AMT - Asset Management Software:
Solutions for Mining Companies
AMT Mining Solutions

AMT is a highly configurable asset management software tool built for mining and other heavy equipment operators.

AMT has evolved since 1999 and today is used by leading equipment management companies around the world. AMT’s proactive approach to equipment management is helping organisations reduce downtime and drive down operating costs.

- Proactive approach to equipment management
- Management by exception and priority
- Built on life cycle costing principles
- Standardised ‘equipment-centric’ data structure
- Highly configurable
- Multiple integration points or stand alone system

There are three base mining products that can be further configured to meet the exact customer requirements.

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<th>Suitable For</th>
<th>Key Features</th>
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<td><strong>AMT ERP Enhancement</strong>&lt;br&gt;Large and mid-sized miners with an existing ERP or asset management system. AMT enhances and integrates to an existing ERP system that performs maintenance planning and has a work order system.</td>
<td><strong>Modelling/Feasibility Studies</strong>&lt;br&gt;<strong>Life cycle costing &amp; Budgeting</strong>&lt;br&gt;<strong>Reporting &amp; Analytics</strong>&lt;br&gt;<strong>Shift log</strong>&lt;br&gt;<strong>CBM (Condition Based Maintenance)</strong></td>
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<td><strong>AMT Full Asset Management</strong>&lt;br&gt;Heavy equipment companies looking for a complete asset management solution. Includes full planning and work order systems with integration to ERP Finance, Inventory, Purchasing and Payroll systems</td>
<td><strong>Full Asset Management</strong>&lt;br&gt;<strong>Strategy</strong>&lt;br&gt;<strong>Planning</strong>&lt;br&gt;<strong>Work Orders</strong>&lt;br&gt;<strong>KPI and Performance Analytics</strong></td>
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<td><strong>Modelling/Feasibility Studies</strong>&lt;br&gt;Life Cycle Cost modelling for feasibility studies and equipment purchase selection. Quick and easy to deploy on either a Server or a PC. No integration, stand alone modelling tool.</td>
<td><strong>Sophisticated zero-based budgeting</strong>&lt;br&gt;<strong>What if scenario analysis</strong>&lt;br&gt;<strong>severity analysis</strong>&lt;br&gt;<strong>easy export</strong></td>
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AMT Base Principles

Supports Best Practices
The first step in the design of AMT was to build the Framework that is a best practices tool that maps out and defines equipment management best practice. AMT has been developed to support those processes.

Life Cycle Costing
AMT projects full life cycle costs and productivity for assets (unlimited term) and maintains a full equipment history database.

Multiple Projections
Multiple projections (maintenance strategies) can be maintained for equipment to maintain records of original assumptions, take a snapshot at a certain time and to “play what-if” with different scenarios. These Projections can be based on different severity profiles.

Escalation
AMT automatically adjusts Projections for escalation and applies different methodologies based on the analyses being performed.

RCM Principles
AMT supports RCM principles. Probabilities of failure modes are incorporated into future projections and provides analyses of historical performance against original RCM assumptions.

All asset related costs
All asset related costs can be captured/processed and forecast in AMT to provide a complete set of data for analyses. This includes Work orders, other equipment specific operating costs not normally captured on such as finance and fuel consumption and site overheads - produces 100% of an operating budget.

Real time
AMT is a dynamic, real-time program (no waiting for overnight routines)

Single integrated database
AMT draws on one database - no duplication of system tables or data entry

Configurable
The modular construction means AMT can be configured to meet a specific customers’ needs - modules turned on/off. AMT can be deployed on a server or on an individual’s PC.

AMT Complete Functionality Map
**AMT Functionality Overview**

**Management Reporting**
- **Dashboard**: Real time reporting of management KPIs in a graphical format
- **Financial**: Real time forecasting, Life-cycle cost analyses, Equipment Evaluation (Cost Per Tonne, Discounted Cash Flows), Benchmarking and determining optimal equipment replacement points (Capex forecast)

**Equipment Performance**
- **Availability, reliability and cost performance reporting and analysis**

**Maintenance Efficiency**
- **Efficiency measures for Strategy-Planning-Daily Operations (Execution) - ie Scheduling accuracy, Backlog ratios etc**

**Strategic Centerlines**
- Maintain centerline (baseline) life-cycle templates for equipment.

**Modelling**
- Model fleet scenarios. Used for analysing and comparing different tender or bid options - costs and productivity. Can include overhead costs.

