

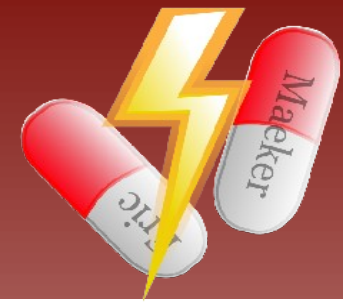
[www.freemedforms.com](http://www.freemedforms.com)



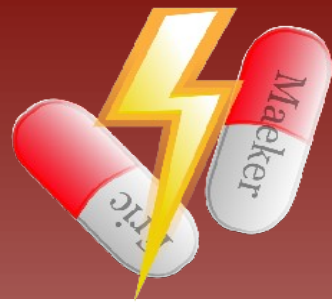
**FreeMedForms: Managing drug-drug interactions. An open source model.**



**Eric Maeker, MD (FR)**  
**Jim Busser, MD (CA)**



# FreeMedForms



- FreeMedForms is a suite of medical applications (EMR, prescriber, drugs interaction checker...)
- Community of medical doctors and computer workers/scientists over the pulse of a french team.
- Applications are freely available with full source code (GPLv3).
- Supported by OpenSuse Medical and Debian Med Team (Fedora Medical in progress).

<http://www.freemedforms.com/>



# FreeMedForms and DDI



- When FreeMedForms [1] was started (2008) a special attention was paid to DDI management
- DDI source data were identified [2-4]
- As the Open Source community lacked a free standalone prescribing software
- the prescriber plugin was therefore built into a standalone application : FreeDiams
- FreeDiams allows users to create complex prescriptions and test DDIs

[1]: <http://www.freemedforms.com>

[2]: Thésaurus des interactions médicamenteuses. AFSSAPS, France

[3]: Drug Interactions: Cytochrome P450 Drug Interaction Table. Flockhart DA. Indiana University School of Medicine

[4]: P-glycoprotein Table - the Effect of Drugs and Foods. Oesterheld Jessica.

