Please note: The invention disclosed in this proposal is the subject of a pending patent application. Please treat this document as confidential.

Certain information contained in this proposal may contain "forward-looking information". Forward looking information statements may include, among others, statements regarding the future plans, costs, objectives or performance of TEK Medical Systems – (the "Company" or TMS), the ecosystem or the platform or the assumptions underlying any of the foregoing. In this proposal, words such as "may", "would", "could", "will", "likely", "believe", "expect", "anticipate", "intend", "plan", "estimate" and similar words and the negative form thereof are used to identify forward-looking statements. Forward-looking statements should not be read as guarantees of future performance or results, and will not necessarily be accurate indications of whether, or the times at or by which, such future performance will be achieved.

The proposal contains statistical data, market research and industry forecasts that were obtained, unless otherwise indicated, from independent industry and government publications and reports or based on estimates derived from such publications and reports and the Company's knowledge of, and experience in, the sectors in which the Company plans to operate. While the Company believes this data and information to be reliable, market and industry data and information is subject to variation and cannot be and therefore has not been verified due to limits on the availability and reliability of raw data, the voluntary nature of the data gathering process and other limitations and uncertainties inherent in any statistical survey.

TRACE: Machine Transfer Authentication Engine

Machine Transfer Authentication Engine on Blockchain

TRACE: Machine Transfer Authentication Engine

Overview: Opportunity with Blockchain

A blockchain is a data structure that makes it possible to create a digital ledger of transactions and share it amongst distributed networks of computers. It uses cryptography to allow each participant on the network to manipulate the ledger securely relying on features of immutability and open-source technology. Blockchain can mitigate barriers pertaining to transparency, traceability, data security to run business operations smoothly. As a technology predicated on collaboration, Blockchain enables participants across the industry to come together and achieve a shared goal, without the need for intermediaries or paper trails to ensure trust. This simplifies and streamlines interactions. Blockchain is a platform that supports multiple use cases within supply chain operations, and it has the ability to transform a number of processes, including peer-to-peer traceability, trade compliance and supply chain tracking.

One such use case is of Know Your Customer (KYC) for tracing flow of assets. The benefits of Blockchain are aligned with industry attempts to solve the KYC challenges of: complex, inefficient processes; access to accurate data; and an increasingly stringent regulatory environment, all of which have led to excessive operational overheads and affected GE-Dealer relationships. Blockchain technology can revolutionize the way GE conducts KYC, by empowering industry players to work together to ensure simple, but secure movement of ultrasound machines between counterparties; mutualizing the effort to manually conduct KYC on dealer and reducing the burden on dealer network to provide documentation and Chain of Custody to counterparties and GE Ambassador & GE Gold Seal by solving functional barriers of verification, enterprise management, data and asset traceability.

Our solution is called TRACE (Machine **Tr**ansfer **A**uthenti**c**ation **E**ngine) and is based on blockchain and helps minimize the need for intermediaries resulting in reduced costs of supervision and monitoring. TRACE is a distributed, multi-layer Blockchain-based network enabling users (GE, Dealers, End-Users) to securely obtain, store, inquire about, and work with GE established compliance-satisfying data.

TRACE reduces the costs of compliance of due diligence mandates that GE expects through its current Dealer Agreement [e.g., Know Your Customer (KYC); Business (KYB); Enhanced Due Diligence (EDD), etc.], while maximizing data and information security and protecting identity beyond the capabilities of GE current, non-blockchain-based compliance systems and dealer agreement. In this manner, the current GE dealer agreement and dealer compliance becomes cheaper, faster, and more secure. TRACE also features a Credibility system, providing Dealers with a reputational score based on compliance and historical transactional activity, which is especially useful for the GE and the dealer ecosystem.

TRACE blockchain technology can cater to solve complex traceability challenges of ultrasound machines. Our bespoke blockchain engine can replace the low security tracking grid of

traditional systems with a state-of-the-art system that will not only simplify asset management but also offer higher levels of security and flexibility to configure the system when needed.

In the context of KYC and the current dealer agreement, the concept of GE being a central intermediary needs to be evaluated, as the dealer base will still prefer to rely on bilateral interactions. Consequently, for TRACE KYC solution to be successful in solving the challenges that surround end-to-end KYC processes as opposed to providing an alternative platform on which to manage interactions, it is incumbent on GE to mandate the adoption on the TRACE Blockchain among the dealers.

