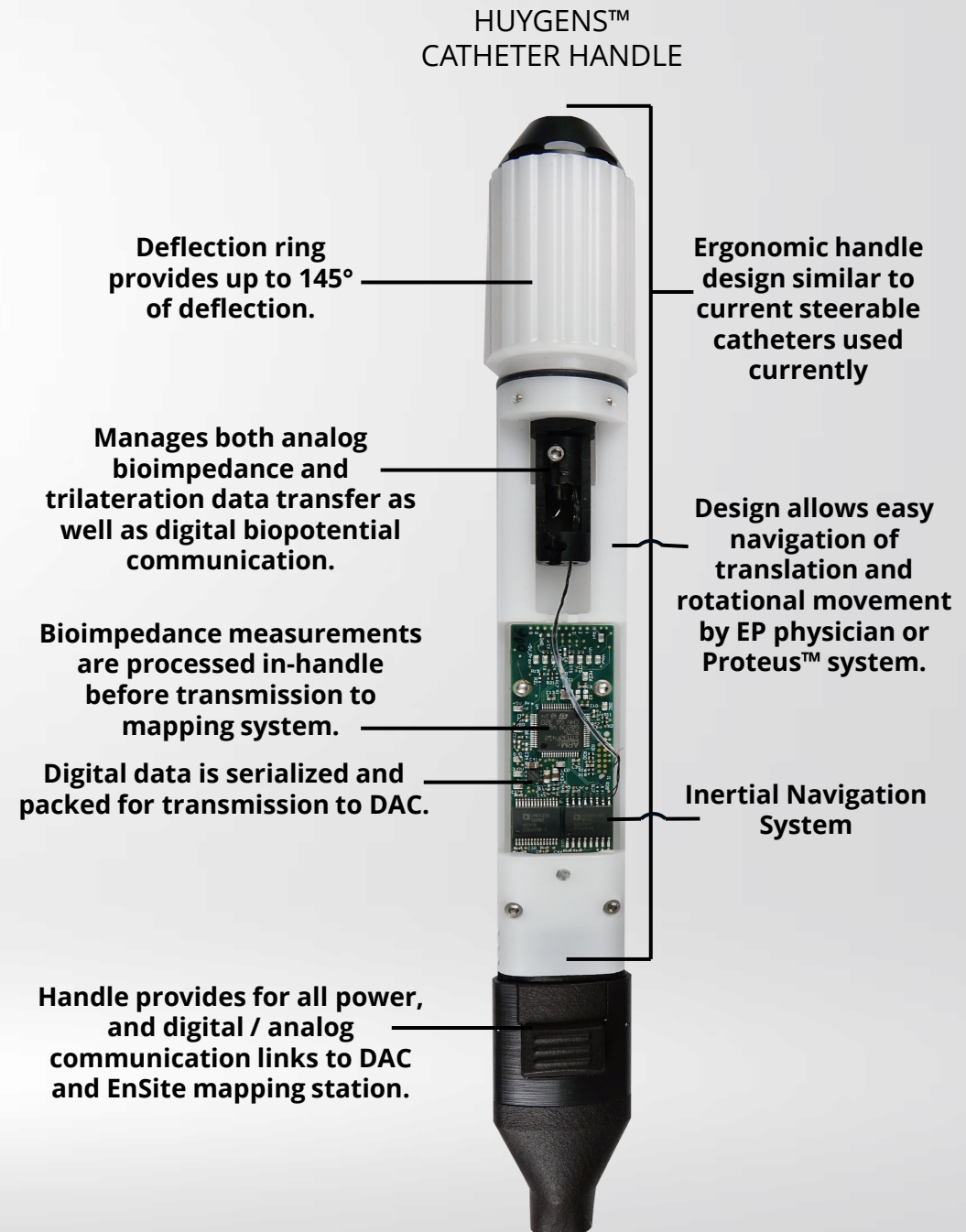
# HUYGENS™ CATHETER

- All bioelectric signal capture, processing, analysis, and data transfer procedures have been miniaturized and embedded into flexible micro-circuit boards in the catheter tip and shaft.
- Multi-array electrode ring pairs provide an ability to take multiple measurements at the same time which enhances signal analysis for capturing only relevant data.
- Reduced signal-to-noise ratio allows capture of low-microvolt signals that currently cannot be seen.
- At-source signal amplification provides the ability to capture and map signals to display data that currently cannot be displayed.
- Digitization of captured signals ensures an uncorruptible data packet transmission to the mapping station.
- Designed to integrate with existing EP mapping systems such as the Abbott/St. Jude EnSite NavX.



# HUYGENS™ CATHETER HANDLE

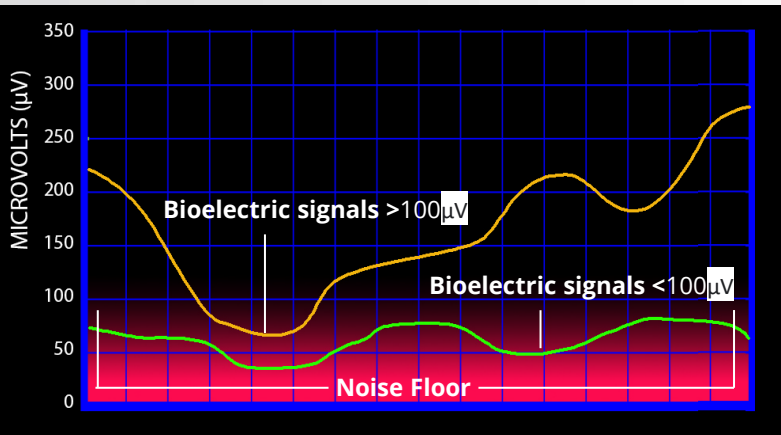
- Designed to be compatible with current steerable mapping catheters to limit barrier to adoption by EP physicians.
- Designed for easy installation into the Proteus™ Navigation System.
- Controller board provides several important functions:
  - Serialization of digitized data for transmission to the NKC Digital-to-Analog Controller (DAC).
  - Passthrough of analog data for trilateration positioning.
  - Processing of bioimpedance data during substrate mapping.
  - Inertial Navigation System monitors and records exact position of handle in any axis of movement.



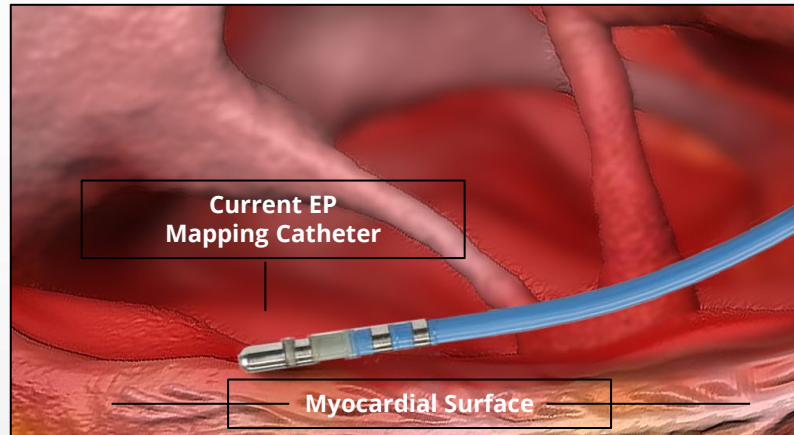


# OUR SOLUTION THE CAPTURE PROBLEM

**1** Current EP mapping catheters only effectively capture bioelectric measurements that are above the 50 $\mu$ V (microvolt range).