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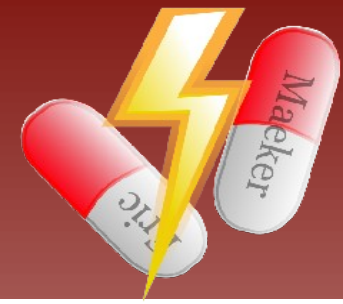
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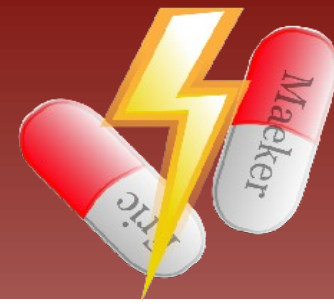
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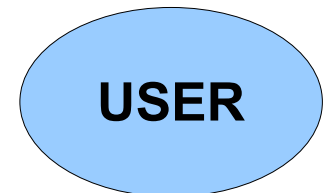
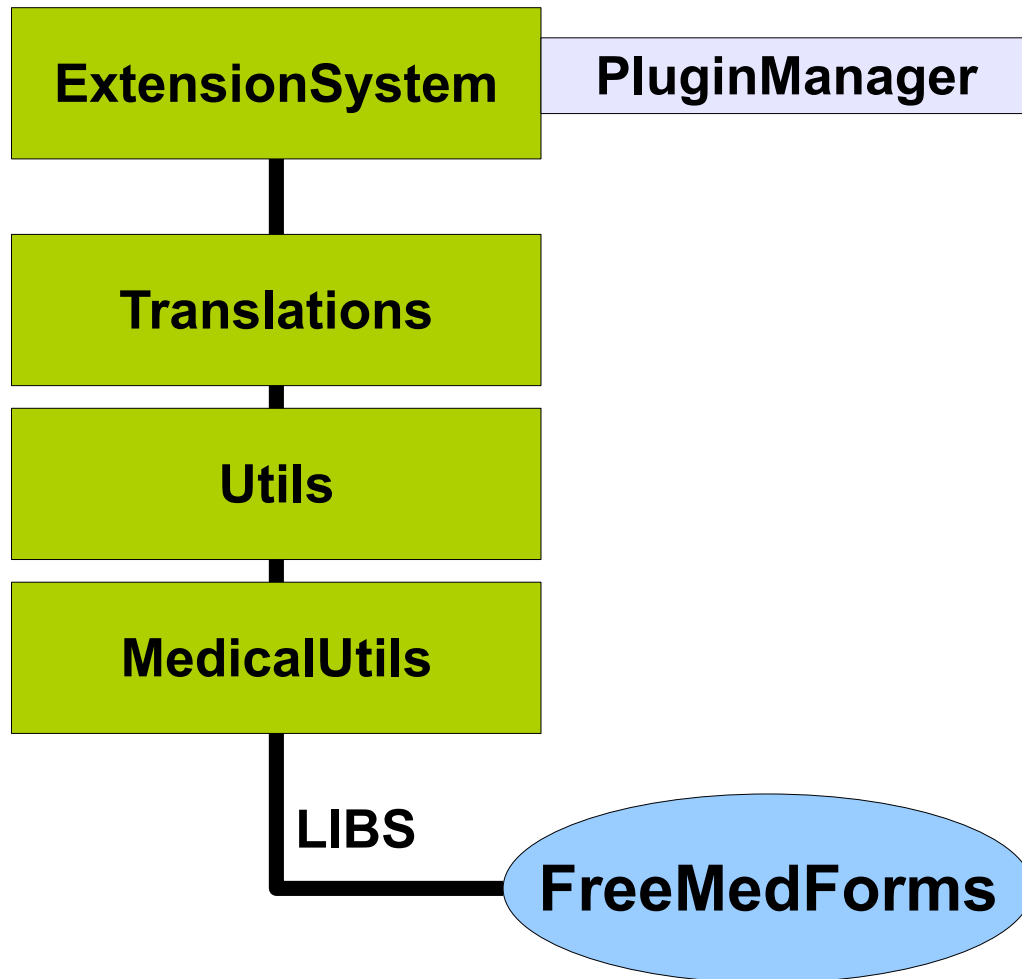


