

Medical Forms For Pilot Licensing

eMFA (On Line Medical Forms for Aviation)

eMFA is an advanced, password protected, on-line application which automates the process of medical examination management and reports generation/ printing and distribution for the pilots of a aviation authority or aviation company.

Product Overview

The main functionality of this product can be summarised as follows:

- Add, Edit, and of View: patient personal details, patient habits (smoking, alcohol habits), patient general and medical history, medical examination details (such as Clinical Examination, Hearing, Visual, Haemoglobin, etc. tests), and medical staff details
- Write recommendations and sign off medical exams.
- Generate standardised medical exam reports and application forms for medical exams.
- Search, sort and list patient records and medical exams.
- Limit access to medical information based on user permissions.

Operation

ASTech's eMFA application an intuitive interface and incorporates a main menu allowing access to any of the functionality at any stage.



Figure 1. Main Menu

An on-line help file, accessible from the main menu depicted in Figure 1, ensures that

instructions on using the system are always accessible.

The following sections describe typical usage scenarios with the aid of sample screen shots of the user interface.

Existing Client – New Medical

This is probably the most frequently used scenario and covers the situation where an existing client presents for a new medical. The client fills out an application form; the record for the client is retrieved from the database; the doctor retrieves the existing data for the client and notes any changes (we assume there is no major difference between present and past client details) as depicted in Figure 2 and generates a new medical examination.

New Client – New Medical

This scenario covers the situation where a new client presents at the hospital and requests a medical examination. In this situation the client fills out an application form and a new record is generated for the new client as depicted in Figure 3.

Editing Client Details

This scenario covers the less frequent situation when the client's personal details (e.g. address, name, etc.), or general and medical history, or the client habits (alcohol intake, smoking) of an existing client have changed. In which case the doctor reviews the existing data for the client, notes that there are some changes in the client's personal details and makes the required changes. Figure 3 depicts the edit form for

editing the client's general and medical history.

Editing Medical Details

This scenario covers medical exams that have not been signed-off yet. There are two cases when a medical exam, not signed of, is changed: to add/ edit medical test results, to the medical exam, to give a recommendation based on the test results for the medical exam, or to change the recommendation for the medical exam if required, after a further review of the test results.

Sign-Off and Reporting

This scenario relates to the situation when the doctors signs off the medical results for a medical exam after a close review of the medical test. The recommendation entered for the client based on the medical exam, along with all the medical tests can be reported using the Report section accessible from the main menu.

Report Section

Reports can be customised based on the customer's request. A sample medical exam report is shown in the report at the end of the document.

Utilities

eMFA ships with a number of utilities for:

- Administrating the users of the application and their permissions to access different sections of the application.
- Backing up and restoring the database the application is using.
- Managing the details of the medical staff.


System Architecture


The eMFA system's architecture is depicted in Figure 4 below. The application stores the information in a MySQL databases and runs on the Apache Web Server. All the interaction with the client is done throw a browser (Internet Explorer, Mozilla, Netscape, Opera, etc.). The application permits the generation of documents (patient medical reports) in PDF and HTML format, that can be send by email (encrypted if required), printed or saved for backup purposes. The reports can also be displayed/ saved in XML format that can be send via HTTPS to another server/ computer at another location (e.g. Aviation Authority) were the information is used by third level application for different purposes.


The database, web server and the application can coexist on the same server or can be situated on different servers. The application can be accessed from the computer as or via the Intranet/ Internet in which case the diagram is as pictured in Figure 4 below.

Contact Us

Contact ASTech (Atlantic Simulation & Training Technologies Ltd.) using any of these means:

 **Address** Unit 2,
Campus Innovation Centre,
Upper Newcastle,
Galway,
Ireland.

 **Phone** +353-91-522316

 **Fax** +353-91-522328

 **E-Mail** info@astech.ie

 **www:** <http://www.astech.ie>

Please fill in the information.
Please note that are required fields.
After you have completed to fill in the data, click the "save" button.

required fields

Client Details:

