History Of Satchwell BMS

1966  **Autoscan 200** supervisory & control systems employing time shared wiring techniques and serial scanning

1974  **Autoscan 600** restyled console with increased monitoring and control capacity

1979  **BAS 700 Series 1** Distributed intelligence BMS employing Intel based microprocessor technology in console and outstations, twin 8” floppy drives

1981  **BAS 700 Series 2** Re-engineered console with increased computing power and 5 Mega byte disk drive

1988  **BAS 2000** P.C. based console with 16 bit Intel computing power in the outstations, communications utilising OSI 7 layer peer to peer communications

1995  **BAS 2800** Improved user interface, increased communication performance greater system capacity and additional features

1997  **BAS 2800+** Improved graphical interface and performance, Windows95 & NT support, Database Alignment, Transaction logging, Live Values Export and Flexima introduction.

**Note:** BAS 2800+ is backward compatible to BAS2000 and BAS 700 Series
Systems Architecture

Remote Site

Remote Site

Remote Site

PSDN/ISDN X25

Token passing bus 802.4 / peer to peer

TCP/IP

Fibre

Copper

Ethernet 802.3

Management Level

Integration to Other Systems

Field Devices

Unitary controllers/field devices

Controllers/field devices

Automation Level
Satchwell Graphical Interface (S.G.I.)

- Active, outstation event based graphics
- Colours can change relating to plant conditions
- Picture object size can change in accordance with conditions
- Animation of plant operation
- ‘Hot Spots’ to other graphics
- Manual override of plant and set values
- Short form Editing of regularly reviewed parameters
- User configurable menus provide access to log data and editing functions
- Picture in Picture
- Multiple Zoom Facility
- Bitmap support
Satchwell System Manager S.S.M.

- Multi Document Interface (M.D.I.)
  - Index tree (Index structure)
  - Index segment (Index and point)
  - Display (requested information)
- Icons represent each point type
- Tool Bar for regularly performed functions
- Tool tips
- 5 customisable status bars per user
- Alarm banner showing current alarm status
- Screen layouts and formats can be customised per user
- Coloured Index identifies points with log information
- User Menus can be configured for most frequently used applications
- Unique Mnemonic Code and point title per point
- Active index displays alarms, logged points and aligned points
Reviews on demand using Drag and Drop
- a single specified point
- a specific plant
- a specific building
- all system points
  each can be further filtered by point types
• Alarm reviews
• Totalisation review such as plant hours run
• Plant review detailing
  - Manually overridden points
  - Points in timed extension
• Regularly reviewed parameters can be assigned to display group list
• Manual override of plant and set values
• Short form Editing of regularly reviewed parameters
• Manual Start, Stop, Temporary on/off, Auto
• Routines for predefined manual plant override
• Scheduler for timed activities
Password Protection

- High system security
- Enforced password change facility
- Time out of user log on with no keyboard /mouse activity
- Flexible privileges per user
- Access classes restricted plant types per user
Management Facilities

- Time schedules
- Relative time schedules
- Calendar time schedules
- Holiday schedules
- Heating/cooling optimised start/stop with linear and logarithmic algorithms
- Plant rotation
- Load cycling
Management Facilities

- PID control
- Enthalpy Control
- Night Purge
- Degree Days
- User Defined strategies, calculations and interlocks via programmable point
- Orderly reinstatement of plant after mains restoration
- Standby generator power up routine to maximum available load
- Maximum demand control with load shedding of items of plant
Satchwell Alarm Manager (S.A.M.)

- 4 categories of Alarms
  - Alarms - Reported to terminal(s) immediately on occurrence
  - Deferred Alarms - Stored in the outstations until another event initiates a link such as autodial
  - Delayed Alarms - Reported to terminal(s) but not displayed until requested or automatically at a predetermined time
  - Retransmitted Alarms - If alarms have not cleared within a pre determined time the outstations will retransmit them

- Alarms available on
  - Digital input condition state
  - Analogue input values high1/low1, high2/low2
  - Totalised values such as flow meters
  - Match/mismatch of plant condition
  - Hours run with 3 levels of alarm for P.P.M.
  - Programmable points

- Alarm display includes icons to represent alarm acknowledgement state
Satchwell Alarm Manager (S.A.M.)

- Alarms can initiate other terminal applications such as multimedia sound, video etc..
- Active point review per filter
- Long text message facility for all alarms
- Alarm display format configurable per user
- Multi terminal alarm acknowledgement facility
- Pre-cancelling of alarms and manual alarm inhibits
- Alarm report facility with flexible search criteria
  - Filters provide precise information
  - Time / date / event filters
  - 2 report format styles
  - Configurable per user
Satchwell Logging Manager (S.L.M.)

- Powerful logging facility as standard
- Easy set-up using “Drag and Drop”
- Toolbars provided for ease of use
- Any point can be logged
- Sample interval from 1 seconds upwards for dynamic logging 5 seconds for historical data.
- Historical data viewing and dynamic log information
- Multiple zoom facility on data
- Dual display of line graph and table of values
- Tables can be exported to other spreadsheet packages
- Multiple scaling options
- Circular and continuous logging facility
- Export facility to other packages
Building Integration Solutions
Options

• Satchwell Pager System Interface (S.P.I.)
  – Provides automatic paging on specific alarm and time occurrence
  – Multiple pager types supported (Site pagers and Public telephone system)
  – 12 parameters can be regularly updated on each pager (dependent on pager type)

• Protocol Interface Units (PIU) to other equipment typically;
  – Fire
  – Access
  – Security
  – Lifts
  – Lights
  – Intelligent electrical switch gear
  – Maintenance packages

• Building Services Interface to pass BAS information to 3rd party packages
• Satchwell Montage Monitoring and targeting software
Benefits of Satchwell and BAS

• UK design and manufacture
• Quality Assurance
• Low whole life cost
• Cost effective energy management
• Short investment pay back
• Programmable planned maintenance
• Modular design
• Industry standard P.C. hardware
• Industry standard communications
Benefits of Satchwell and BAS

• Easy of use
• Full supporting service
• Nexus bureau
• In house training specialists
• Proven contracting record
• Interfaces
• Complete solutions provider
• Partnerships