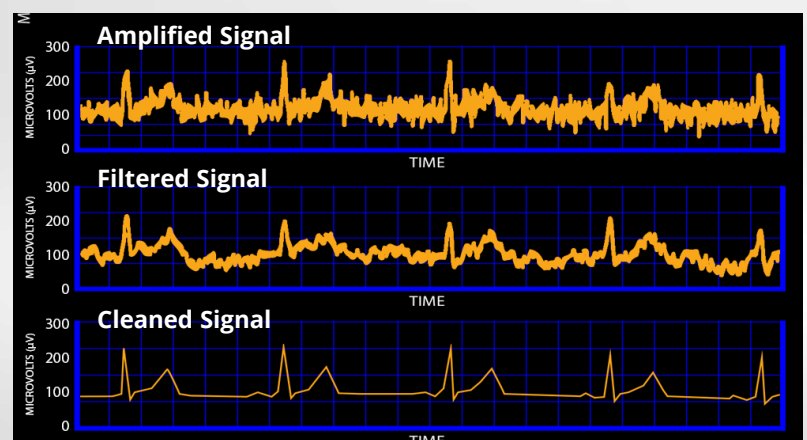
**2** Most EP mapping procedures are only looking at the topographical surface tissue fidelity of the heart.



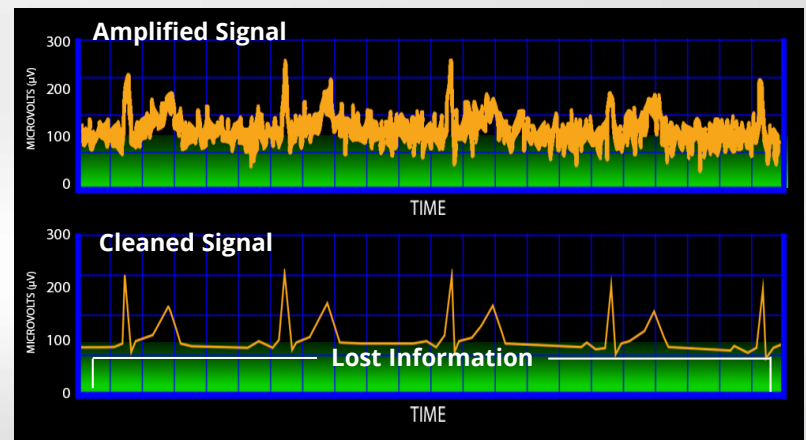
**3** Signals below the 100 $\mu$ V threshold are difficult to measure due to noise contamination from the surrounding bloodpool and EMF.



**4** Current mapping systems correct for this issue by amplifying and filtering the captured signals in an attempt to "clean" the information.



**5** This provides good tissue fidelity information of the myocardial surface above the 100 $\mu$ V range but disregards or eliminates information below that range.

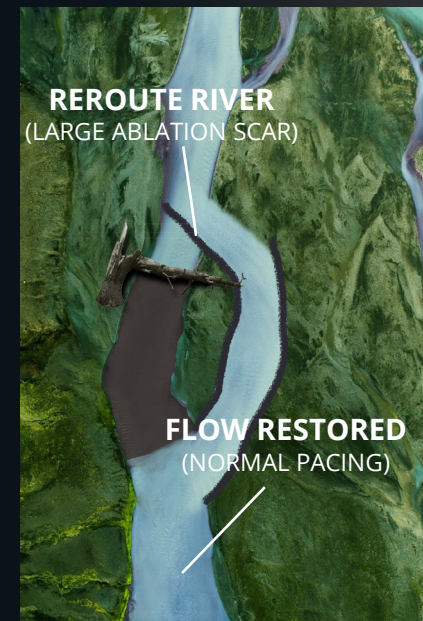


# OUR SOLUTION THE CAPTURE PROBLEM

- It is believed that most complex arrhythmia cases are a result of not being able to get a clear picture of what is disrupting the normal pacing signals.
- Micro scars are thought to be an important contributor to complex arrhythmias.
- Micro scars typically measure in the  $< 75\mu\text{V}$  range and can be as low as  $20\mu\text{V}$ .
- Surface measurements alone are only the “tip of the iceberg” and tells nothing about the extent of damage below the surface.



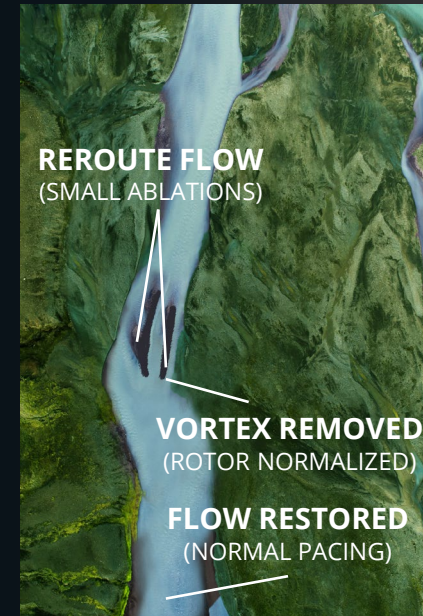
The illustrations on the left and right show a tree that has fallen across a river completely blocking the flow of water. In EP, this is the equivalent of a large scar tissue that is readable in the  $\geq 100\mu\text{V}$  range. By making a large ablation scar, the physician in essence creates a new channel for the signal to be redirected around the disturbance to restore normal rhythm.