# FreeMedForms and DDI

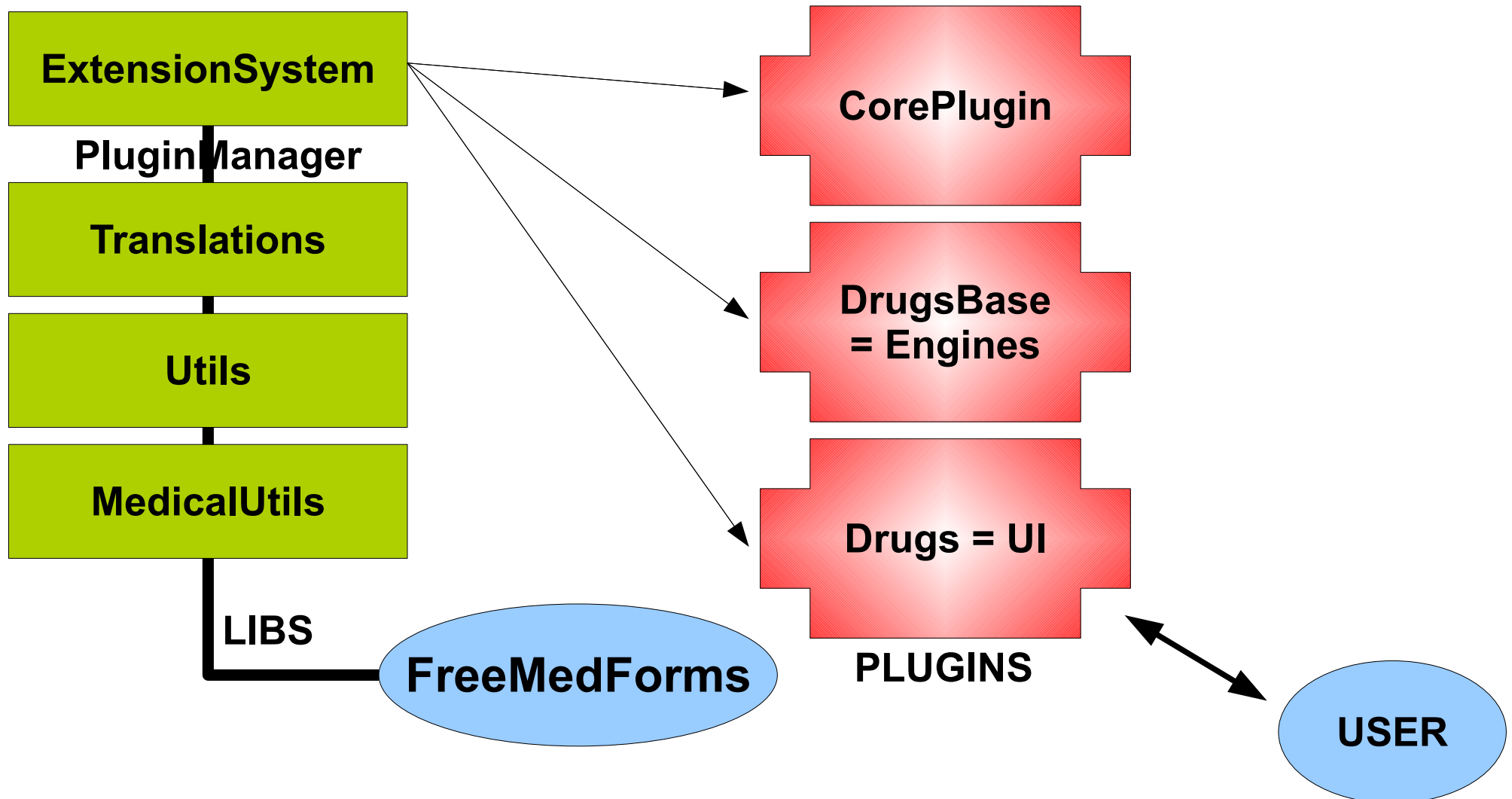


- Linux, MacOSX, Win32, Win64, (FreeBSD)
- C++ using Nokia's Qt libs
- Code is documented using Doxygen
- Massive usage of MVC architecture
- Builded using dynamic librairies with plugins architecture
- Using SQLite for local databases
- Possible interoperability
- Roadmap/Issues defined on the wiki web site

