

SMART Lighting, Hamburg 2017

To BMS or LMS....?



John Sayer M. Eng

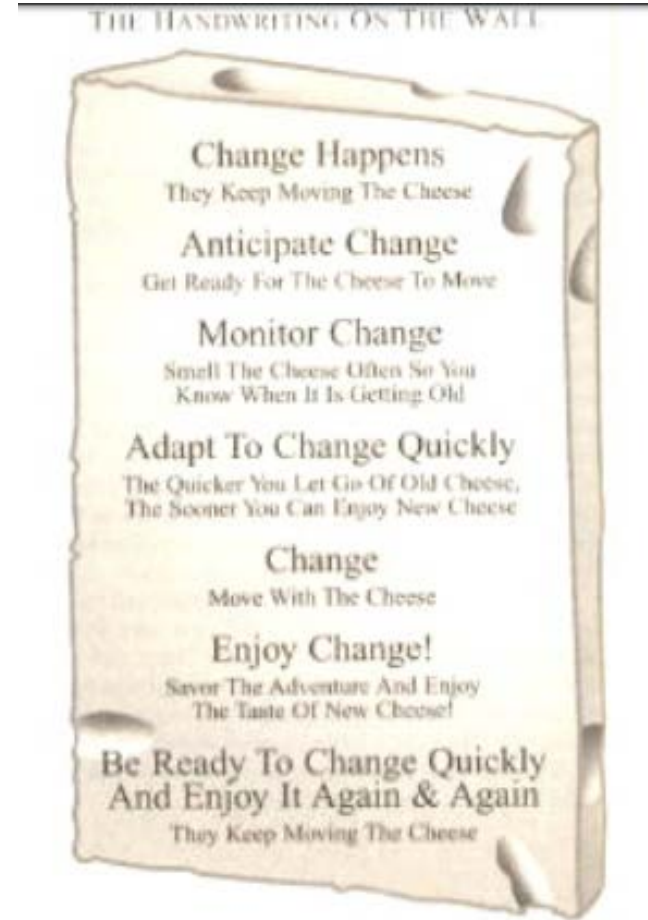
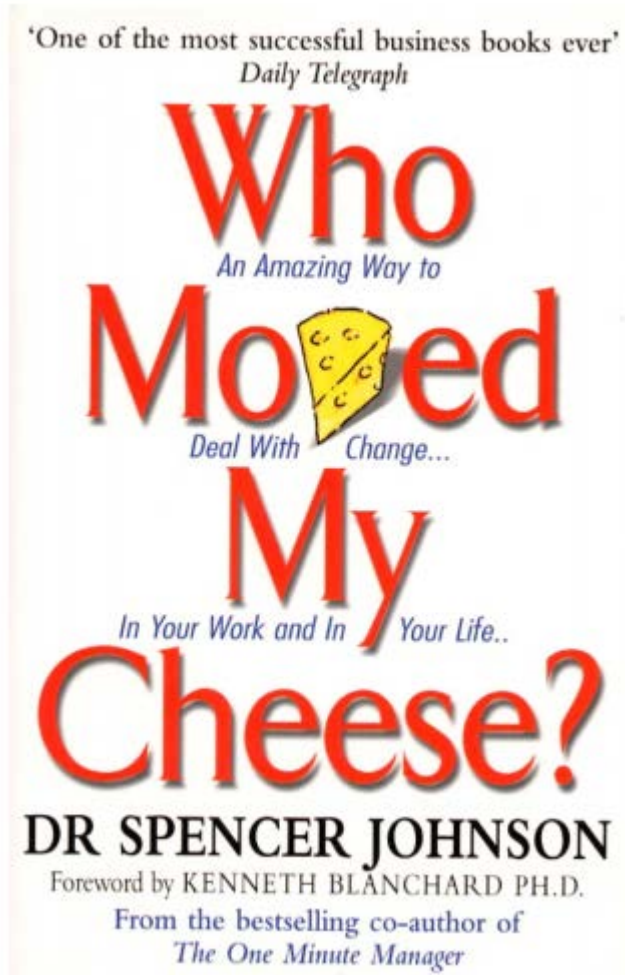
Senior Project Development Engineer
Advanced Integration Centre of Excellence
Building Efficiency
Tel: +44 7976 129426

E-Mail: John.a.sayer@jci.com

John is a work package leader in the OpenAIS innovation project



Coping with Change



Scenarios & Use Cases – Why controls and a Management System?