## THE RIVER ANALOGY



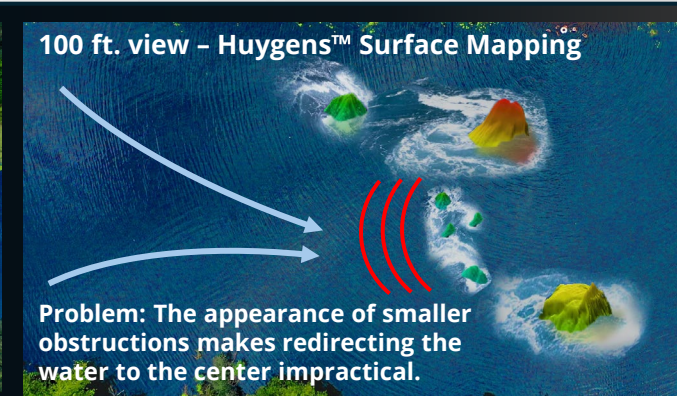
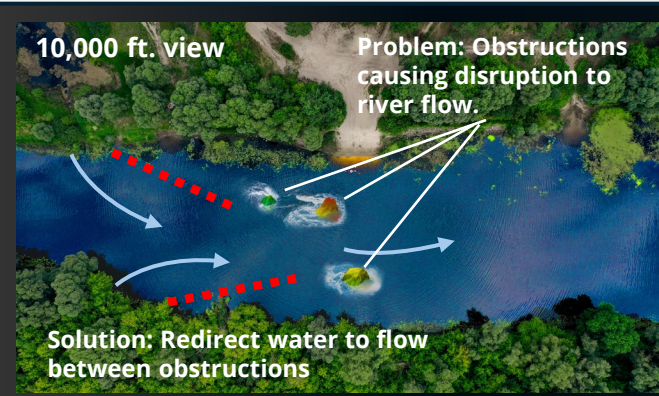
The illustrations on the left and right show small rocks, like small scar tissue, that are not completely blocking the flow but are causing the water form disruptive eddies. In EP, these vortexes are known as rotors. This disruption is sufficient to diminish and disrupt the electrical enough to cause arrhythmia issues.



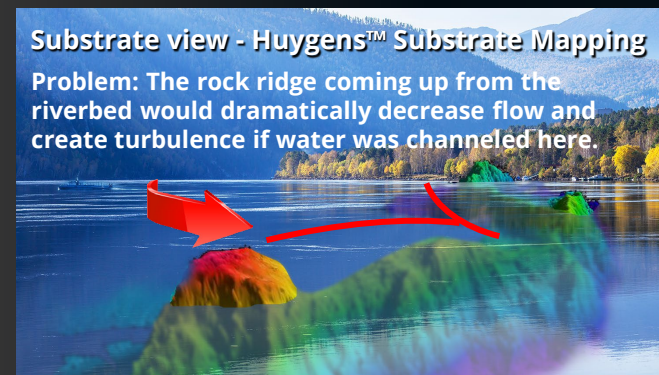
The Huygens™ Catheter allows the EP physician to “see” these micro-scar disruptions to get a clearer picture of how to treat complex arrhythmia cases.

# OUR SOLUTION THE HUYGENS™ DIFFERENCE

- To look below the surface, substrate (bioimpedance) mapping is required.
- Substrate mapping provides important data on the quality of the myocardial, endocardial, epicardial and pericardial tissues.
- This is critical when it comes to analyzing scar tissue.
- Scar tissue generally has a denser mass than healthy tissue and therefore creates a barrier to the flow of the heart's electrical currents.
- Understanding the depth of tissue damage as well as the spread of the damage beneath the surface can have a significant impact on ablation decisions and their resulting affect on restoring normal pacing.
- The Huygens™ Catheter gives the EP physician this added information in a single catheter.



The images here illustrate the importance of better surface mapping and substrate mapping. The top left image shows a surface view of a river from 10,000 feet. At this level, the snapshot shows how three large rocks are interrupting the water's flow. Based solely on this information, the best corrective action would be to build a dam upriver from these obstructions that would channel the water in between the two large rock formations to maximize the flow to the center of the river. What this view of the river is not able to show, but can be seen on the top right image, is that when you get closer to the surface and take a picture, the visibility of smaller obstructions is easy to see. This is what the Huygens™ Catheter improved biopotential mapping provides. As these become visible it also becomes apparent that directing the water between the two large formations would create a larger disturbance to the river's flow. Neither of these surface-level images shows what is happening below the waterline. As can be seen in the bottom left image, the obstructions on the surface are only the "tip of the iceberg" to what is causing the flow issue. By providing both bioimpedance (topographical) and biopotential (substrate) mapping at the same time, The EP physician has a much more comprehensive picture to decide how to redirect electrical signals. Using our illustration of the river, the best course of action would be to direct the water to either side of the center where there are no surface or underlying obstructions to interrupt the water's flow.

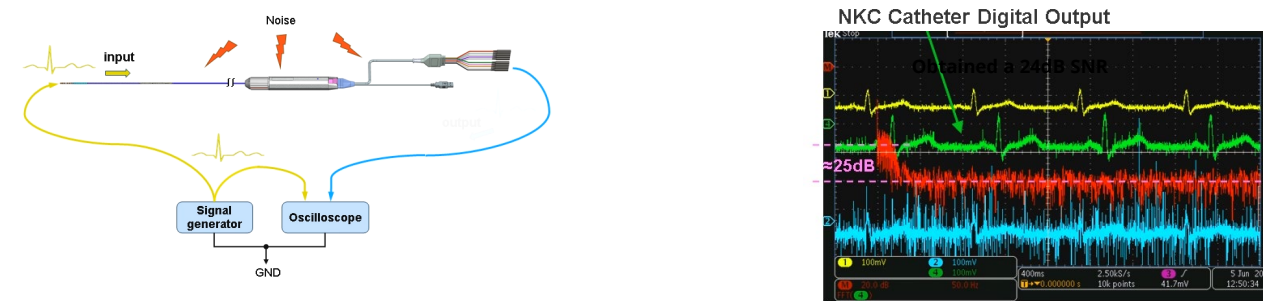
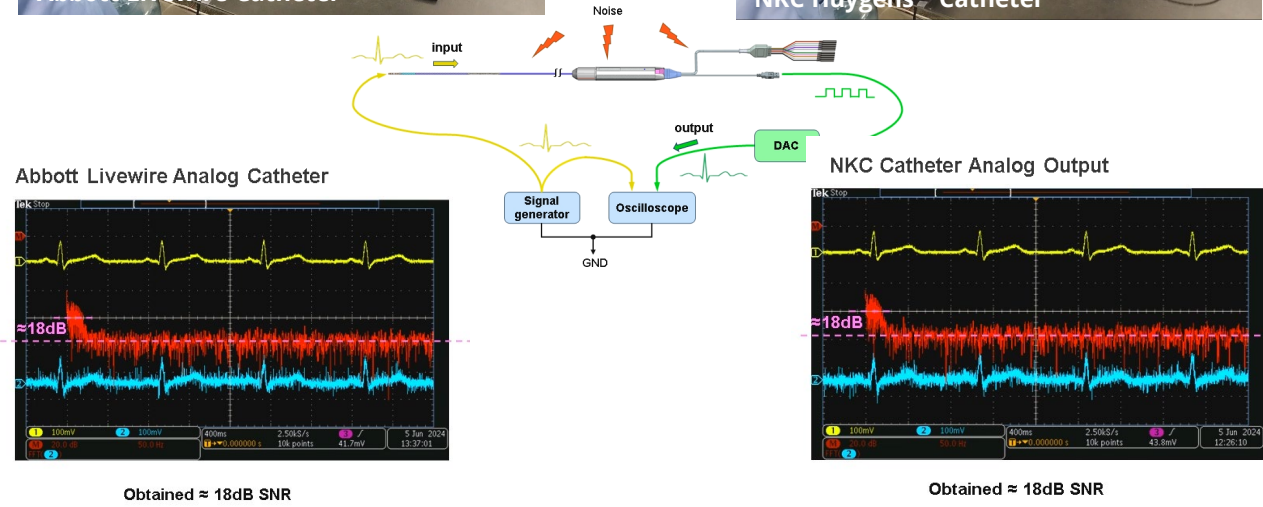
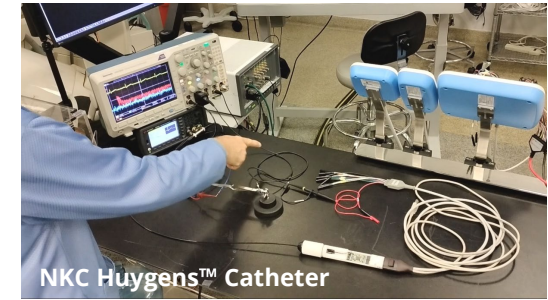
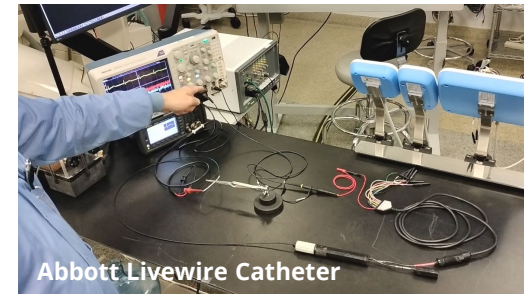