# FreeMedForms App structuration

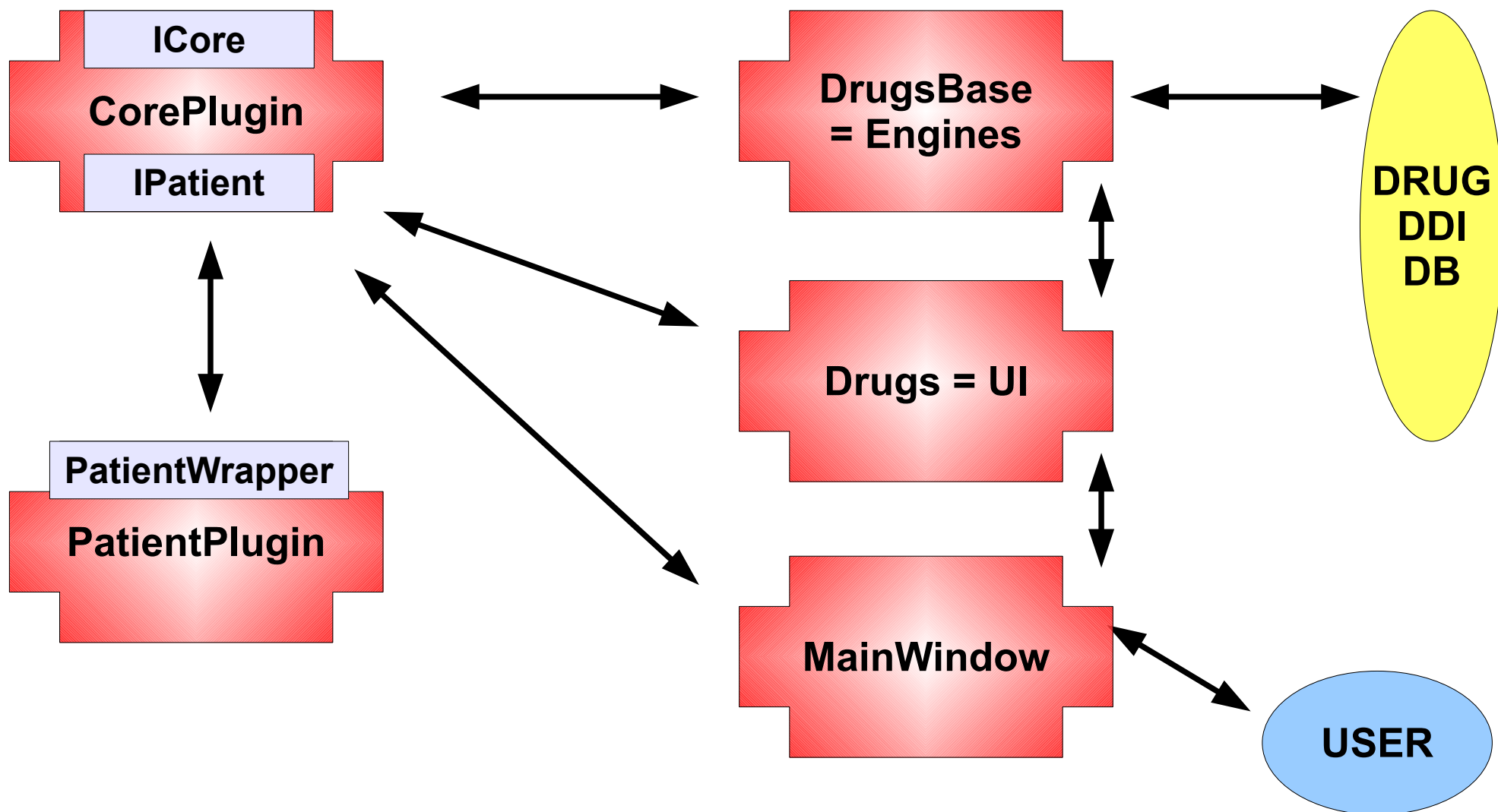


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