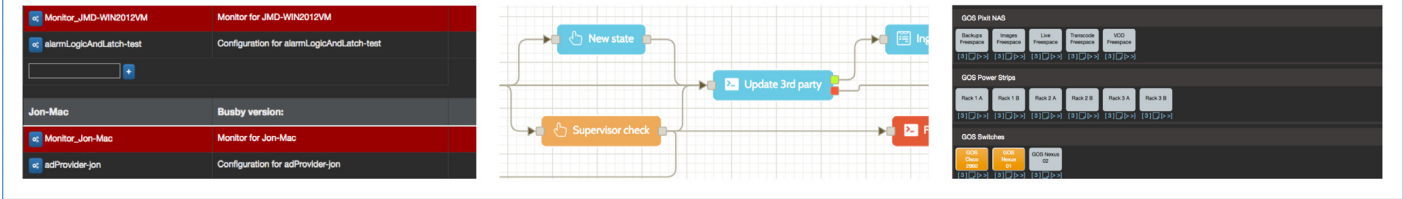# Xdream distribution

squared paper

State of the art microservices and ESB toolkit for workflow orchestration

7 MICROSERVICES USE-CASES
IN BROADCAST

A special strength of Squared Paper Ltd. (United Kingdom) is linking hardware and software together to simplify workflows and improve the control of file flows or streams. The Squared Paper team has many years of experience in the broadcast industry. They are particularly good at implementing control systems, designing automations and management systems. Their customers include some of the world's largest broadcasters. Squared Paper´s flagship product is the software toolkit Busby, an Enterprise Service Bus (ESB) based on micro services designed for rapid deployment in media applications.

x-dream-distribution GmbH is the exclusive master distributor of Squared Paper software solutions and products in EMEA.

In this document you can find several examples of broadcast workflows, implemented by Squared Paper in Europe.

Soho Post-Production House

Problem
A Soho post house required a solution to simplify their workflow with a mixture of automated and manual steps.

Solution
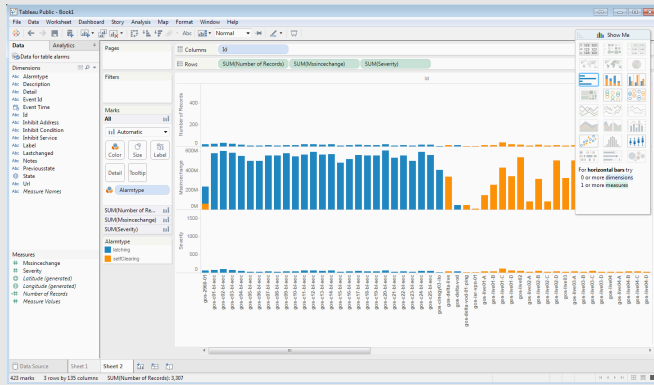We developed custom interfaces for:
- order processing
- media management
- transcoding

Busby Boards provided a simple but highly flexible UI to control their whole workflow at a glance. Operators have a simple to-do list and can track both manual and automatic steps through the workflow. The post house's customers have a read-only view of Busby Boards to avoid the need to phone up to check on progress.

Because the Motion Picture Association of America has stringent security requirements about who can access content, Busby's interface to Keycloak (a widely used open-source secure authentication server) was used to provide HTTPS authentication and role-based access to Busby interfaces.

Because the post house often on-boards new customers with bespoke workflow requirements, Busby configuration editor is used so that in-house engineering staff can tailor the system for each customer.

Playout Alarm System

Problem

A playout facility required an alarm system to actively notify staff of equipment and signal faults using both proprietary broadcast and standard IT protocols.
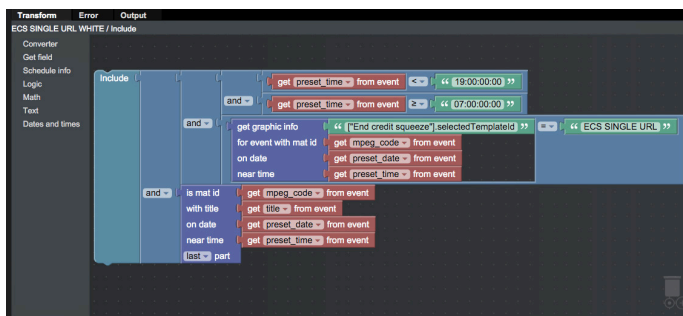
Solution

Busby alarms and monitoring was used to supply an operational alarm panel and audible alerts in the control room.
Busby Alarms also stores a history of alarms allowing SLA reporting and analysis.

The customer required the ability to make more complex reports, and perform deeper analysis of alarm data, so the Busby Big Data service along with the Busby Tableau web data connector were used to provide this.
Busby system diagram was used to provide a head-up display of the overall system status so that operators could have a logical view of how problems would affect the system.
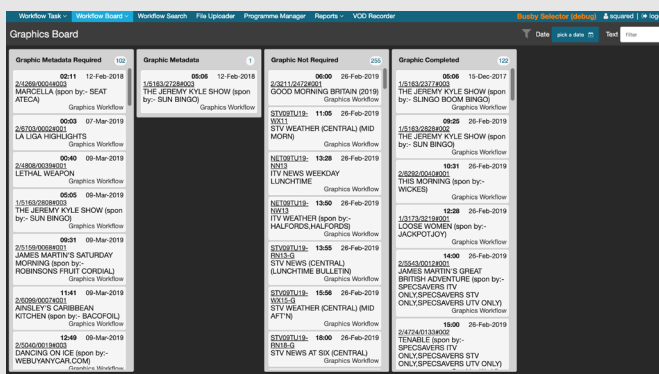
Schedule Processing and Catch up and Web Capture

