

Experience in Developing Reference Applications with Qt/QML

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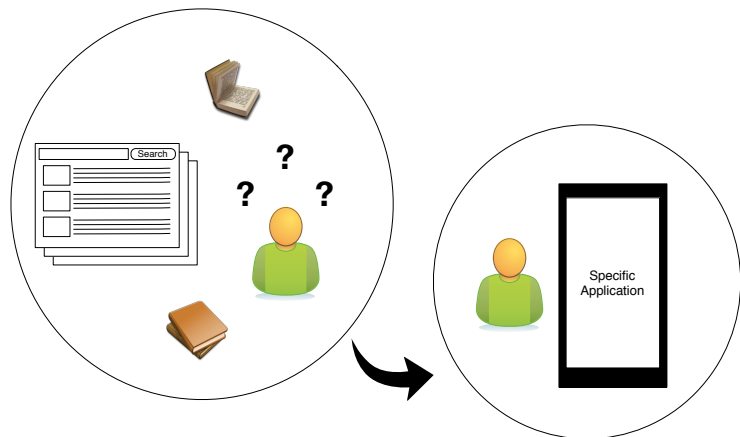


12th FRUCT conference
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Background and Motivation

- Many various sources of information
- Reference applications containing all required information



Reference Resources

- Resources that do not need to be constantly updated
 - ▶ Data can be stored locally (i.e XML)
 - ▶ Examples:
 - ★ electronic encyclopedias
 - ★ reference books
 - ★ dictionaries
- Resources that need to be constantly updated
 - ▶ Interaction with web service via API
 - ▶ Examples:
 - ★ database of movies
 - ★ news feeds



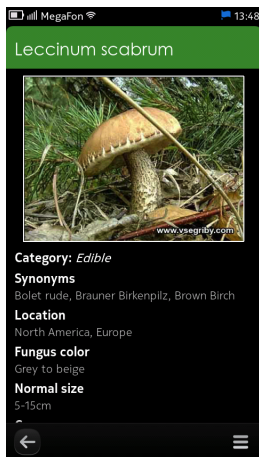
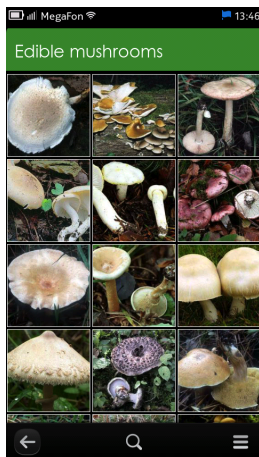
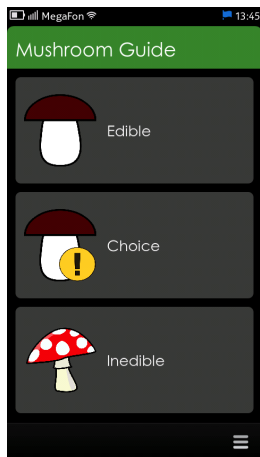
Reference Applications vs Web-sites

- Information is available at any time with mobile phone or smartphone
- Aggregation of information from several Internet resources
- More convenient user interface



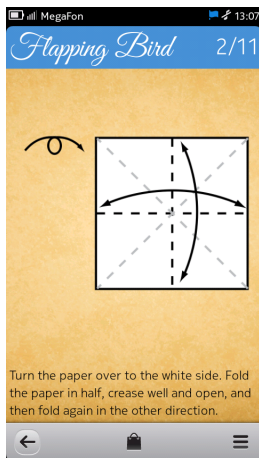
Mushrooms

- <http://oss.fruct.org/projects/mushrooms/>
- Information about particular species of mushrooms by its photo or name

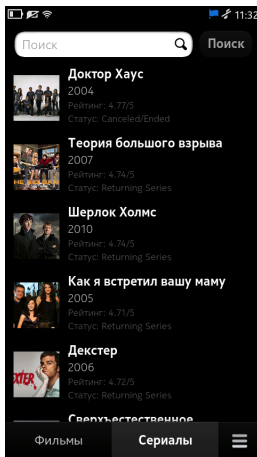
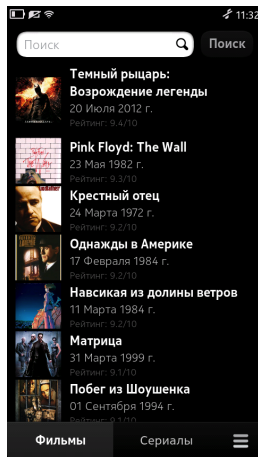


Origami Zoo

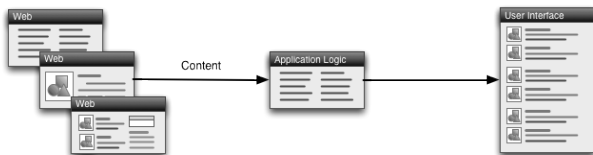
- <http://oss.fruct.org/projects/origami/>
- Clearly illustrated steps and instructions



- <http://oss.fruct.org/projects/kinoman/>
- Mobile client for The Movie Database (TMDB) and MyShows.ru