GE will have assurity that their dealer has independently verified their customer's ID documents on the chain, thus, GE will not have to carry out any KYC checks, reducing administrative burdens and costs.

As data stored on TRACE Blockchain is irreversible, it would provide a single source of truth thereby minimizing the risk of duplication or error.

TRACE: Machine Transfer Authentication Engine

Problem Statement

GE faces a major challenge in streamlining end-to-end visibility of ultrasound assets and corresponding data (serial number, options, release level) on an unregulated dealer network which causes dependency and conflict amongst the stakeholders.

As a consequence of the complex regulatory and chain-of-custody requirements and challenge of accessing quality data, the collection and verification of a dealer entity information is burdensome. Ensuring the accuracy of information is further exacerbated by ultrasound machines showing up in sanctioned countries after the fact. GE has traditionally increased staffing and investigative resources as the mechanism for managing complexity in this KYC environment.

For GE, enforcing and policing compliance represents a substantial drain on resources. Additionally, compliance processes can be repeated multiple times by various GE subdivisions due to "data siloing", effectively multiplying costs. Data silos are repositories of data which exist specifically for and remain under the exclusive control of particular divisions or regional markets within GE. One division's repository is often inaccessible to other divisions and/or incompatible with other division's systems, despite the data being useful to both divisions. These inefficiencies stem from a lack of flexibility and poor interoperability between the organization's technological and bureaucratic systems.

On the other hand, for dealers, compliance, policing and enforcement is an expensive overhead and for smaller dealers it can stifle even basic operations.

The TRACE blockchain solution aims to simplify automation of private regulatory compliance with the Know Your Client (KYC) feature and protocols for fraudulent asset transfer prevention with complex security mechanisms with configurable restriction rules.

TRACE can configure complex restrictive regulations such as portability rules, geophysical restrictions, product centric compliances and other custom configurations.

TRACE: Machine Transfer Authentication Engine

Solution: TRACE Blockchain engine for machine asset transfer

Easy Machine Asset creation
For conducive traceability of ultrasound machines, the machine assets are first created on the chain. With a unique ID assigned to the machine asset, it will be easier to authenticate the details of the asset and its current owner.

Zero dependence on stakeholders
Often the stakeholders are accountable for the management and change of custody of machines. With TRACE solution the responsibilities and authority imposed on stakeholders can be withdrawn completely to instate transparency and traceability of the assets. It will drastically minimize conflicts caused amongst dealers and stakeholders on record keeping and machine transfer authorization.

Integrated data of your product
Once the asset identity is created, the data of the asset is stored on the chain. The TRACE solution built on a distributed ledger architecture will store all transactions of the asset; streamline business processes, aid in cost reduction, and reduce risks inherent in traditional compliance systems. All updates linked to the asset will be compiled with data analytics.

TRACE: Machine Transfer Authentication Engine

Strengthening the weak link

Built on a decentralized computing architecture, TRACE blockchain will allow the accumulation of data from multiple GE sanctioned and authorised stakeholders into a single immutable, cryptographically secured and validated database.

KYC verification using TRACE blockchain will be faster, easier, safer and more efficient than the traditional verification procedures. Blockchain as a technology has lived up to its promise of delivering radical solutions; Blockchain technology is emerging as the way to let companies make and verify financial (value exchange) transactions on a network instantaneously without a central authority to improve scalability and implement continuous flow of asset data. It is a trustless technology built on a distributed network to ward off any single point of failure, for enhanced reliability and resilience.

The system will provide real-time analysis and verification of every bit of data when a transaction is made. The TRACE blockchain ledger can provide a historical record of all documents shared and compliance activities undertaken for and by each dealer/end-user customer.

Malicious attempts to view or change the data become a part of the data itself, making third-party manipulations immediately obvious. There is also an advantage for the dealer that they only have to provide KYC documents once (until they need to be updated) and that they are not disclosed to any other party (except to their own supplier) as the other stakeholders will not need to see and check the KYC documents but will just rely on the TRACE Blockchain verification.