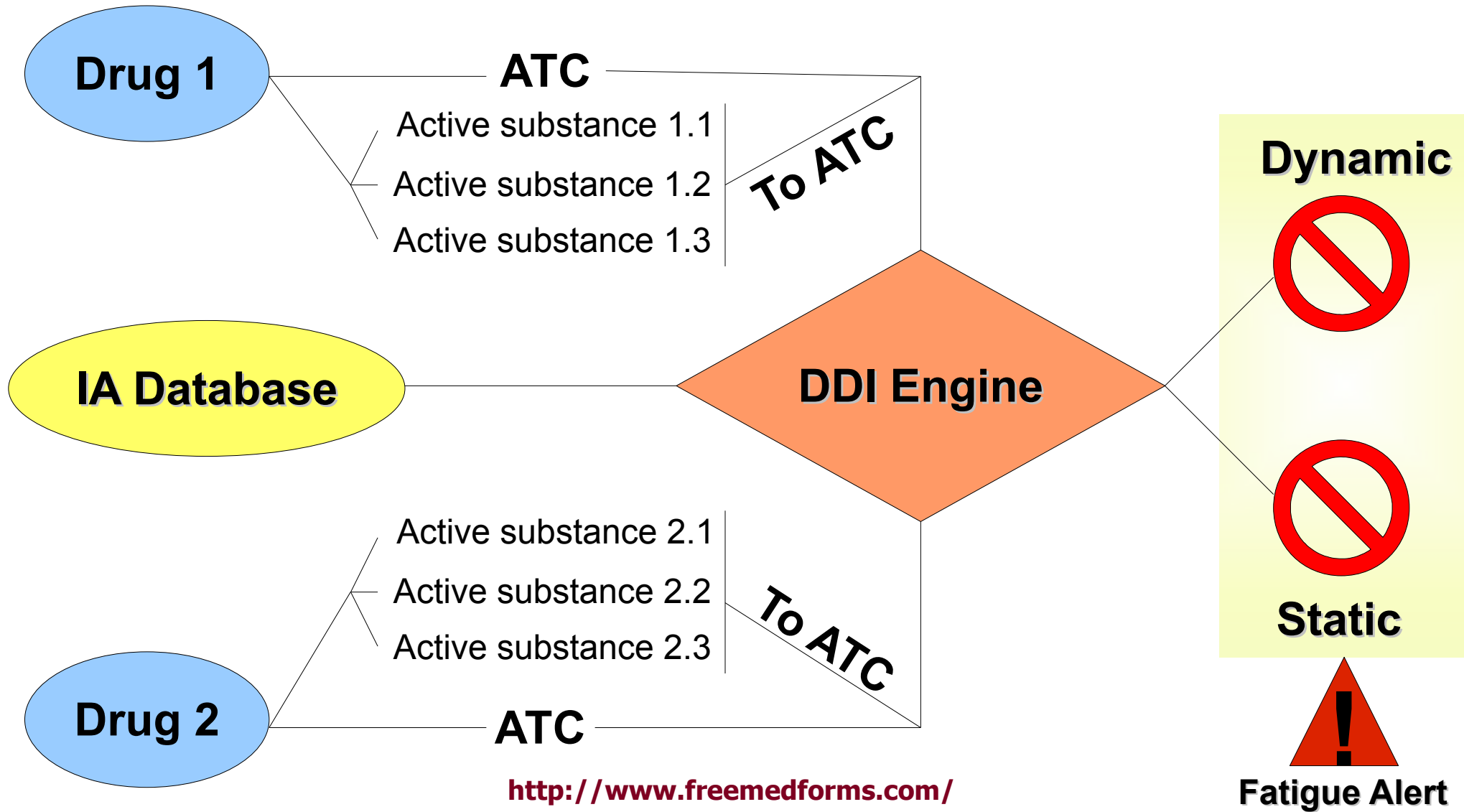
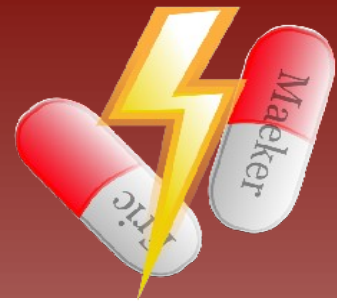