Licence ID:	<input type="text"/>	Permanent address:	
First Name(s):	<input type="text"/>	Address 1:	<input type="text"/>
Maiden name:	<input type="text"/>	Address 2:	<input type="text"/>
Surname:	<input type="text"/>	Address 3:	<input type="text"/>
Nationality:	<input type="text"/>	Address 4:	<input type="text"/>
Date Of Birth:	<input type="text"/> (dd/mm/yyyy)	County:	<input type="text"/>
Occupation:	<input type="text"/>	Country:	<input type="text"/>
Postal address:		Postal Code:	<input type="text"/>
Address 1:	<input type="text"/>	Phone:	<input type="text"/>
Address 2:	<input type="text"/>	Employer:	<input type="text"/>
Address 3:	<input type="text"/>	Eye color:	<input type="text"/>
Address 4:	<input type="text"/>	Hair Color:	<input type="text"/>

Client Habits:

Alcohol Average (units per week)	Smokes
<input type="text"/>	Please select one <input type="button" value="v"/>

General and Medical History:

	Yes	No		Yes	No
1. Eye trouble/eye operation	<input type="radio"/>	<input type="radio"/>	2. Spectacles and/or contact lenses ever worn	<input type="radio"/>	<input type="radio"/>
3. Spectacle/contact lens prescriptions change since last medical exam	<input type="radio"/>	<input type="radio"/>	4. Hay fever, other allergy	<input type="radio"/>	<input type="radio"/>
5. Asthma, lung disease	<input type="radio"/>	<input type="radio"/>	6. Heart or vascular trouble	<input type="radio"/>	<input type="radio"/>
7. High blood pressure	<input type="radio"/>	<input type="radio"/>	8. Kidney stone or blood in urine	<input type="radio"/>	<input type="radio"/>
9. Diabetes, hormone disorder	<input type="radio"/>	<input type="radio"/>	10. Stomach, liver or intestinal trouble	<input type="radio"/>	<input type="radio"/>

Figure 2. Add form for adding new patient

Client Name: Tom Ryan
 Medical exam date: 02/03/2002 [dropdown] [add new medical exam]

- Client Details
- Client Habits
- General & Medical History
- Medical Exam
 - Clinical Exam
 - Hearing Test
 - Haemoglobin Test
 - Urinalysis
 - Pulmonary Test
 - Accompanying Reports
 - Visual Test
 - Recommendation

required fields

save reset cancel

	Yes	No		Yes	No
1. Eye trouble/eye operation	<input type="radio"/>	<input checked="" type="radio"/>	2. Spectacles and/or contact lenses ever worn	<input type="radio"/>	<input checked="" type="radio"/>
3. Spectacle/contact lens prescriptions change since last medical exam	<input type="radio"/>	<input checked="" type="radio"/>	4. Hay fever, other allergy	<input type="radio"/>	<input checked="" type="radio"/>
5. Asthma, lung disease	<input type="radio"/>	<input checked="" type="radio"/>	6. Heart or vascular trouble	<input type="radio"/>	<input checked="" type="radio"/>
7. High blood pressure	<input type="radio"/>	<input checked="" type="radio"/>	8. Kidney stone or blood in urine	<input type="radio"/>	<input checked="" type="radio"/>
9. Diabetes, hormone disorder	<input type="radio"/>	<input checked="" type="radio"/>	10. Stomach, liver or intestinal trouble	<input type="radio"/>	<input checked="" type="radio"/>
11. Deafness, ear disorder	<input type="radio"/>	<input checked="" type="radio"/>	12. Nose, throat or speech disorder	<input checked="" type="radio"/>	<input type="radio"/>
13. Head injury or concussion	<input type="radio"/>	<input checked="" type="radio"/>	14. Frequent or severe headaches	<input type="radio"/>	<input checked="" type="radio"/>
15. Dizziness or fainting spells	<input type="radio"/>	<input checked="" type="radio"/>	16. Unconsciousness for any reason	<input type="radio"/>	<input checked="" type="radio"/>
17. Neurological disorders: stroke, epilepsy, seizure, paralysis, etc	<input type="radio"/>	<input checked="" type="radio"/>	18. Psychological/psychiatric trouble of any sort	<input type="radio"/>	<input checked="" type="radio"/>
19. Alcohol/drug/substance abuse	<input type="radio"/>	<input checked="" type="radio"/>	20. Attempted suicide	<input type="radio"/>	<input checked="" type="radio"/>
21. Motion sickness requiring medication	<input type="radio"/>	<input checked="" type="radio"/>	22. Anaemia/Sickle cell trait/other blood disorders	<input type="radio"/>	<input checked="" type="radio"/>
23. Malaria or other tropical disease	<input type="radio"/>	<input checked="" type="radio"/>	24. A positive HIV test	<input type="radio"/>	<input checked="" type="radio"/>
25. Sexually transmitted disease	<input type="radio"/>	<input checked="" type="radio"/>	26. Admission to hospital	<input type="radio"/>	<input checked="" type="radio"/>
27. Any other illness or injury	<input type="radio"/>	<input checked="" type="radio"/>	28. Visit to medical practitioner since last medical examination	<input type="radio"/>	<input checked="" type="radio"/>
29. Refusal of life insurance	<input type="radio"/>	<input checked="" type="radio"/>	30. Refusal of flying licence	<input type="radio"/>	<input checked="" type="radio"/>
31. Medical rejection from or for military service	<input type="radio"/>	<input checked="" type="radio"/>	32. Award of pension or compensation for injury or illness	<input type="radio"/>	<input checked="" type="radio"/>
Females only:					
33. Gynaecological, menstrual problems	<input type="radio"/>	<input checked="" type="radio"/>	34. Are you pregnant?	<input type="radio"/>	<input checked="" type="radio"/>
Family history of:					
35. Heart disease	<input type="radio"/>	<input checked="" type="radio"/>	36. High blood pressure	<input type="radio"/>	<input checked="" type="radio"/>
37. High cholesterol level	<input type="radio"/>	<input checked="" type="radio"/>	38. Epilepsy	<input type="radio"/>	<input checked="" type="radio"/>
39. Mental illness	<input type="radio"/>	<input checked="" type="radio"/>	40. Diabetes	<input type="radio"/>	<input checked="" type="radio"/>
41. Tuberculosis	<input type="radio"/>	<input checked="" type="radio"/>	42. Allergy/asthma/eczema	<input type="radio"/>	<input checked="" type="radio"/>
43. Inherited disorders	<input type="radio"/>	<input checked="" type="radio"/>	44. Glaucoma	<input type="radio"/>	<input checked="" type="radio"/>