TRACE Blockchain meets the need for an efficient, shared platform for managing and exchanging standardized KYC data and document uploading and sharing it with the stakeholders is free on TRACE. A dealer validates the data rigorously (as outlined by GE KYC conditions), and informs the stakeholder if it is incomplete or needs to be updated. TRACE will send out alerts to GE and stakeholders whenever the data changes.

The security and privacy of customer's KYC information will remain intact– for both GE and all stakeholders, as long as all KYC is processed on the TRACE Blockchain. The data on TRACE Blockchain will be a reference point with a cryptographic hash — which would give individuals access to relevant client information on a TRACE node ensuring a secure and private way of conducting and storing a stakeholder's KYC information. Equally important to

stakeholders is ensuring that only GE will have authorized access on a temporary basis so that access to KYC information is only granted when strictly necessary for that purpose, and for no other ancillary reason.

For example, the TRACE blockchain record could be used to provide as proof of authentication that an intermediary has acted in accordance with the requirements placed upon it – should GE raise a ticket of clarification. It would also be of particular use in identifying entities attempting to create fraudulent histories.This would be an advantage over the current GE compliance and transaction systems, which are more susceptible to fraud.

TRACE Blockchain can resolve business barriers like data loss and data tampering as information stored on the chain is auditable and secure. TRACE Blockchain is deployed as a gatekeeper that validates product assets and the stakeholders or participants associated with the asset.

With the TRACE Blockchain architecture, GE can opt to integrate IOT and RFID with augmented intelligence to solve complex traceability problems with least human intervention.

A fundamental feature of this technology is its openness to third party collaboration for future integration to enhance scalability while making sure that the security of the data is not compromised. Additional imaging products (MRIs, C-Arms etc.) can be added to the stack.

The TRACE blockchain solution can be configured to integrate data analytics to study the pattern of the product circulation (transfer of ownership) and for extracting valuable insights at the meta-data level.

Data Analytics & data science seeks to extract knowledge and insights from structured and unstructured data – with an aim of extracting information and actionable insights from it. This encompasses statistics, data analysis, machine learning, and other advanced methods used to understand and analyze actual processes using data. Like any technology data analytics has its own challenges and limitations – some major challenges to data science include privacy issues and dirty data.

Addressing privacy issues by providing only meta-data and the control of dirty data (or erroneous information) are areas that TRACE can impact through decentralized consensus algorithm and cryptography, TRACE blockchain, makes for seamless verification of transferable data. It will help address issues such as human error, data duplication, and false information and validates data making it resistant to any manipulation.

TRACE can be deployed by GE on the sale of new products and can facilitate the trade-in program for supply into GE Gold-Seal and GE Ambassador and mitigate attrition of GE's installed base.

Key attributes of TRACE

Characteristics of TRACE that make it an advantageous technology to leverage:

Immutability

Records are given a unique ID and stored cryptographically in a way that ensures lineage and eradicates the opportunity to tamper with information without alerting the rest of the network.

Privacy

Encryption through complex cryptography and obfuscation techniques ensures that GE and Dealers maintain control of their sensitive information (i.e., SOLD to information) and can decide which parties are granted permission to access this information via access to the correct key.

Shared ledger

Consensus mechanisms ensure that shared data is agreed upon, improving access to accurate information across the supply chain.

Transparency

Any participant in the network can access a record, with the correct permission from GE or the dealer. This is an opportunity for GE to be nodes on the Blockchain and monitor information directly, ensuring compliance.

TRACE: Machine Transfer Authentication Engine

Smart Contracts on TRACE

Smart contract is an agreement stored on a TRACE block with predefined programs that records compliance rules, stakeholder's data to self-execute and automate tasks for uninterrupted operations.

Smart contracts are traceable and tamper-proof. Regulations and data recorded on the digital contract can be configured. For ultrasound machine asset management, smart contracts will aid in automating compliance driven protocols of geophysicality, type of machine (Make/Model), unique ID (Serial Number) and other possible regulating factors for transfer of assets.

How do smart contracts work on TRACE ?

The contract is written in a code deployed on the TRACE blockchain. Smart contract is self-executing and does not require any human intervention. It works on a simple singularity of 'what if fulfilled then?' The 'what if fulfilled then?' regulations are first recorded on the smart contract and deployed on the TRACE blockchain for implementation.