# OUR SOLUTION THE HUYGENS™ DIFFERENCE

- The Huygens™ Catheter at-source embedded capture and processing allows the catheter to capture these low-microvolt signals.
- The at-source amplification and digitization provides a significant increase in signal-to-noise ratio allowing these signals to be “seen” and mapped by the mapping system.
- The Huygens™ Catheter provides both biopotential surface mapping and bioimpedance substrate mapping of the tissue fidelity below the surface.
- Biopotential and bioimpedance mapping can be done simultaneously or selectively during the same EP mapping procedure to increase the quality of the data being captured while lessening the procedural time to the patient.
- The result is an EP map that provides a 200x increase in resolution and detail that can better inform the ablation decisions of the EP physician.

\*In a recent test to validate the Signal-to-Noise Ratio (SNR) of the Huygens™ Catheter against the industry standard Abbott Livewire catheter, NKC was able to show the Huygens™ technology was equal to the Livewire when measuring a controlled QRS signal via analog capture. When employing NKC's proprietary at source analog-to-digital measurement for transmission of the data, and then converting it back to analog at the mapping station, the Huygens™ Catheter improved the SNR by 32% from 18dB to 25dB.

## COMPARING THE SIGNAL\_TO\_NOISE RATIO (SNR) OF THE ABBOTT LIVEWIRE TO THE HUYGENS™ CATHETER\*



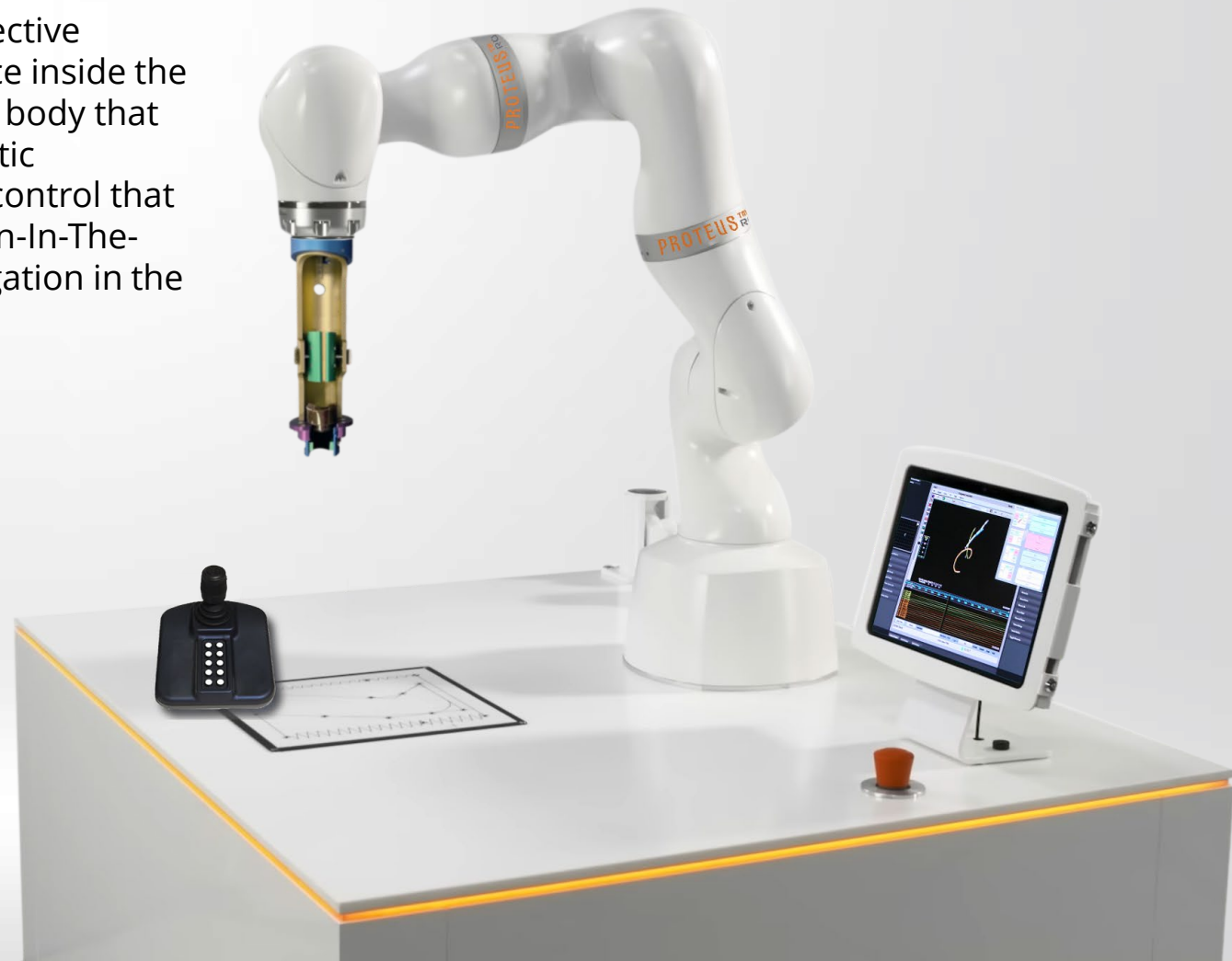
# PROTEUS™ ROBOTIC NAVIGATION SYSTEM

*"If you have always done it that way, it is probably wrong."*

— Charles Kettering  
American Inventor  
and businessman

Developed to provide an effective method for catheter guidance inside the living dynamic of the human body that melds AI with precision robotic repeatability and computer control that allows both improved Human-In-The-Loop and autonomous navigation in the EP operating theater.

