



## AIDC Solution Development (Middleware) platform

SkandSoft Technologies is a Software development company with dedicated focus on the AIDC space.

SkandSoft Technologies 1.0 version of SETU™ [US & Global patent applied and pending], is a pioneering RFID middleware platform which is also a Solution development platform that meets an exhaustive list of business requirements that would ideally be required from a RFID solution.

SkandSoft Technologies SETU™, our RFID Information Management Platform (also an RFID/AIDC Middleware), **is the recipient of the Frost & Sullivan, 2006 RFID Emerging Technology of the Year Award.**

<http://www.frost.com/prod/servlet/press-release.pag?docid=71774565>

SETU™, conceived on the SkandSoft CONQUER approach, is a strategic and organic evolution of future business requirements in software, unlike many of the current offerings in this segment, which are reactions to the mandate driven RFID space, and thereby limited, by their reactionary nature.

Outlined below are some of the unique features of the SETU™ RFID platform, which makes it the most obvious choice for a RFID environment of today, which very soon would grow to accommodate other automatic data capture technologies.

- SETU™ is one of the most evolved approaches (and not just a REACTION to the mandates) to solution development in the RFID space that incorporates debuting features for advanced business functionality such as
  - Embedding Business Processes onto the RFID [AIDC] Grid
  - Dynamic Thresholding and
  - Progressive Event Filtering (patent pending)

- SETU™ is the only platform that supports EPC RP1.1, TDS 1.1.26, ALE 1.0
- SETU™ is the only platform to support RP1.1 with both RP and non-RP readers (ISO and EPC Gen1, Gen2). This unique feature is achieved by converting the conventional reader command sets responses to RP compliant responses
- SETU™ is the only platform to support all 21 Van der Aalst patterns - Thereby allowing the users to create and deploy ANY business process through zero-code configuration screens for solution development. By hard coding 60% of all the common functionality of RFID [AIDC] solution directly onto SETU™, the balance 20% is for industry specific customization & 20% for Client specific customization.
- Short term RFID to Long term AIDC – SETU™ is designed to eventually accommodate the entire spectrum of technologies that would service the wireless and sensor based technologies space.  
SETU™ is the only middleware that is completely RFID hardware vendor neutral [Alien, Texas Instruments, etc.], Protocol neutral [ISO, EPC, etc.] & Frequency neutral (HF, UHF, etc.). Thus, you can use specific and relevant hardware in the same solution and make your solution far more efficient.
- SETU™ is an active partner in your business process, not merely a set of passive software codes  
Apart from interacting with various types of hardware devices transparently and acquiring, the data, SETU™, also applies business and physical context to the data. This gives an opportunity to monitor, manage and enforce business process compliance. Any deviation from the defined process are captured as events and relevant actions taken to minimize the deviations- thus covering the full cycle of data acquisition-business contexting - decision making - feedback. This makes SETU™ an active participant in the Business Process - not just a collection and bridging mechanism.
- Multiple business requirements on single solution – Multiple Mandate Modules  
SETU™ 1.0 offers many first-time features including automatic compliance environments for specific mandates from Wal-Mart and US Department of Defense US on the same platform. This would include any other industry specific mandates or compliance requirements.

SETU™ can also support customized modules for automatic compliance to relevant sections of the Sarbanes Oxley Act [SOX] that call for real-time information on material assets.

SETU™ helps end customers by facilitating enforced compliance to internal process compliances like ISO.

- Open source platform Lowest TCO amongst any possible comparison  
Irrespective of the number of computer systems that need to be deployed along with your RFID solutions, with SETU™, you are saved any indirect cost in the form of license costs of Microsoft Windows OS and various application and database servers – as SETU™ runs on Red Hat Linux.
- Web based, multi-location business control  
All configuration, monitoring and management of all the hardware devices can be done from one central location irrespective of the distribution of physical location, different hardware vendors, protocols, standards used.
  - Process definition, setting up events and actions can be done remotely over web E.g. Change of an employee security status or a documents security status.
  - Access to Reports – Custom reports can be designed on the fly by the management as required and can be access remotely. Role based portals allow customization of types of reports for various groups of end users.
- Health Module to monitor and control the data collection activity – SETU™ is the only middleware offering a comprehensive health management module for 24X7 control of RFID hardware devices. The module is independent of hardware parameters – vendor, frequency, protocol, etc. SETU™ supports SNMP and non-SNMP devices also.
- Only middleware sensitive and user friendly to dynamics of business environments. SETU™ allows maximum flexibility among the available middleware's in the following aspects:
  - Modifying a business process
  - Each object to be RFID tagged will have different characteristics to be written onto the tags. This requirements call for designing various UIs and table designing and mapping. Some of the characteristics would come from existing databases – e.g. list of documents, name of the employees etc., SETU™ allows the users to create such UI on-the-fly and dynamically creates relevant tables and maps them.

- Association of various objects – Documents assigned to employees, divisions, classifications, etc. Association with various options like Multiple parents (e.g., Same document assigned to 2 employees), Follow Order (e.g., documents can be assigned security measures only after Employee authentication)
- Selective Data Treatment – Optimal use of collected data in various applications:
  - Aggregated Data                      ERP (Oracle, etc.)
  - Raw Data                                  Business Analytics
  - Statistical Treated Data              Reporting/ BI Applications
  - Correlated Data                        Industrial Control Systems
- Seamless integration with enterprise IT environments and third party applications
  - Integration with external applications is facilitated in multiple ways:
    - Through shared XML files
    - Through Web Services
    - Through X-DB
    - Through SETU™ API's that can be called from the external application
      - Get reports based on Process
      - Get reports based on all the States of a Process
      - Get reports on all the Events
      - Get raw data – by Antenna, Reader, Zone, State and Process
- Distributed architecture provides largest physical coverage under single license  
 SETU™ execution is distributed between the Clients and the Server to minimize dependency on single-node and to have contingency (e.g., if the network is down between server and client, client can independently handle all the data till network comes up and the server takes over).  
 A single SETU™ license covers 2560 data capture points, which is more than sufficient for real life deployments at manufacturing plants etc. SETU™ is designed to be the ideal and most preferred RFID platform for solution development for any functional vertical.
- SETU™ allows the users to subject the raw data collected from the devices to Business Context (Business Process Definitions as provided by the user), apply various constraint rules, event rules and actions

- Full cycle of data acquisition – business contexting – decision making – feedback  
SETU™ also makes use of other technologies like ICS (Industrial control Systems) like PLC's, SCADA, and Micro Controllers, etc. to provide a closed loop solution, e.g. triggering a Security Gate door control, if there is an unauthorized movement of Assets, etc.
- A single SETU™ platform can be used to design and deploy multiple business processes-up to 20. The same infrastructure (RFID hardware) can server all other applications there by increasing your ROI.
- RFID enables Business Process Reengineering in a number of instances. SETU™ allows any such changes without a need to call a System Integrator or going for an extra license or application. End users themselves can embed the changes on to the platform as SETU™ is Zero-Code and highly intuitive.

With all the above unique and SETU™ specific advantages, the scalability (physical – maximum number of data capture points, process – this is the only middleware that supports multiple independent processes on the same platform, up to 20 processes) ensures that SETU™ by far the most cost effective software approach for RFID.

SETU™ 1.0 is the most evolved approach to un-structured data domains like RFID and is a perfect long-term partner for all those who intend to use such technologies.