If the ultrasound asset is transferred to an entity fulfilling all the norms and conditions laid out in the smart contract, the transaction of transfer will be reflected on the TRACE blockchain successfully. If a fraudulent entity attempts a transaction, the smart contract cannot execute, and the entity will be blacklisted and prohibited from any entry on the blockchain.

The TRACE solution provides configurable restrictions, fraud and anomaly prevention engine which hides the complex logic building and smart contract programming by transpiling the configured rules to smart contract in real time.

What sets TRACE Smart contracts apart?

- The autonomy drill: The implementation of the contract removes the need of intermediaries as it does not require any authorization or command to run. This results in cost-saving and improves efficiency of data tracking.
- Private preset: Unlike other systems that are prone to malicious attacks smart contracts built on the TRACE engine are highly secure as the data fed is encrypted.
- Irreversible & interoperable: Data stored on the TRACE smart contract is auditable and secure. The data is shielded with complex programmed layers to keep the transactions of the entities (machine asset, buyer/seller and manufacturer) secure.
- Time saver: Smart contracts can save hours of time and cumbersome operations carried by dependents. The TAT of the smart contract is relatively quicker and more reliable than any other system.

The TRACE Blockchain

By leveraging stability of the blockchain architecture and the smart contract ecosystem of the blockchain Virtual Machines , our solution will develop and maintain blockchain software that bridges the gap between stability and scalability. This includes potential integrations with sidechain platforms if required in the future and the creation and deployment of TRACE, as a public-facing blockchain with transparency, connectivity, and auditability as its primary mandates.

This scalable blockchain solution that can be configured to solve complex issues of product traceability, regulation of compliances of varied kinds and accruing data from various entities.

Machine Transfer Restriction helps GE set up the restriction rules like geolocation compliance, asset details like: type, size, power, compatibility, manufacturing date and place and other specifications without any programming and technical assistance.

TRACE: Machine Transfer Authentication Engine

The machine transfer restriction engine is the key feature of this solution. Data is fed by the dealer to facilitate a successful transfer on TRACE blockchain. The machine transfer restriction engine conducts an intermediate transaction within the blockchain.

This is a preliminary step of the verification process on the block. If the transaction made on the chain meets the rules of the contract, the transaction moves to the final stage and is recorded on the blockchain**.**

Prediction and Anomaly Engine

As businesses have complex ecosystems that include agencies outside their perimeter the aim of the TRACE blockchain technology is not just to help GE track and transfer of ultrasound machine assets but also identify and filter suspicious entities.

This solution can track any suspicious activity, network intrusion, unrecognized traffic pattern, repeated failed machine transfer attempts.

Our blockchain is empowered with well-defined autoML that will provide real-time updates on detection of a suspicious activity on the chain. The prediction engine works in an automated state and will immediately blacklist any entity (Dealer or End-User) that attempts to access the chain through an unauthorized channel and with incorrect or unsanctioned credentials.

Security of intermediate transactions

TRACE provides an exclusive feature of intermediate transactions on the blockchain that enhances the asset verification security process. Once an ultrasound machine asset is created, it is stored on the chain. The intermediate transaction works as a primary drill to verify the authenticity of the entity before it is validated.

When an entity registers on the chain to carry out a function, the data is first shot as an "intermediate transaction" to verify its authenticity.

If the data is correct and meets the compliance regulation rules of the smart contract, the transaction will be verified and stored on the chain.

Dealing with Anomaly over chain

Crux of the TRACE blockchain system is it's disruptive technology that helps in asset   tracing and fraud prevention through the course of any movement of assets. The first dealer will be registered on the blockchain and his record on the block will receive data of the consecutive buyers and sellers of the asset. This data on the blockchain will be visible to authorized participants only. In case of an anomaly detection, an independent chain will get auto-generated between the dealer (first participant of a particular asset) and the intended buyer. This chain will help the dealer extract all information about the machine asset and the buyer. If the intended buyer/ party is identified as 'malicious' or he does not meet the rules set in the smart contract, the dealer will have the authority to blacklist him.

Future scope of TRACE blockchain architecture

The need for smarter end-to-end supply chain networks has become crucial. The ability to track product flows, share accurate information and data amongst stakeholders and integrate wide product portfolios is essential to GE supply chain leaders.