Support LiveWire Catheter



## OUR SOLUTION DIFFERENTIATORS

- The result of over 20 years of development into computer-assisted catheter navigation.
- Portable plug-and-play system only has three connection points, requires no special infrastructure and occupies only nine-square feet of operating space.
- Training curve on the system has been designed to allow the EP physician or a technician to acquire platform proficiency in a short period of time.
- Cost of the Proteus™ Navigation System is a fraction of comparable platforms such as the Intrusive Systems da Vinci or the Magellan Robotic System.
- Maintenance and repair of the Proteus™ Navigation System is much lower projected uptime is much higher.



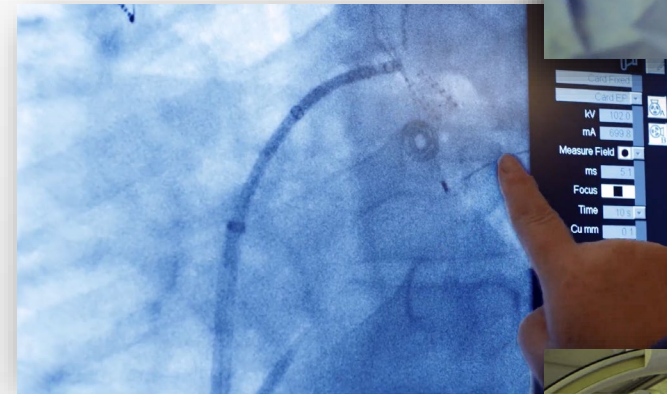
# OUR SOLUTION THE DEXTERITY PROBLEM

- To date, catheter navigation has relied on the dexterity of the EP physician.
- Catheter control is done by pushing, pulling and twisting a 95cm long by 2-3mm diameter wire from outside the patient's body inside the heart.
- As a result, the consistency of capturing data for the creation of a heartmap can vary widely.
- The success of the science in an EP procedure is entirely dependent on the artistry of the EP physician.
- The ability to perform effective grid mapping or accurate return-to-point catheter navigation with either a mapping or ablation catheter is not possible.



Typical EP catheters consist of a very thin cable that measures 95cm (37") in length and are very flexible to be able to move around the tight environs of the heart.

The catheter is maneuvered manually by the EP physician from an entry point at the patient's groin or neck. Navigation is done by pushing, pulling and twisting the catheter by hand to make contact with every point inside the heart required for mapping or ablation.



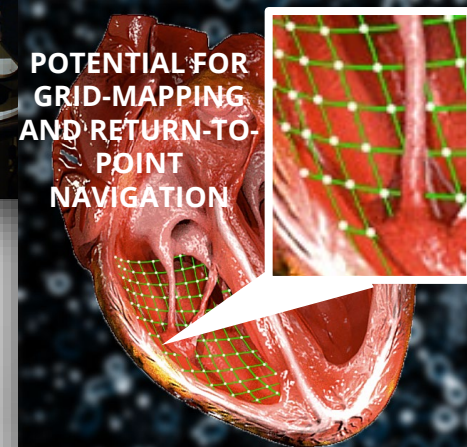
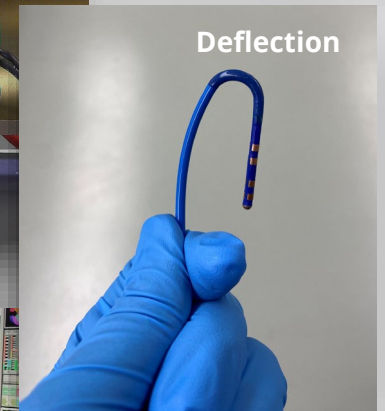
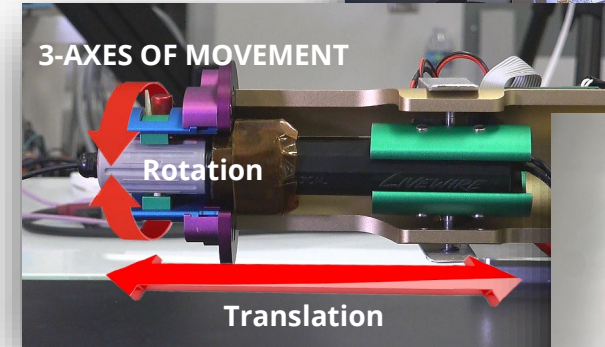
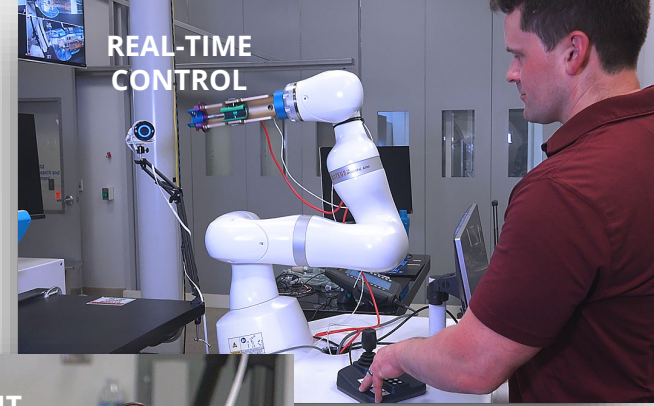
The only real-time visualization tool the EP physician has is via X-ray or fluoroscopy. Everything is dependent upon the physician's experience and dexterity.

Despite all the technical advances made in imaging, monitoring, technical engineering, electrophysiology still remains just as much an artform as a science with the results dependent on the quality of the artist.



# OUR SOLUTION THE PROTEUS™ DIFFERENCE

- Proteus brings the potential for true real-time procession control of EP catheters using robotic-assisted computer navigation.
- Complete control of the three axes of guidance: translation, rotation and deflection.
- Coarse- and fine-grain control of a catheter with  $\pm 0.1$  mm to  $\pm 0.15$  mm repeatable tolerance.
- Can be used with true Human-In-The-Loop control or autonomous control.
- Designed to bring the reality of precision grid mapping and return-to-point to the EP physician.
- AI will allow the system to improve the ability to achieve better diagnostics while increasing patients safety in many areas including:
  - Three-way communication between the Huygens™ Catheter, the PLC and the Proteus™ to monitor and adapt for force-feedback control of the catheter tip pressure to increase signal capture fidelity and minimize tissue damage.
  - Ability to take captured mapping information and use cloud-based data and deep-learning to inform best ablation paths.
  - Ability to provide autonomous navigation inside the moving dynamic of the human heart.