**Budgeting & forecasting**
- Specialised module to streamline the creation and maintenance of accounting budgets and forecasts. Can maintain multiple versions, export to corporate budgeting systems and perform analyses against actual performance.

**Strategy Optimisation**
- Routines to define and optimise maintenance strategies - identify risk areas, play “what-if”, view fleet performance, understand life-cycle impact

**Component Management**
- Maintain technical information on component performance, analyse component performance (ie “bell-curve”, analysis of failure modes etc) and maintain component change out schedule

**EM Issues**
- Log of all equipment issues and the steps to resolve them. Provides a knowledge database to prevent others re-inventing the wheel

**Daily**
- **Asset Register**: Maintain asset register, calculate depreciation and other equipment charges
- **Maintenance Strategy Definition**: Define the base maintenance strategy which drives the maintenance program and life cycle cost engine
- **Standard Jobs**: Standard jobs with bill of materials, labour times etc
- **Condition Based Maintenance**: Dive strategy from external systems such as oil sampling and electronic equipment systems. Aligns to an RCM methodology.
- **Rotables Management**: Component tracking and rotatable inventory management - forecast rotatable inventory levels to identify ‘spikes’
- **Long term Planning**: Forecast components and labour requirements
- **Daily Planning**: Backlog management, daily planning, raising POs’ and resource levelling
- **Shift Log / Work Close Out**: Service tool - electronic shift log, quick access to equipment history and component status, downtime capture and analysis, work order close out
- **Library**: Store all work scopes (job instructions, JSAs’, inspection sheets), training materials, legal contracts and best practice information
- **Work Orders**: Capture equipment costs (or import from external ERP)

**Specialised**
- **MARC Financials**: Billings analysis, MARC overheads tracking
- **Plant Hire / Rental**: Calculate Plant Hire rates, process monthly plant hire invoices and management reports on recovery of costs and maintain “condition based depreciation” accounts
AMT Architecture

HIGHLIGHTS
- AMT is a suite of software products that can operate as a standalone tool or as part of a multiple vendor solution
- The database layer is built on SQL Server, the comprehensive, integrated data platform from Microsoft
- The application layer uses the .NET Framework, the world’s leading application infrastructure for client/server applications targeting the Windows platform
- The client layer is primarily implemented in .NET smart clients; some AMT products deliver data to a wider audience in a web browser and are implemented in ASP.NET
- Reporting is achieved using Crystal Reports and Adobe Acrobat; reports can also be exported to a variety of formats including Excel and CSV
- For maximum interoperability, data interchange is available through a variety of methods, including XML Web Services; this means that AMT can integrate seamlessly into a Service-Oriented Architecture (SOA) environment

PERFORMANCE
- AMT has been designed from the ground up to perform well in a distributed environment, including slow networks with high latency
- All data transferred between server and clients are minimised through the innovative use of object models, design patterns and caching techniques
- Custom user interface controls have been written in-house to specifically address performance and usability issues
- Configurable compression algorithms ensure that network bandwidth is optimised

SCALABILITY
- Since it is built on standard and well-known Microsoft platform technologies, AMT can take advantage of the scalability features provided by these products
- Windows Server and SQL Server scalability features such as server clustering, database partitioning are available for AMT deployments
- Transactions are managed in Distributed Transaction Coordinator (DTC)

SECURITY AND AUDITING
- Security has been built into the AMT suite of applications from the ground up
- AMT databases use SQL Server, which has advanced security capabilities supported by Microsoft
- AMT Uses low-level client/server security, as well as the concept of user groups and customised access to menus depending on the user group to which a user is assigned; AMT can use Active Directory for user authentication, and therefore supports the “single sign-on” concept
About iSolutions AMT & AccTech Systems

iSolutions developed and own AMT and is a leading provider of services and training to mining equipment companies. Software and processes are based on a dynamic Life Cycle Costing (LCC) methodology which enables Equipment Managers to understand how the decisions they take today effect the long term productivity and cost of their operations.

AccTech Systems is the sole distributor of AMT software solutions in Africa. AMT, enterprise Asset Management Tool, is used by Mining Companies, Earthmoving Contractors, Equipment Dealers and other Asset Intensive companies.

To learn more about our products and services, please visit AccTech online at www.acctech.biz or alternatively contact AccTech Sales on +2712 664 0200 or email: sales@acctech.biz