Commission

Power, addressing, grouping

Cause and Effect mapping

Use (Occupier)

Intervention

Automation and Personal Control

Easy Life

Use (FM)

Scheduling

Maintenance – Triage and Fix

Reportage - Energy, Occupancy

Change – Expectations rising, technology improving

Configure & Commission

Integration – Blinds, Room booking, Guard controls, Energy saving

User

Decorative, Colour, TuWh lighting

Personalised intervention automation and tools

FM

Predictive scheduling of energy commitments

Easy maintenance

Space management

Integrated room controls

Obvious Scenes and Modes built-in. Automation

Occupancy knowledge

Energy data analysis and billing (EMS?)

Mobile working

Increase
Building
Value

Building Wide System Integration? – Smart Lighting, Smart Building

Why do tenders still keep the lighting separate?

SMART building specs excluding the lighting!!!

What is going on and how long can that last for?

Why?

“Lighting is special and complicated.”

Yes.....but so are HVAC, Access control,

CCTV, Fire, PAVA, Phones,

Pagers, AV, IP infrastructure, Energy, Assett

locating etc.

Even LDAP for authentication and Enterprise Calendars for room bookings and QR codes over Guest Wifi for mobile controls.....

Building
Wide
Ecosystem

Growing Pains – Can the LMS grow to meet new demands?

Lighting Management System

Where does software run?

Local or central control

Database and API's

Lighting Smarts built-in

1000's of objects

Local TTL vs Cloud response

Room controls - trying

Built-in blinds control

Hardware and gateway add-ons

Lighting Management Supplier

Specify blind controls?

AV interfaces?

Training

Room controls and HVAC?

Other systems interfaces?

Databases and IT

Business model

How do you sell other things?

Direct or via collaboration?

Growing Pains – Can the BMS assimilate another system?

Building Management System

Where does software run?

Local group control or central

Discovery, many objects

How does it field control lights?

.....connects to controller

Room controls

Built-in?

Hardware and gateway collaboration

Other systems

Probably already connectable

History of systems integration

Building Management Supplier

Specify a lighting design?

Plan power and signal

Training

Lighting use cases and control logic?

Databases and IT

Already works with Energy, FM, IT ,
Security etc

Business model

Commission 2000 lights cost effectively?

Buy the parts and pay an electrician

Collaborate with experts

IoT – Change is bringing great opportunity

Future: is Bigger and MORE of EVERYTHING

More sensors

Sensors will be shared between “systems”

“Who put that CO2 sensor in my lights?”

More data, trends and analysis

More system interactions and automations

More Apps

More expertise?

Emerging: IP and PoE to luminaire

Wired IP(Mains) , PoE+, UPoE

Wifi, 6LowPan wireless

Who moved my Cheese? – Is it hard, soft, smelly or just old?

Success is repeatable and reliable: Revenue is assured forever?

Hardware.

Is it resource restricted? Does the model scale the system size and complexity with the hardware cost?

Software.

Is it 'free' with the hardware? If there was no less hardware to sell or it runs somewhere else could you licence it?

Niche.

Product, controls, services, value?

Special

M or E? Integrator?

Customers sticky or locked in?

Who moved my Cheese? – New flavours?

Business models and supply chain: Both impacted

CAPEX vs OPEX? Rent vs Buy? SaaS and LaaS

Value. ROI. Do all the new benefits mean clients have more money to spend on the lighting

Are they buying products or outcomes?

Comfort, safety, energy, rentability, future proofing?

Do they need only one supplier of cheddar?

Cheese shop or supermarket?

Does hardware need maintenance any more?

IT and IoT companies and App developers embrace the new models and have the resource or dot.com attitude to have a go to steal your software sale and run it on their hardware

What do you know about cloud and data security?

The future – BLAIM Design & Pre-Commission

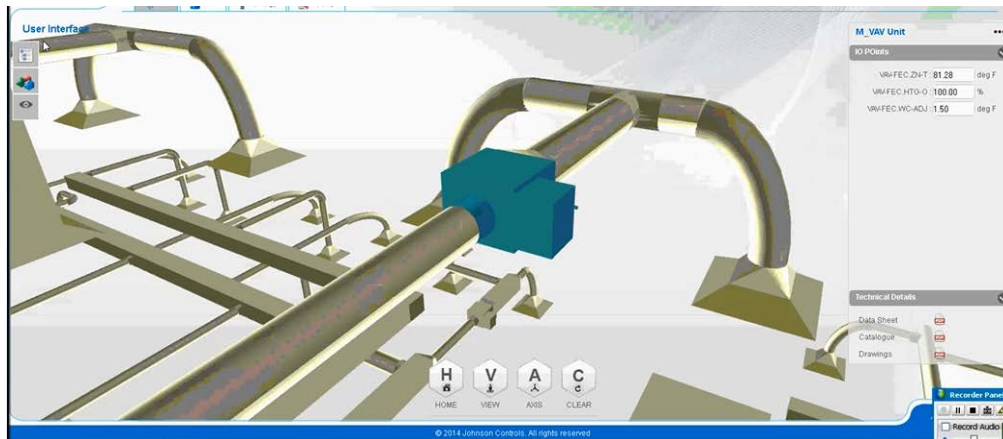
BIM analysis: building performance design