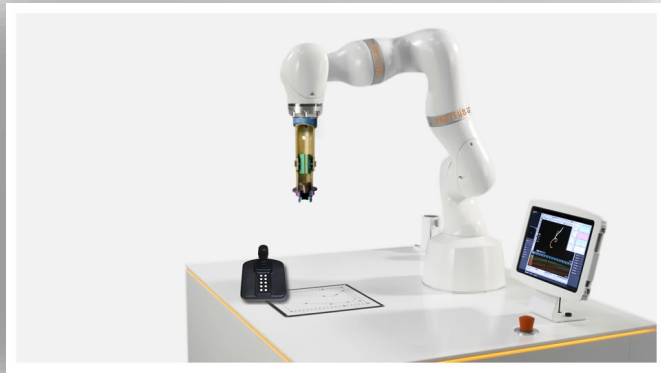




# OUR SOLUTION THE PROTEUS SYSTEM

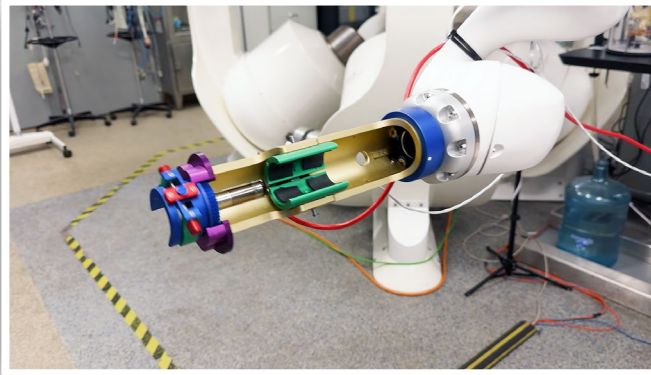
The Proteus Robotic Navigation platform consists of three main sub-systems.

## THE ROBOTIC ARM



- Programmable control of robotic arm in any mode of operation.
- Repeatability precision control of catheter with  $\pm 0.1$  mm to  $\pm 0.15$  mm precision.
- Articulated limbs provide 360° in any axis of direction.
- All movement managed by EP physician with remote joystick.

## THE GRIPPER



- Serves as the End-Effector of the Proteus™ Robotic Arm.
- Interface for easy installation of the Huygens™ Catheter.
- Can also accommodate most current EP catheters that use a steering design.
- Gripper guides the catheter in translation, rotation and deflection.

## THE NAVIGATION CONTROLLER



- Omni-directional joystick provides true Human-In-The-Loop navigation.
- Programmable control panel provides autonomous execution of macro-routines.
- Ergonomic design provides zero barrier to usage for EP physicians.

# OUR SOLUTION THE PROTEUS SYSTEM

The Proteus™ Robotic Navigation System is part of a complete EP Operating Suite that delivers a diagnostic mapping solution that surpasses currently available platforms.

## THE DAC



Provides conversion of the transmitted digital signal back to an analog format for use by the mapping system.

## THE PLC



The Programmable Logic Controller acts as a "traffic cop" in the system to monitor and control the various communication data streams that allow the system to talk to each other.

## THE ENSITE NAV-X



The industry gold-standard in 3D EP mapping systems takes the trilateration and bioelectrical measurements made by the Huygens™ Catheter to create a high resolution 3D map of the patient's heart in real-time.

## THE HUYGENS™ GUI



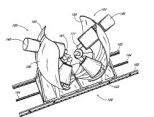
Allows control of various parameters of the Huygens™ Catheter including, amplification levels, electrode channel selection, bioimpedance/biopotential operating modes, calibration of the catheter, and monitoring of the electrode channel measurements.

# OTHER TECHNOLOGIES

**(12) United States Patent**  
**Shachar et al.**  
 (11) Patent No.: **US 8,027,714 B2**  
 (13) Date of Patent: **Sep. 27, 2011**

**(54) APPARATUS AND METHOD FOR MEASURING ANATOMICAL DIMENSIONS OF THE HEAD, NECK, THROAT, LARYNX, CONTROL, AND IMAGING**

**(57) Abstract:** An apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging. The apparatus includes a probe with a sensor and a camera. The method includes measuring the anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

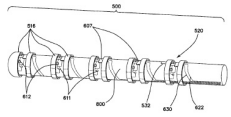


**FIG. 1** is a schematic diagram of the apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

**(12) United States Patent**  
**Shachar et al.**  
 (11) Patent No.: **US 8,220,425 B2**  
 (13) Date of Patent: **Dec. 29, 2015**

**(54) METHOD AND APPARATUS FOR MEASURING ANATOMICAL DIMENSIONS OF THE HEAD, NECK, THROAT, LARYNX, CONTROL, AND IMAGING**

**(57) Abstract:** A method and apparatus for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging. The apparatus includes a probe with a sensor and a camera. The method includes measuring the anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

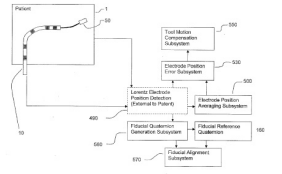


**FIG. 1** is a schematic diagram of the apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

**(12) United States Patent Application Publication**  
**Shachar et al.**  
 (11) Pub. No.: **US 2012/0259822 A1**  
 (13) Pub. Date: **Nov. 15, 2012**

**(54) APPARATUS AND METHOD FOR MEASURING ANATOMICAL DIMENSIONS OF THE HEAD, NECK, THROAT, LARYNX, CONTROL, AND IMAGING**

**(57) Abstract:** An apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging. The apparatus includes a probe with a sensor and a camera. The method includes measuring the anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

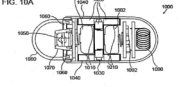


**FIG. 1** is a schematic diagram of the apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

**(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)**  
 (19) World Intellectual Property Organization  
 (11) International Publication No.: **WO/2012/14717 A2**  
 (12) International Publication Date: **14 June 2012 (2012.06.14)**

**(54) APPARATUS AND METHOD FOR MEASURING ANATOMICAL DIMENSIONS OF THE HEAD, NECK, THROAT, LARYNX, CONTROL, AND IMAGING**

**(57) Abstract:** An apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging. The apparatus includes a probe with a sensor and a camera. The method includes measuring the anatomical dimensions of the head, neck, throat, larynx, control, and imaging.



**FIG. 10A** is a schematic diagram of the apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

In addition to our lead product technologies, NKC holds the exclusive IP on several other innovative surgical tool and medical device platforms.