# FreeMedForms Plugins interrelations

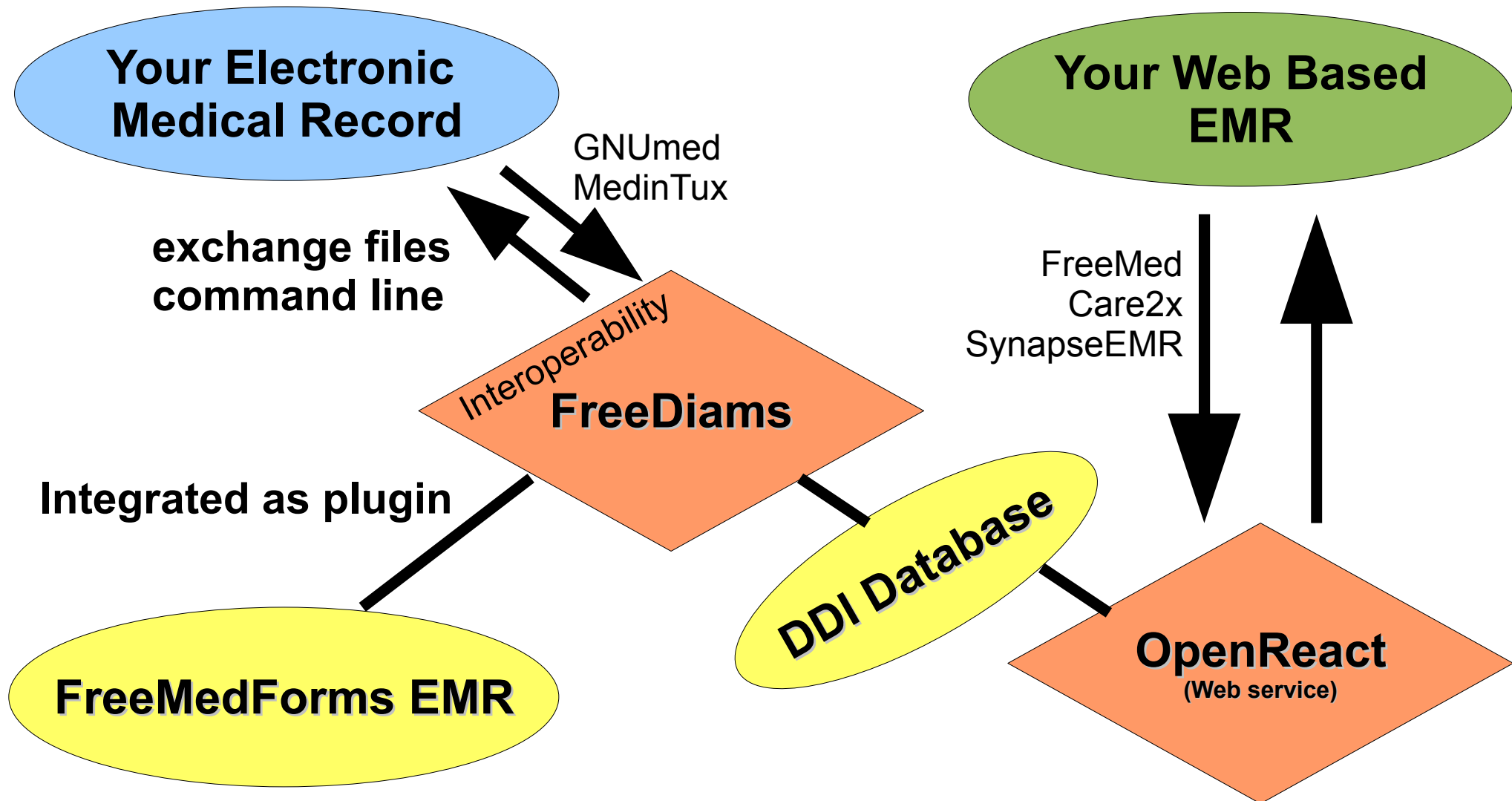




# FreeMedForms DDI engine

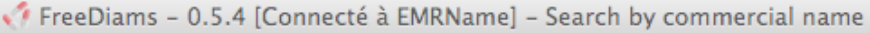


# Sharing the DDI engine



<http://www.freemedforms.com/>

# FreeDiams full UI



Informations sur le patient

▼ **Known allergies**

- ▼ ATC
  - OTHER DRUGS FOR PEPTIC ULCER A...
  - RETINOL
  - ACTH
  - ALL OTHER THERAPEUTIC PRODUCTS
- Drugs
- INN

▼ **Known intolerances**

- ▼ ATC
  - I.V. SOLUTIONS
  - SPECIFIC IMMUNOGLOBULINS
  - NITROGEN MUSTARD ANALOGUES
  - PHENYLBUTAZONE
  - ACETIC ACID DERIVATIVES AND REL...
  - DICLOFENAC
  - SALICYLIC ACID AND DERIVATIVES
  - INDOLE DERIVATIVES
- Drugs
- INN