save reset cancel

Figure 3. Editing the General and Medical Details

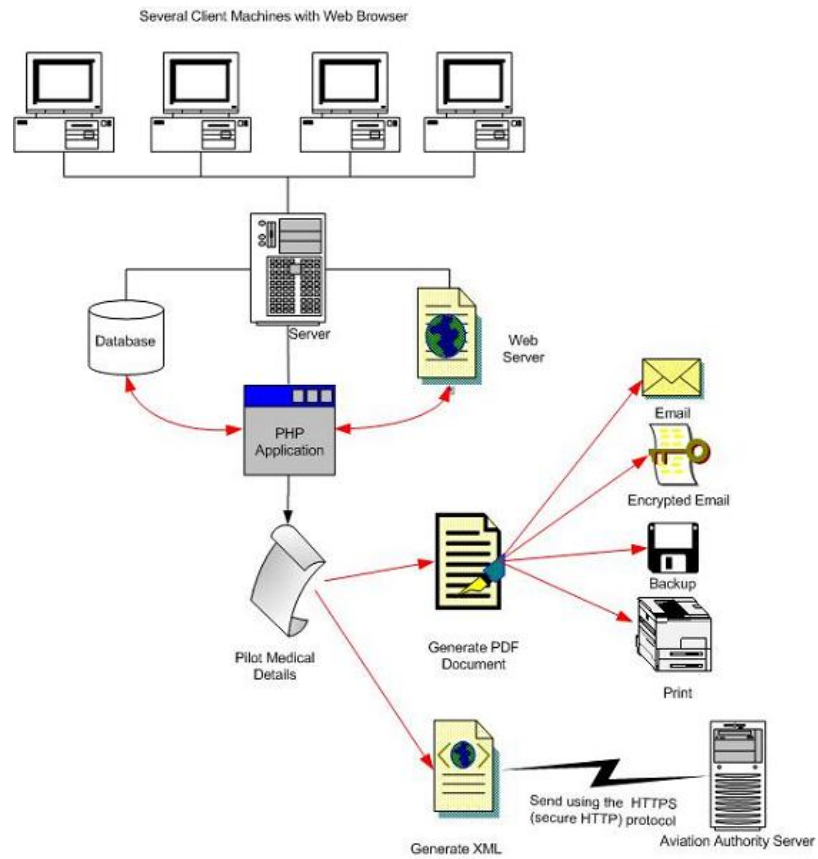


Figure 4. eMFA Architecture (multiple users)