TRACE Blockchain can scale a system with custom functionality by integrating Internet of Things (IoT) & RFID/NFC to get better tracking of asset movement. TEK Medical Systems has successfully modeled and implemented IoT use cases and has the expertise to assess, architect and implement use cases for IoT & RFID/NFC.

TRACE Blockchain technology can eliminate supply chain complexity by combining it with RFID/NFC solutions. Near Field Communication (NFC) technology is a contactless solution based on a radio frequency field, designed to exchange data between two devices through a simple touch gesture. Radio-Frequency Identification (RFID) uses electromagnetic fields to identify and track tags attached to objects.

Combining RFID/NFC with TRACE blockchain can lead to product flows with increased transparency, more security and automated administrative operations through the use of TRACE smart contracts. NFC technology provides a safe connection to data about product origin, certifications, and the journey through the supply chain. These insights provide key benefits to all stakeholders, from suppliers through to consumers.

With the increasing adoption of IoT, there is a challenge in securing collected user data and TRACE Blockchain is an excellent fit. The technology behind IoT systems, simple by its very nature, has led to complex protocols with conflicting configurations. Almost all of today's Internet of Things ecosystems are based on centralized systems. Centralized clouds and network equipment involved in these architectures are exponentially expensive as the number of devices increases.

In this centralized model, IoT devices are authenticated, identified and communicate their data in real time or semi-real time mode with the cloud. In a highly connected smart-city scenario, where private homes, offices, streets with their traffic lights, transportation and pedestrians produce a mass of data every second, the cloud infrastructure needs to scale, leading to a price increase. As the environments become smarter, the higher the cost of this type of infrastructure will be. IoT devices are subject to various types of vulnerabilities and often if a device connected to the cloud infrastructure is breached, the whole infrastructure is at risk.

Since TRACE Blockchain is decentralized in its design, this approach to the Internet of Things makes many of the classic attacks unenforceable. Adopting a secure, tamper-evident peer-to-peer communication model to process transactions between IoT devices can also significantly reduce the costs associated with installing and maintaining various network and cloud systems and distribute computing and storage needs across devices that form the Internet of Things networks.
This will also prevent "single point of failure" vulnerability, where the failure of a single node in a network can lead the entire network to collapse.

With TRACE Blockchain, message exchanges between devices can be treated in the same way as dealer-to-dealer transactions. GE's devices will rely on cryptographically signed transactions and digital smart contracts thus, guaranteeing a optimum level of security that

15

was previously unobtainable. The fact that TRACE Blockchain cryptographically verifies the transactions eliminates the possibility of man-in-the-middle attack, replay and all other classical "device-to-cloud" attacks.

Vulnerability Comparison

Attack	Cloud	RFID	NFC	TRACE Blockchain
Wrapping	X			
Eavesdropping	X	X	X	
Flooding	X			
Stealing Account	X			
MITTM	X	X	X	
Browser	X			
Reflection	X			
Session Hijacking	X			
Replay	X	X	X	
Brute Force	X			

TRACE: Machine Transfer Authentication Engine

Dos/DDoS	X	X	X	
Skimming		X		
Phishing	X		X	X
User tracking			X	
Spoofing	X		X	

The process: adopting TRACE and Smart Contract

Contrary to popular belief that adoption of technology requires more time to adopt, our TRACE blockchain solution requires minimal time to set in, with a user-centric dashboard and seamless interface adoption of the TRACE blockchain system is straight-forward.

Pseudonymous blockchains, like Bitcoin and Ethereum, display a limited amount of information regarding the origin, amount, and destination of data or smart contract. These solutions, while practical for moving value outside the traditional financial system, can be difficult to integrate with services that cannot bypass KYC requirements of the GE dealer-agreement.

TRACE blockchain facilitates the following: the collection of users' data off-chain using traditional collection strategies with the ability to provide attestation points for third-party utilization. For example, if GE wants to confirm a dealer's completion of KYC requirements in order to participate in a transaction, confirmation can be found on the TRACE blockchain. But this confirmation would not disclose the dealer's personal information (i.e., sold-by/sold-to information) mitigating data leak risk and facilitating the adoption of TRACE across stakeholders.