Common Structure of Reference Applications



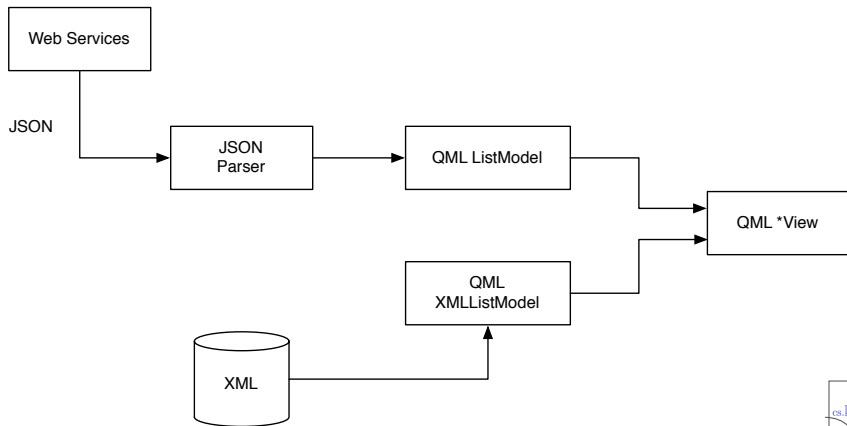
Main stages

- 1 Search of online resources with required information
- 2 Load structured data into a data model
- 3 Present information to the user by means of view



Implementation Details

- Mushrooms and Origami Zoo – offline XML-based applications
- Kinoman – interaction via API of web services



Implementation Details

■ Interaction with web services using XMLHttpRequest API

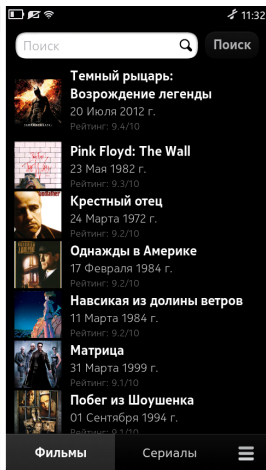
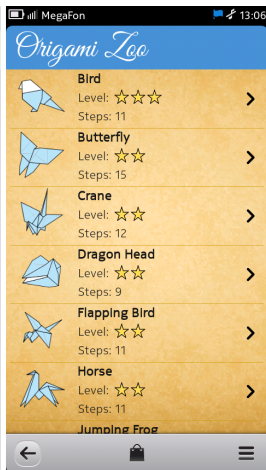
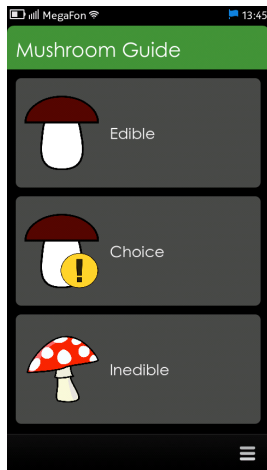
```
var xhr = new XMLHttpRequest();

xhr.onreadystatechange = function () {
    if (xhr.readyState === XMLHttpRequest.DONE) {
        var response = JSON.parse(xhr.responseText);
        var films = response.results
        for (var i = 0; i < films.length; i++) {
            filmsModel.append({
                film_id: films[i].id,
                title: films[i].title ,...
            });
        }
    }
}

xhr.open("GET", "http://api.themoviedb.org/3/movie/top-rated");
xhr.send();
```




List Pages of the Applications



Pages with Detailed Information

MegaFon 13:48

Leccinum scabrum



www.vsegriby.com

Category: Edible

Synonyms
Bolet rude, Brauner Birkenpilz, Brown Birch

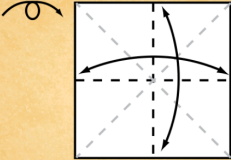
Location
North America, Europe

Fungus color
Grey to beige

Normal size
5-15cm

MegaFon 13:07

Flapping Bird 2/11



Turn the paper over to the white side. Fold the paper in half, crease well and open, and then fold again in the other direction.

MegaFon 11:33

Декстер / Dexter

US
Драма, Криминал
Даты выхода: 1.10.2006 - ...
Статус: Returning Series
Рейтинг: 4.54/5

Сезоны Удалить из изб...

Я — Декстер. Декстер Морган. Я работаю судмедэкспертом в полиции Майами. Я не понимаю любви, мне безразличен секс, и у меня нет чувств. А еще я серийный убийца.

Мой отец был полицейским и прекрасно обучил меня прятать улики. Обычным гражданам не стоит меня бояться, я убиваю только преступников, подонков, до которых почему-либо не смогла или не захотела добраться полиция. Я убиваю их, аккуратно распиливаю на части и избавляюсь от трупов. Убийство для меня — творческий акт, искусство.

Но однажды... В Майами появляется некто, равный мне. Даже превзошедший меня.



Metrics

Application	QML files (LOC)	JavaScript files (LOC)	XML (LOC)
Mushrooms	15 (1111)	4 (266)	3 (4962)
Origami Zoo	13 (679)	2 (104)	17 (1420)
Kinoman	15 (1187)	7 (667)	—



Future Plans

- Developing more reference applications based on this pattern
- Add new features to existing applications
 - ▶ search mushrooms by its individual features (stem, cap, etc.)
 - ▶ add new figures to Origami Zoo application
 - ▶ ...