## Catheter Guidance, Control and Imaging System

## MOSFET Catheter

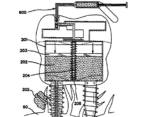
## Lorentz Active Sheath

## Magnetically Maneuverable Pill Cam

**(12) United States Patent**  
**Shachar et al.**  
 (11) Patent No.: **US 8,202,090 B2**  
 (13) Date of Patent: **Jan. 19, 2012**

**(54) MEDICAL IMAGING DEVICE USING APPARATUS AND METHOD FOR MEASURING ANATOMICAL DIMENSIONS OF THE HEAD, NECK, THROAT, LARYNX, CONTROL, AND IMAGING**

**(57) Abstract:** A medical imaging device using apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging. The apparatus includes a probe with a sensor and a camera. The method includes measuring the anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

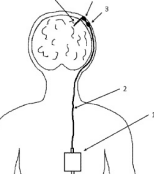


**FIG. 1** is a schematic diagram of the apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

**(12) United States Patent Application Publication**  
**Shachar et al.**  
 (11) Pub. No.: **US 2010/030455 A1**  
 (13) Pub. Date: **Oct. 9, 2010**

**(54) MEDICAL IMAGING DEVICE USING APPARATUS AND METHOD FOR MEASURING ANATOMICAL DIMENSIONS OF THE HEAD, NECK, THROAT, LARYNX, CONTROL, AND IMAGING**

**(57) Abstract:** A medical imaging device using apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging. The apparatus includes a probe with a sensor and a camera. The method includes measuring the anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

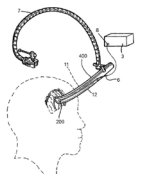


**FIG. 1** is a schematic diagram of the apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

**(12) United States Patent**  
**Shachar et al.**  
 (11) Patent No.: **US 8,133,172 B2**  
 (13) Date of Patent: **Mar. 13, 2012**

**(54) MEDICAL IMAGING DEVICE USING APPARATUS AND METHOD FOR MEASURING ANATOMICAL DIMENSIONS OF THE HEAD, NECK, THROAT, LARYNX, CONTROL, AND IMAGING**

**(57) Abstract:** A medical imaging device using apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging. The apparatus includes a probe with a sensor and a camera. The method includes measuring the anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

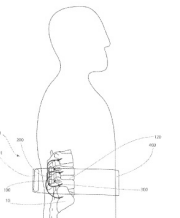


**FIG. 1** is a schematic diagram of the apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

**(12) United States Patent Application Publication**  
**Shachar et al.**  
 (11) Pub. No.: **US 2011/0291559 A1**  
 (13) Pub. Date: **Dec. 1, 2011**

**(54) MEDICAL IMAGING DEVICE USING APPARATUS AND METHOD FOR MEASURING ANATOMICAL DIMENSIONS OF THE HEAD, NECK, THROAT, LARYNX, CONTROL, AND IMAGING**

**(57) Abstract:** A medical imaging device using apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging. The apparatus includes a probe with a sensor and a camera. The method includes measuring the anatomical dimensions of the head, neck, throat, larynx, control, and imaging.



**FIG. 1** is a schematic diagram of the apparatus and method for measuring anatomical dimensions of the head, neck, throat, larynx, control, and imaging.

## Medicated Dispensing Dental Implant

## Cerebrospinal Fluid Sensor

## SMART Brain Retractor

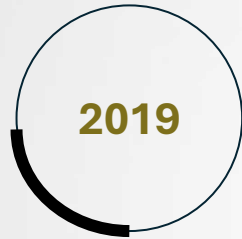
## Vertebral Body Motion Sensor

# MILESTONES ACHIEVED

Over the past ten years, NKC has been able to achieve all of its targeted milestones. This despite the global pandemic, the downturn in medical technology investment and an everchanging regulatory and market need.

Proof of concept, proof of market, prototype fabrication and initial validation testing have all been completed on the Huygens™ Catheter. Successful completion of its upcoming pre-clinical animal study will position the company in a favorable position to applying for FDA 510(k) certification.

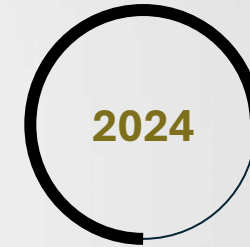
- Proof of concepts on all technologies.
- IP protection with over 100 patents both domestic and international related to its catheter guidance, smart catheter, and smart catheter sheath inventions.
- Completed installation of its clean room and wet lab facilities for in-house prototype testing and development.
- Completed initial third-party validation studies with Sandia National Labs on Huygens™ Catheter capabilities.
- Completed development and testing of the Proteus™ I Catheter Navigation system to validate mechanical and electrical design specifications
- Secured collaboration with Abbott/St. Jude to integrate its Huygens™ – Proteus™ Surgical Platform with their EnSite NavX EP mapping system,
- Created regulatory board to facilitate NKC submission for FDA goals.
- Completed initial design and prototype testing of the Huygens™ Catheter Handle.
- Completed initial prototype testing of the completed Huygens™ Catheter/Handle assembly.
- Completed initial trilateration integration of the Huygens™ Catheter technology to the Abbott/St. Jude EnSite X mapping system.
- Completed integration of the NKC DAC (digital-to-analog convertor) to the Abbott/St. Jude EnSite X mapping system.
- Completed development and testing of the Proteus™ II Robotic Arm with the Catheter Gripper for basic modal navigation and in-theater catheter navigation.
- Finalized protocols for initial Pre-Clinical Animal Study for determining catheter efficacy and safety to meet predicate device standards.
- Completed final design specs for Huygens™ Catheter and developed partnership agreements with strategic for manufacture of initial prototypes for Pre-Clinical Animal Study.



Completed initial \$3.5 million Round A capital raise



Completed \$2.5 million Series A Preferred Stock capital raise with additional \$1.0 million loan



In process of \$3.0 million Series B Preferred Stock capital raise.

## Q3 2024 to Q2 2025 GOALS

- Perform in-house validation test on prototype catheters for readiness for Pre-Clinical Animal Study.
- Continue development on Huygens™ Software/Firmware control system.
- Continue development on Proteus™ Catheter Guidance system HITL interface, AI integration preliminary autonomous control software/firmware.
- Finalize documentation for Phase One audit for ISO13485 Certification
- Perform and complete initial Pre-Clinical Animal Trial.
- Based on the success of the animal trial, prepare documentation to submit FDA for 510(k) Pre-Market Notification using the Abbott Live-Wire as the predicate device.

## OUR TEAM EXECUTIVE BOARD and MANAGEMENT

NKC is managed by an elite group of seasoned professionals with extensive backgrounds in medical technology engineering, electrophysiology, clinical and practical research, regulatory affairs, and technology commercialization. Their collective experience intersects to provide the company the strategic leadership and forward-thinking vision that has enabled the advancement of what is a fundamental shift in advancing the art of cardiac-based EP diagnostics and treatments.