Asset Transfer & Onboarding on TRACE

Onboarding Ultrasound Assets on the TRACE Blockchain

GE can choose to customize the onboarding process of the machine assets by opting to add asset details like **date of manufacturing, Machine unique ID, date and place of manufacturing,** that can be configured using TRACE (**machine transfer restriction engine)** for restricting any unauthorized machine asset transfers.

Ultrasound Asset Onboarding – process on TRACE at point of manufacture

Onboarding of machine assets on TRACE is easy and quick with TRACE's friendly interface, users can simply log in to the dashboard with the private key i.e, the password or credentials assigned at the time of the system deployment. Next, they can create their machine asset on the dashboard by entering asset details like manufacturing date and place, Unique ID, model name and other relevant information of the asset. This process will create the machine asset and store it on the TRACE blockchain.
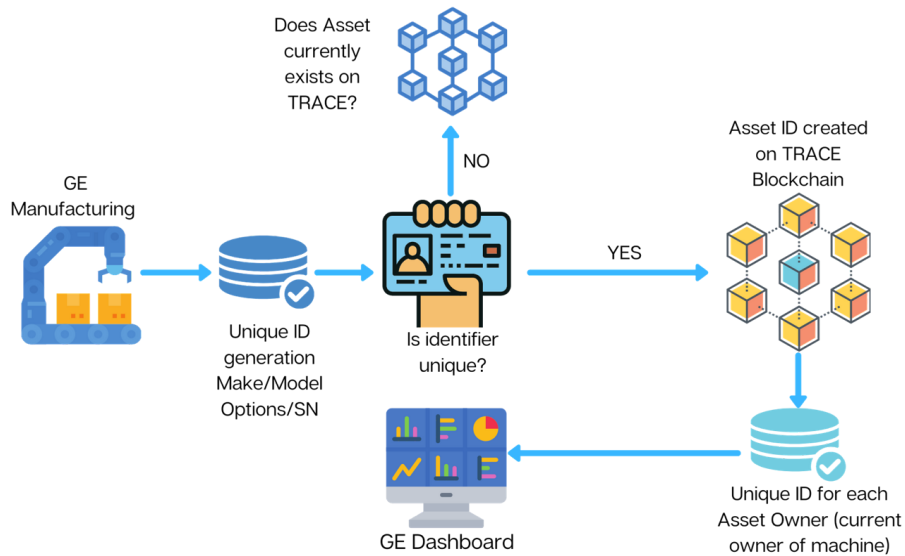
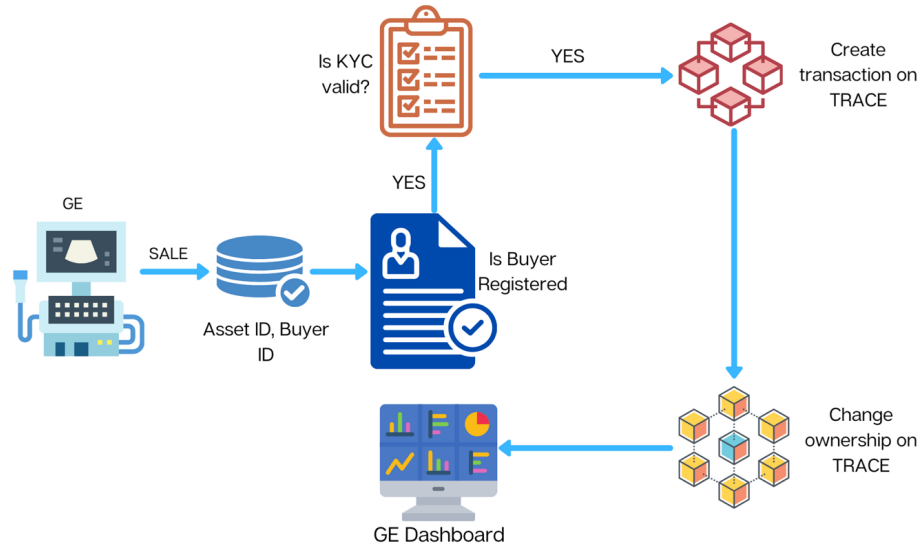**GE's path to Asset Registration on TRACE Blockchain**

Process to register Sales on TRACE Blockchain

The TRACE blockchain solution also simplifies the process of ultrasound machine asset sales and change in ownership. GE's sales executive will log in to the dashboard with their private key to get access. In the next step they need to scan the QR code or enter the unique ID of the asset to check for KYC registration of the entity who intends to purchase the asset.

