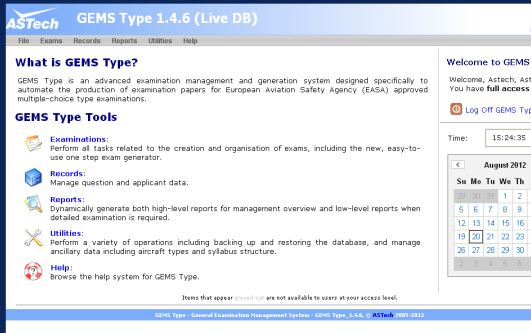


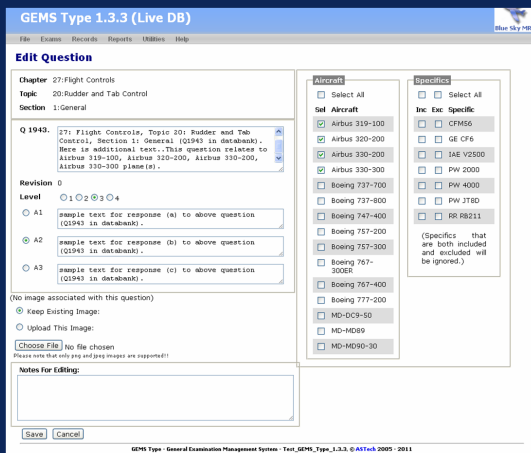
Key Features

- **ADVANCED EXAM MANAGEMENT SYSTEM SPECIFICALLY DESIGNED FOR EASA 147 ORGANIZATION'S PART-66 TYPE EXAMINATIONS**
- **MULTIPLE CHOICE QUESTIONS CAN INCLUDE IMAGES**
- **EASY MANAGEMENT OF STUDENTS' RESULTS AND EXAMINATION PAPERS**
- **GENERATES BOTH PAPER BASED AND ONLINE EXAMS**
- **GENERATES STATISTICAL ANALYSES OF RESULTS**
- **AUTOMATED CORRECTION OF EXAM PAPERS USING OMR**

Gems Type Homepage



Gems Type Edit Questions



GEMS Type

GEMS Type is a web application which automates the management of EASA 147 Organisation's Part-66 Type Examinations. It maintains a databank of questions categorised according to ATA syllabus and includes meta data including difficulty level, version number, aircraft specifics. It can generate both paper-based (with or without automatic grading) and on-line examinations and has comprehensive analysis and reporting functionality.

EASA-147 and other crediting bodies for aircraft maintenance engineers specify strict guidelines for the conduct of examinations. In particular for Type examinations, there must be a random selection of questions from the relevant ATA Chapters/Topics at the appropriate difficulty level. Additionally, the examiner has to generate a substantially new (i.e with maximum allowed overlap) examination paper for each sitting of the exam. The work involved in maintaining a large databank of questions, generating exams, correcting them, analysing the results, producing reports is very time consuming.

GEMS Type takes over the day-to-day task of exam generation; it produces random, non-repeating examination (and associated solution papers for correction purposes) covering questions specific to selected aircraft or families of aircraft. It is also quick and easy to use: examinations can be generated in minutes (as compared to hours and sometimes days using traditional approaches) using a simple point-and-click interface.

Functionality

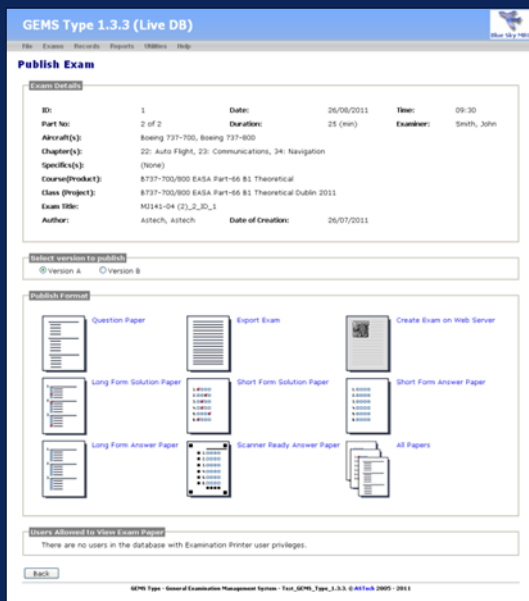
All the function in GEMS Type are accessed through an intuitive GUI. The following are some of the main functionalities of ASTech's GEMS Type:

- Web application hosted on customers' corporate intranet
- Deployment as single VM (Virtual Machine) comprising web sever, database and scripting
- Multiple concurrent users with access privileges
- Both paper based and online exams (separate module for exam delivery) created
- Different formats of exam papers available. Customer logo included
- Automatic grading of paper (separate module)
- Graphics and mathematical equations can be included
- No practical limit on number of questions
- Question categorisation includes:
 - chapter, topic and section number (as specified by ATA)
 - difficulty level
 - aircraft list e.g. B767, Airbus 380
 - specifics (e.g. engine, APU, etc.) included/ excluded
 - revision number
 - creator, validator and relative dates
 - supporting graphics
- Course and course instance (class) tables included or can access external applications
- Sophisticated templating system
- Exam comparison facility
- Extensive reporting facility including:
 - reports for all exams from particular candidate
 - reports for all candidates in particular exam
 - item analysis showing suspect questions
 - revision history for questions
 - question usage reports

Gems Type Exam Macro



Gems Type Exam Publishing



Typical Operations

The following provide some typical operations in GEMS Type:

Editing Questions

As well as allowing the user to add, edit, move and delete questions, the Database Manager also allows you to associate questions with one or more types of aircraft and one or more “specific” (that is, any difference to what is regarded as being the default equipment for that aircraft type) such as a different engine or APU. This helps to ensure the relevancy of all questions chosen for each examination paper. GEMS Type allows exams and solution papers to be produced in a very small number of steps.

Generating Exams

Exam papers can be published in a number of formats including:

- Long Form Papers: Contains the full question and answer texts for each question
- Short Form Papers: Contain boxes where the answer for each question may be entered
- Other Forms

Benefits of GEMS Type

GEMS Type offers extensive reporting facilities simplifying the process of exam and question analysis. Reports can be created for each trainee showing the trainees details, exam details, achieved scores and answers for each question.

Questions can be categorized according to chapter, topic and section number (as specified by ATA), difficulty level, aircraft list e.g. B767, Airbus 380.

GEMS Type offers flexible deployment including stand alone computer configuration or web system deployment creating paper based as well as online exams. Paper exams are scanner ready and can be automatically corrected with the OMR software. GEMS Type is an EASA compliant and therefore follows the quality of standards.

ASTech in the Aviation Industry

Atlantic Simulation & Training Technologies (ASTech) is an internationally trading software company based in Galway, Ireland. The company specializes in products and services for the development and delivery of training and examination systems for industry. Customers within the aviation industry include Lufthansa Technical Training, SR Technics, Embraer, TAP Portugal, Lufthansa Resource Technical Training, Cargolux, Shannon Aerospace, including. Other products include GEMS Basic, GEMS Fundamentals, GEMS OMR, GEMS Online Exam, GEMS PPL, GEMS FCL and GEMS Pilot Type.

Functionality Overview