Materials & Building behaviours. Physical design clashes

Why not lighting design

Already does the general plumbing and cabling

Imagine it calculated & the lighting design into the building and pre-defined the obvious groups and triggers and scene/modes too.



Design by hand or automatically

Space types

Space behaviours

Luminaire and sensor groups

The Future – BLAIM total lifecycle

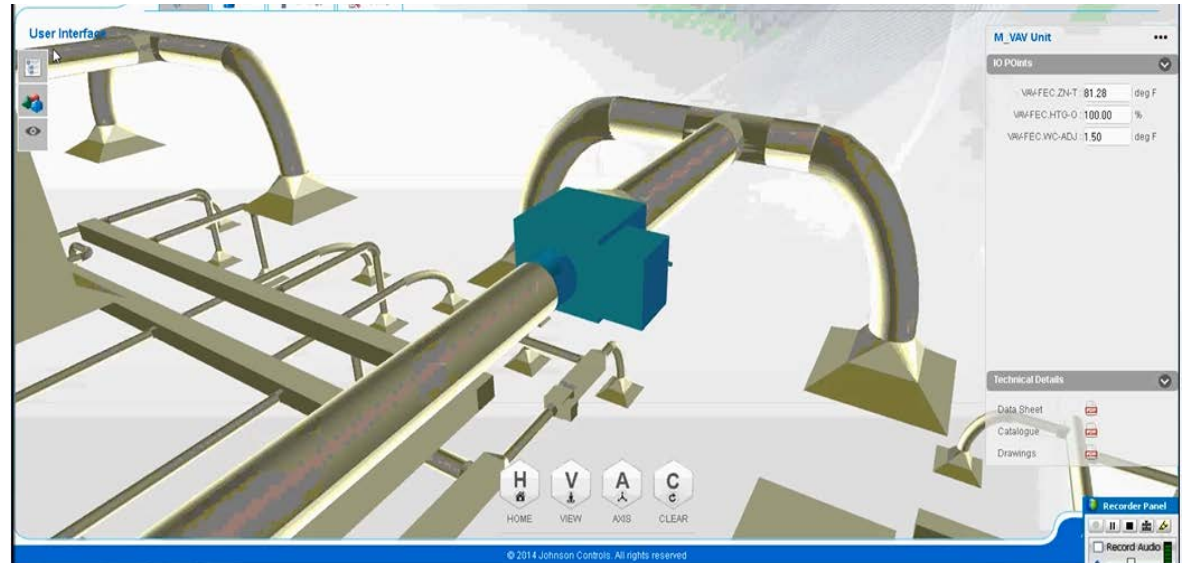
3D Context

Project status

Online status

DIM status

As-Built - Instant QA



You can do this in 2D now

BUT disparate tools and phases with no analysis

BIM (or other tools) could seamlessly oversee the whole lifecycle

Then it will be even harder to change the spec or design after the lighting design got done already as part of the RFP.

So is the answer the Supplier? – Who owns the vision?

M&E model

Generally supports price and silos

Electrical is lighting

HVAC control is mechanical

Master Systems Integrator

Owens the customer SMART vision

De-scopes the Integration tasks

Uses outside experts where needed

Works in the model with traditional supply

So is the answer the System? – Will it solve new use cases?

Future: OpenAIS

Full IoT, IPv6, wired and wireless

Open standard for intelligent solid state lighting

Platforms for tools, applications & innovation



Emerging: IP to luminaire

Wired IP, PoE+, UPoE,

Wifi and 6LowPan wireless

Current: DALI

BACnet over IP with light protocols, includes
blind and room controls.

OpenAIS will create and share an open architecture to support your changes and your ideas: bigger cheese, more types of cheese, more people buying cheese

“Create an open ecosystem to enable a wider community to deliver the smartness of light. Allow easy adaptability to cater for the diversity of people and demands”

We are solving the hard bits, the IT, IoT, Security, TTL, Data

You do the rest

.....or **I will**.....or an app developer ..or an IT provider.....or actually anyone that can see an opportunity.

Thank you

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Questions?

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