If the KYC is valid, the GE sales executive can execute an asset transfer on TRACE and this transaction will get updated on the TRACE blockchain and will also notify the GE supply chain operations.

In case the intended buyer is blacklisted on the system for fraudulent or suspicious behavior, TRACE will not process the transaction.

TRACE: Machine Transfer Authentication Engine

GE's path to Asset Sale & Transfer on TRACE Blockchain

Dealer's Journey on TRACE Blockchain for Asset transfer

TRACE Blockchain aims to amalgamate data of current ownership of assets by a dealer and GE's data created at the time of production on TRACE chain via automation of data analytics for absolute transparency and traceability.
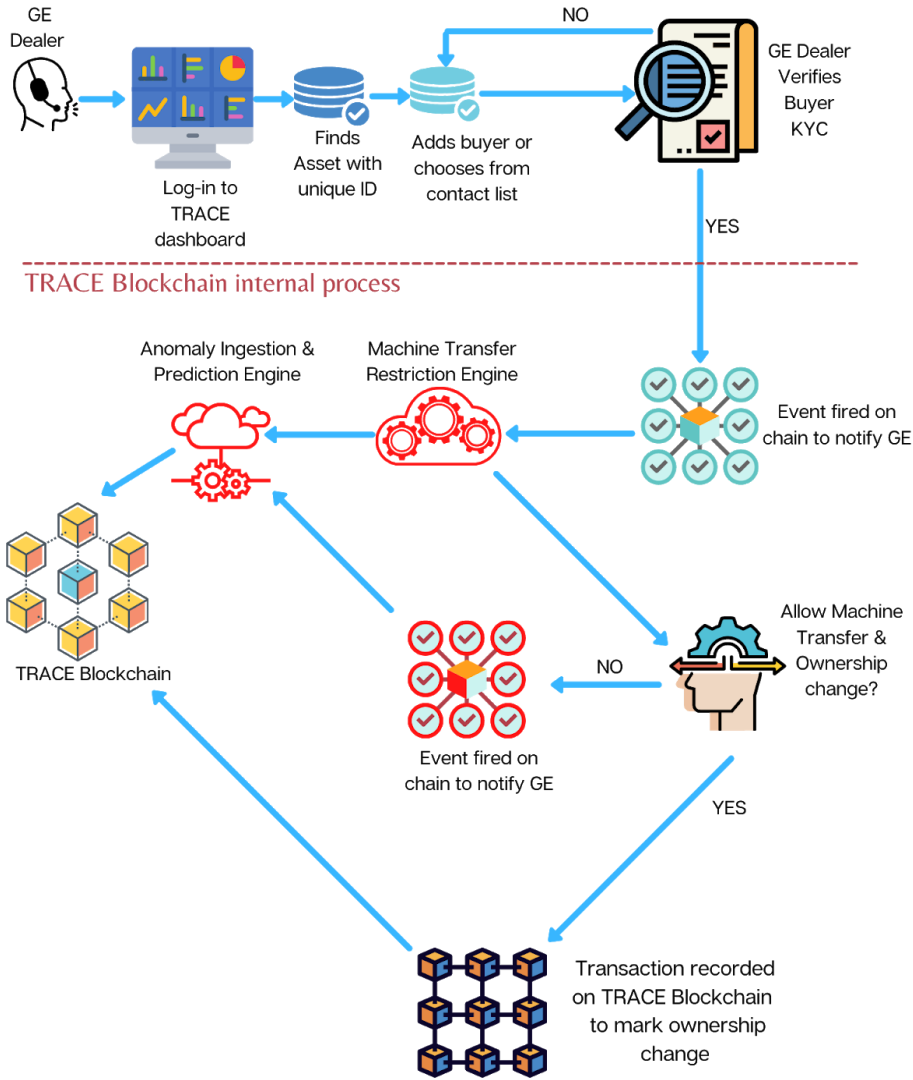
Dealer's path to Asset Sale & Transfer on TRACE Blockchain

End-User can log in to the TRACE dashboard with their credentials. To transfer/sell a machine asset they can select the asset type and scan or enter the unique ID.
Next, they need to add the buyer's details or add them from their contact list to check if their KYC is valid.