Solution

- Block-based schedule translation and enhancement
- Data source lookup and integration with Busby workflows
- Captures all output in 1 min segments
- Automatic or manual stitching
- Includes OP47 capture and VTT subtitle export
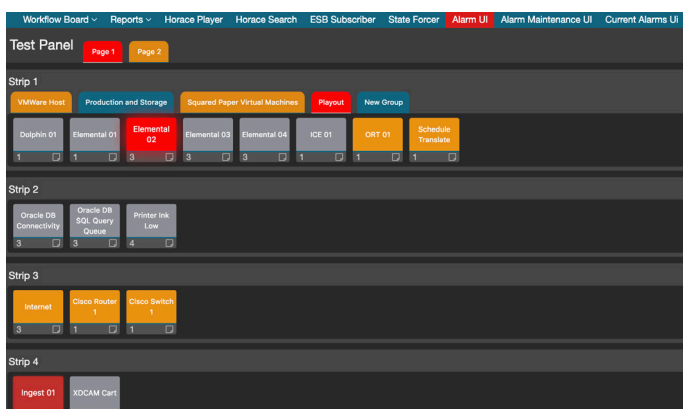- Auto or manual stitching
- AD mixdown

Schedule Driven Deliveries

Solution

- Schedules are scanned for required assets
- Assets are delivered to TX providers based on scheduled times
- Busby boards UI for status tracking

SLA Protector Alarms

Solution

- Analyses real-time data from GV Morpheus
- Alarms if parameters are incorrect/SLA will be breached
- Text-to-speech synthesis for alarms

x-dream-distribution potfolio: Squared Paper Ltd.

Stream Route and Monitor

Problem

A service provider required an encoder control system to automate the streaming of multiple video chains using a timed schedule across three data centres.
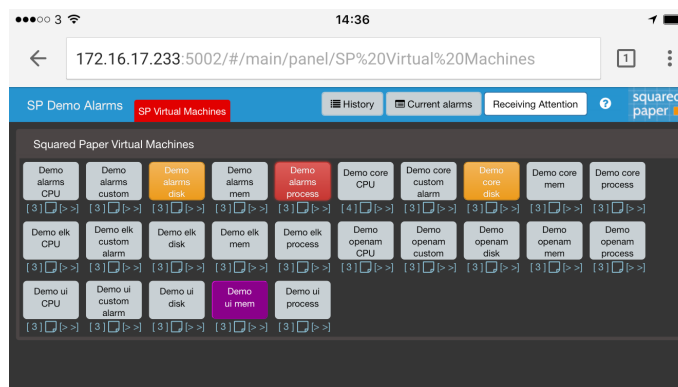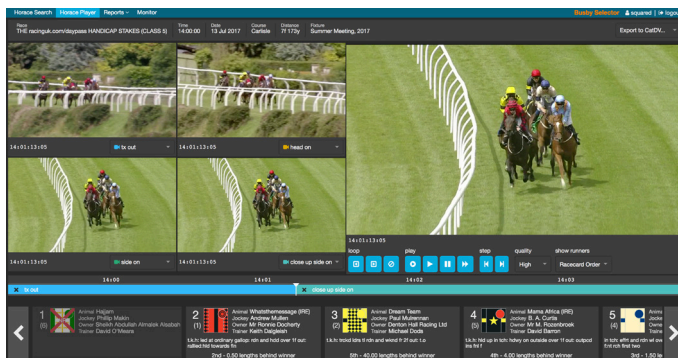
Solution

- Controls a pool of Elemental encoders
- Monitors all equipment and services
- Automatically reports against SLA
- Largest and most complex Busby system

Busby timed event service was used to provide timed control of encoders and integration with the customer's scheduling facilities.

Busby Alarms was provided so that operational staff have instant notifications of any potential problems with the system, and can respond before output is affected.

Busby Dashboards was provided so that the service provider can have a real-time view into the system.

Racetech & IRIS Horseracing Archives

Problem

A specialist sports outside broadcast company required a system to simplify:

- The ingest of video files after events
- Video browsing for sports officials and edit list creation for edit operators
- Management of files to and from the ALTO disk archive

Solution

- Web-based access for race officials
- An end-to-end multi-camera archive and viewing system for Racetech
- Use of DAC ALTO gives access to any of a quarter of a million assets in under ten seconds

A custom multi-view UI was developed for use by officials to review races. All relevant metadata is displayed in an easy to read format.

Busby core forms the basis of all the custom microservices needed for this project including:

- Interface to transfer files from legacy tape archive to ALTO disk archive
- Browse video generator
- Interface to import metadata into Elasticsearch store for fast searching

Busby Dashboards gives an overview of the status of the migration process from tape to disk and the general system status.

Busby Alarms was provided to alert operational staff of any issues before they become problems.

File manager was deployed to provide a Virtual File System interface to the ALTO disk archive.

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x-dream-distribution GmbH is an international operating company selling software products to the broadcast industry. We work closely with trusted vendor partners from all over the world and Europe-based channel partners.

The mission of x-dream-distribution is to bring interesting, innovative and well developed products to the market and build up strong sales channels for those vendors. We also offer the best solution for our customer's needs. Our vision is to cover all relevant building blocks of the broadcast industry's end-to-end file and stream-based workflows.