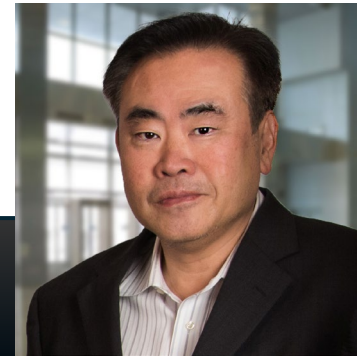
**JOSH SHACHAR**  
Board Chairman,  
Chief Executive Officer  
and Chief Technology Officer



**Dr. ELI GANG, MD,**  
**FACC, FACP**  
Director and  
Chief Medical Officer



**ROGER KORNBERG, PhD**  
Director of the Science  
Advisory Board  
2006 Nobel Laureate in  
Chemistry



**Dr. THOMAS CHEN, MD,**  
**PhD**  
Director



**Dr. EUSTAQUIO ABAY II, MD,**  
**FACS**  
Director

# OUR TEAM

## EXECUTIVE BOARD and MANAGEMENT

### JOSH SHACHAR

Board Chairman,  
Chief Executive Officer  
and Chief Technology Officer



- Educated at Sorbonne in Paris, France and the University of Haifa in Haifa, Israel
- Received his Bachelor of Arts and Masters Degree in Philosophy of Science and Mathematics.
- Received Fulbright Scholarship to attend UCLA to pursue his PhD.
- Founded several engineering and technology firms including Thermo Control, Inc., Pastushin Aviation, Inc., LAMBDA Signetics, Inc., ThermoCouple America, LLC, Carnap Analytic Corp., EDEL Engineering, Engineered Magnetics (EMI), Pharmaco-Kinesis, Corp., Sensor-Kinesis, Corp. (SKC), Cognos Therapeutics, Inc., and Neuro-Kinesis, Corp.
- Both EDEL and EMI have been trusted partners with major aerospace firms and all branches of the DOD for over 25 years.
- Virtually all free world missile programs are operating with EMI equipment abroad.
- Developed the first implantable SMART pump for metronomic delivery of therapeutics for patients with Central Nervous System (CNS) diseases.
- Under SKC developed the first portable, hand-held device for detection of pathogen-related biomarkers in a sample at source.
- SKC acquired by Larry Ellison's TACO Venture Corp.
- Developer of all the technologies under the NKC banner.
- Founded the Carnap Foundation which provides scholarships to students at the University of Haifa.

# OUR TEAM

## EXECUTIVE BOARD and MANAGEMENT

### **Dr. ELI GANG** **MD, FACC, FACP**

Director and  
Chief Medical Officer



- Bachelor of Arts in Molecular Biology and Philosophy from Columbia University in New York City.
- Medical Doctorate from Columbia University's College of Physicians & Surgeons, in New York City.
- Residency at Columbia University in New York City.
- Clinical Professor of Medicine at the David Geffen School of Medicine at UCLA.
- Board-certified in Internal Medicine, Cardiology, and Clinical Electrophysiology.
- Served as co-director of Clinical Electrophysiology at Cedars-Sinai Medical Center.
- Fellow of the American College of Cardiology, American Heart Association, Heart Rhythm Society, and the American College of Physicians.
- Maintains his practice specializing in the diagnosis and treatment of complex arrhythmias.
- Expert in catheter ablation and implantation of pacemakers and automatic defibrillators.
- Conducted extensive research in the development of advanced ECG technologies and the development of robotic approaches to ablation in the heart.



# OUR TEAM

## EXECUTIVE BOARD and MANAGEMENT

### ROGER KORNBERG PhD

Director of the  
Science Advisory Board  
2006 Nobel Laureate in Chemistry



**2006 Nobel Prize**

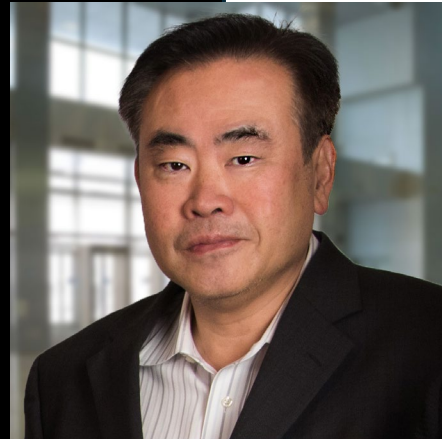
- Biochemist and Professor of Structural Biology at Stanford University School of Medicine since 1978.
- Awarded the 2006 Nobel Prize in Chemistry for his studies of the molecular basis of eukaryotic transcription.
- Was the first to create a picture of how transcription works at a molecular level.
- Lead researcher for the Nobel Prize at the Stanford Synchrotron Radiation Laboratory, a DOE-supported research facility located at the Stanford Linear Accelerator Center (SLAC).

# OUR TEAM

## EXECUTIVE BOARD and MANAGEMENT

**Dr. THOMAS CHEN**  
MD, PhD

Director



- Board-certified neurosurgeon
- Director of Surgical Neuro-oncology at University of Southern California (USC).
- Tenured Professor of Neurosurgery and Pathology at USC.
- Graduated summa cum laude in three years from University of Illinois at Urbana-Champaign
- Received Bronze Tablet honors (top 3% of undergraduate students)
- Inducted into the Phi Beta Kappa national academic honor society.
- Inducted into the Alpha Omega Alpha national medical honor society the University of California, San Francisco,
- Neurosurgery training at USC.
- Received his Ph.D. in pathobiology at USC.
- Fellowship-trained spine surgeon
- One of a few surgical neuro-oncologists in the country who specialize in spine cancer surgery.
- Maintains a clinical practice in both surgical neuro-oncology and spine surgery.
- Heads a research laboratory focused on glioma biology.
- Has published extensively on glioma biology and neurosurgery.
- Serves on the editorial board for The Spine Journal and Journal of Neuro -oncology
- Serves on the review board for Neurosurgery and Journal of Neurosurgery.
- Participates on numerous national neurosurgery committees.

# OUR TEAM

## EXECUTIVE BOARD and MANAGEMENT

### Dr. EUSTAQUIO ABAY II MD, FACS

Director



- Recognized neurosurgeon specializing in micro-neurosurgery, neurovascular surgery, neuro-oncology, stereotactic functional neurosurgery, radiosurgery, spine and peripheral nerves repair.
- Recognized and respected leader of local, national medical and civic communities.
- Bachelors of Arts degree from the Ateneo de Manila University in Quezon City
- Medical Doctorate from the University of Santo Tomas in Manila, Philippines.
- Master of Science Degree in Neurosurgery from the Mayo Graduate School of Medicine, University of Minnesota
- Residency in Neurological Surgery at the Mayo Clinic in Rochester, Minnesota.
- Served as Chief of Section for Neurosurgery at the Via Christi Regional Medical Center, St Francis and St Joseph Campuses in Wichita, Kansas.
- Clinical Assistant Professor, Section of Neurosurgery for the Department of Surgery at the University of Kansas School of Medicine in Wichita
- Advisory Board Member for the Brain Injury Association of Kansas and Greater Kansas City.
- Founder of the Kansas Spine Hospital - part of a Neuroscience Center of Excellence in the region.
- Lecturer and author
- Has received many industry and philanthropic awards including Top 10 Most Influential Person in Healthcare and top neurosurgeon in the Wichita, Kansas area.

# neuro-KINESIS

CORPORATION

## THANK YOU

FOR MORE INFORMATION CONTACT YOUR INVESTOR REPRESENTATIVE OR CONNECT WITH US AT:

- Web: [Neuro-Kinesis.com](http://Neuro-Kinesis.com)
- Email: [info@neuro-kinesis.com](mailto:info@neuro-kinesis.com)
- Tel: 424.426.6110