TRACE: Machine Transfer Authentication Engine

If yes, they can transfer the asset in their name and a pre-set notification will be fired to GET via TRACE Blockchain. If not, the request for KYC will be directed to the Machine Transfer Restriction Engine.

TRACE: Machine Transfer Authentication Engine

Dashboard Details

GE's Dashboard

The TRACE system offers an easy-to-use dashboard interface to manage, create and verify assets and the details of the intended buyer. GE can feed information of the ultrasound machine assets like regulatory compliance on the asset, model name and type, manufacturing year and place.

GE can get access to the attempts made by unauthorized sources. Geophysical tracking of the machine asset and the current ownership status of the asset can also be tracked through the dashboard.

It also allows GE to configure the restrictions laid on the assets. The TRACE system allows adding and updating assets, checking the whitelisted and blacklisted entities on the TRACE blockchain. It also showcases the confidence scores of the customers drawn via the anomaly and fraud prevention engine and the transfer restriction engine.

Customer Dashboard

The TRACE solution also offers a customer dashboard for sale/ purchase or auctioning of the ultrasound machine assets. The customer/dealer/end-user dashboard allows buyers/sellers to view the current ownership and history of the machine asset.

To make a machine asset transfer, an individual can log in to their dashboard with their private key i.e., the password or credentials assigned to them. To check the current status of a machine they can simply enter the machine details or scan the barcode of the asset (if they can) and check the compliance rules and machine asset details.

To make a machine asset transfer the customer needs to add details of the potential buyer or can simply autofill the entity's details if they are on their beneficiary list.

To transfer a machine the user will need to check the KYC status of the buyer, if the KYC is verified (validated) he/ she can transfer the Ultrasound asset. Once the transfer is made, the machine restriction transfer engine will shoot this transaction to the TRACE blockchain to save the data. In order to maintain fairness-of-business each transfer of the KYC is visible only to the transfer to an individual who is authorized to see the KYC data.

Appendix A

List of security issues affecting the cloud infrastructure related to IoT devices:

1. Wrapping attack: This attack occurs by duplicating the user credentials during the login process, and the SOAP2 messages that are exchanged during the connection setup between the web browser and the server are modified by the attackers.

2. Eavesdropping: under the term eavesdropping fall the techniques used to intercept communications that occur within a channel established between two authorized users.

3. Flooding attack/DOS attack: The goal of a DOS attack is to consume all the available resources of a server to make the system unresponsive to legitimate traffic.

4. Data Stealing problem. This type of attack involves hacking the data and security of cloud systems by stealing system access credentials.

5. Man-in-the-Middle Attack (MITM): in this case the attacker succeeds in gaining access to the communication channel between two legitimate users, being able to both intercept and modify the information without making anyone aware of it.

6. Reflection Attack: This type of attack is perpetrated in challenge-response type systems that use the same communication protocol in both directions. The idea behind this type of attack is to trick the victim by asking him for a solution (response) to his own challenge.

TRACE: Machine Transfer Authentication Engine

7. Replay Attack: The replay attack is a form of cyberattack that targets computer networks in order to take possession of an authentication credential communicated from one host to another, and then propose it again by simulating the identity of the issuer. Usually, the action is carried out by an attacker who interposes himself between the two communicating sides or from a spoofed IP.

8. Brute force/Dictionary attack: in a brute force attack, a series of attempts are made to guess the credentials of a certain system, based on information generated through specific dictionaries or by specific rules.

9.

TRACE: Machine Transfer Authentication Engine

Appendix B

List of abbreviations:

PoW	Proof of Work
PoS	Proof of Stake
DPoS	Delegated Proof of Stake
pBFT	Practical Byzantine Fault Tolerance
IoT	Internet of Things
DNS	Domain Name Server
DDoS	Distributed Denial-of-Service
RFID	Radio-frequency identification
SOAP2	Simple object access protocol v.2
MITM	Man-in-the-middle attack
SaaS	Software as a service
NFC	Near-field communication
PoS	Point of Sale
PK	Public key infrastructure
DAG	Direct Acyclic Graph
KYC	Know your customer
IPFS	InterPlanetary File System

TRACE: Machine Transfer Authentication Engine