Patient Name  Firstname

ac\*ar

- ACETAMINOPHEN, CAFFEINE, AND DIHYDROCODEINE BITARTRATE (TABLET, 712.8MG...
- ACETAMINOPHEN, CAFFEINE, AND DIHYDROCODEINE BITARTRATE (CAPSULE, 356.4M...
- ACTHAR (INJECTABLE, 40 UNITS/VIAL)
- ACTHAR (INJECTABLE, 25 UNITS/VIAL)
- ACTHAR GEL-SYNTHETIC (INJECTABLE, 80 UNITS/ML)
- ACTHAR GEL-SYNTHETIC (INJECTABLE, 40 UNITS/ML)
- ACULAR (SOLUTION/DROPS, 0.5%)
- ACULAR LS (SOLUTION/DROPS, 0.4%)
- ACULAR PRESERVATIVE FREE (SOLUTION/DROPS, 0.5%)

IBUPROFEN 200MG , TABLET [INN]  
Take 1 TABLET each day for 1 month

DIGOXIN (TABLET, 0.25MG)  
Take 1 TABLET each day for 1 month

FUROSEMIDE 80MG , TABLET [INN]  
Take 1 TABLET each day for 1 week

SLOW-K (TABLET, EXTENDED RELEASE, 8MEQ)  
Take 2 TABLETS each day for 1 month

WARFARIN SODIUM (TABLET, 4MG)  
Take 1 TABLET each day for 1 month

Modèles

- ▼ Cardio-vascular templates
  - ▼ Acute heart failure
    - with atrial fibrillation

# DDI synthesis dialog

Synthetic interactions - FreeDiams

Navigation icons: ? (All interactions), - (Contraindication), / (Discouraged), 💡 (Precaution for use), ⚠️ (Take into account)

2	💡	DIURETICS	NON-STEROIDAL ANTI-INFLAMMAT...
3	💡	HYPOKALEMICS	DIGITALIS GLYCOSIDES
4	-	ORAL ANTICOAGULANTS	NON-STEROIDAL ANTI-INFLAMMAT...

Interacting drugs

LASIX (TABLET, 80MG)  
HYPOKALEMICS

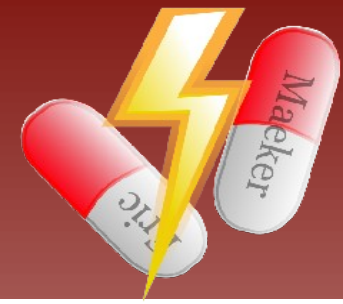
DIGOXIN (TABLET, 0.25MG)  
DIGITALIS GLYCOSIDES

Risk and management

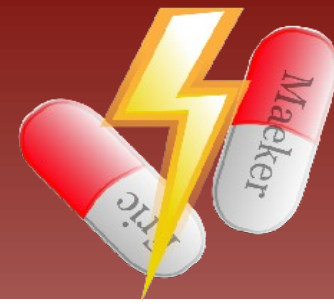
Hypokalemia promotes toxic effects of digitalis.

Correct hypokalemia before and make any clinical monitoring, ECG and electrolyte.

[Link to reference](#)    Get the bibliography    Cancel    OK



# FreeMedForms Needs you !



- FreeMedForms is a great and big project
- Actually unfunded
- Need devs and funds
- Code is available as package with each releases or @SVN:  
<http://code.google.com/p/freemedforms/source/checkout>
- Main web site: <http://www.freemedforms.com/>
- Mailing list: [freemedforms@googlegroups.com](mailto:freemedforms@googlegroups.com)
- Kisses to my wife and children (who support my devs...)
- Thanks, The FreeMedForms Team

<http://www.freemedforms.com/>