

DRAGOȘ STOICA

DEV TALKS CLUJ '16



AND NOW
FOR SOMETHING
COMPLETELY
DIFFERENT

IN A GALAXY NEARBY, PRETTY CLOSE, ON OUR PLANET ...

- ☑ It is post web online era. 2 billion smartphones used daily, all willing to connect to a web server. Gadgets invasion has started. IOT is here!
- ☑ Are your mobile applications ready?
- ☑ How much your application depends on data connection?
- ☑ For how long your application will work offline?



SO, ANYWAY ...

John Cleese

3 RECIPES FOR HAPPY MOBILE IOT!

★AppCache - HTML5 - Mobile WebApp

★Applications that Sync, powered by PouchDB

★The Database is the Application

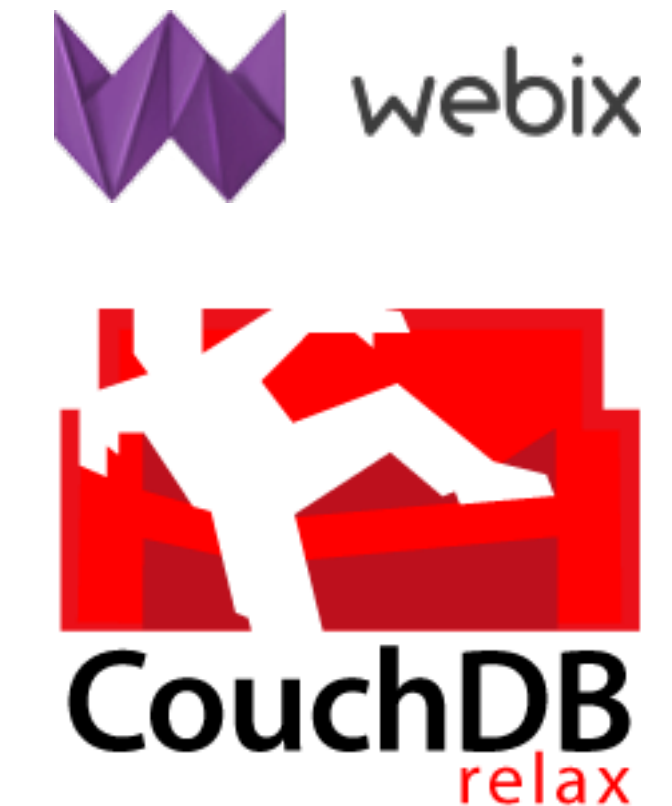
★AppCache - HTML5 - Mobile WebApp

INGREDIENTS:

- ❖ ONE GOOD JAVASCRIPT WEB BASED FRAMEWORK – WEBIX
- ❖ A MODERN AND STRONG NOSQL DATABASE – COUCHDB
- ❖ AN ACCOUNT FOR ONLINE INSTANCE
- ❖ A DECENT TEXT EDITOR

PREPARATION:

- ❖ DEVELOP ON LOCAL ENVIRONMENT
- ❖ MODIFY THE WEB SERVER ADDRESS.
- ❖ PUBLISH/REPLICATE THE APPLICATION.
- ❖ PRO TIP : YOU MAY USE APPZIP TO PUBLISH YOUR APPLICATION TO ONLINE DATABASE INSTANCE
- ❖ SERVE THE APPLICATION FROM COUCHDB, AND CONSUME IT WITH A MOBILE WEB BROWSER.



MINDSET

- ▶ Aim towards Single Page Applications (SPA)
- ▶ Put most of the logic on Client Side (JavaScript - Webix)
- ▶ Think and Design Replication oriented - the CouchDB way
- ▶ Use LocalStorage on client's browser to store offline data (HTML5)
- ▶ Detect on-line offline switch in your application (HTML5)
- ▶ Solve document conflicts on client side, before update
- ▶ Enjoy and have fun!

APPLICATION ARCHITECTURE



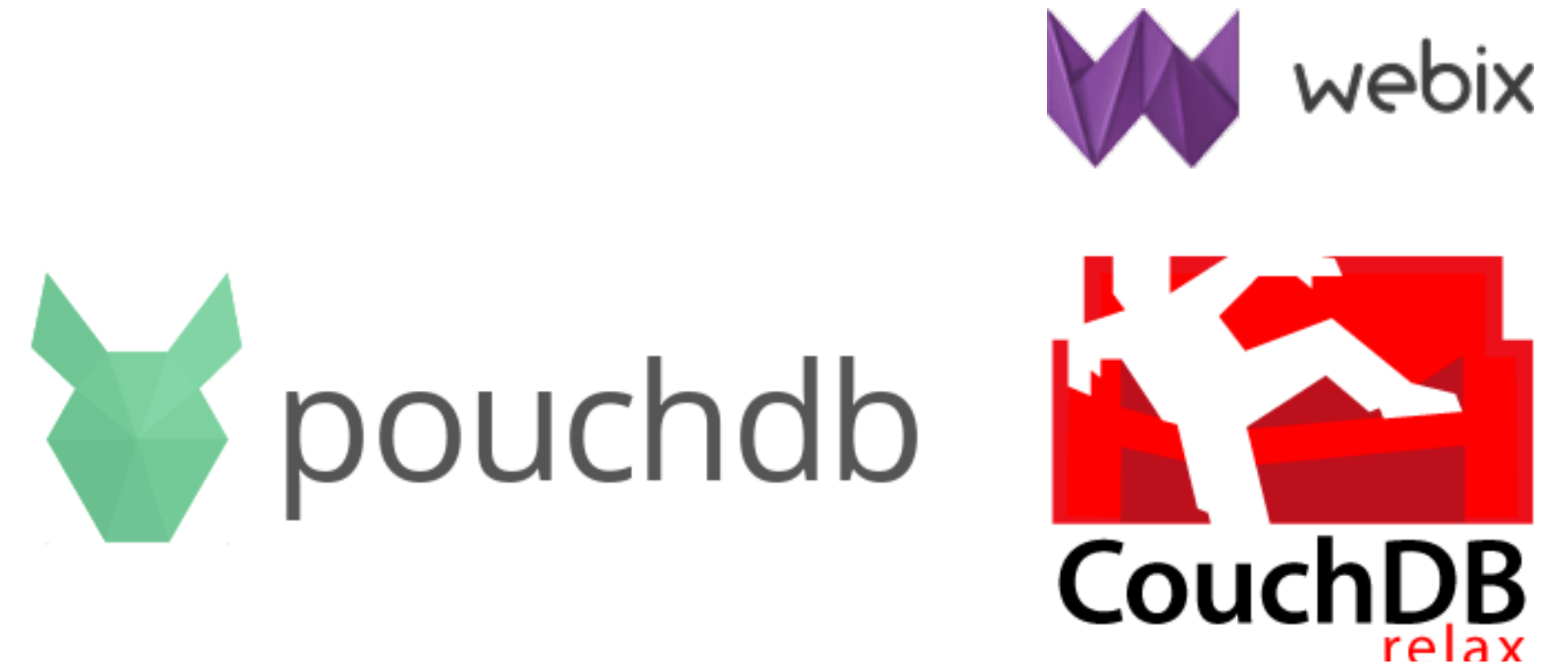
★Applications that Sync, powered by PouchDB

INGREDIENTS:

- ❖ A MODERN JAVASCRIPT MOBILE FRAMEWORK – WEBIX
- ❖ AN EVENTUALLY CONSISTENT NOSQL DATABASE – COUCHDB
- ❖ A DATABASE THAT SYNCs – POUCHDB
- ❖ A HYBRID MAD FRAMEWORK – CORDOVA/PHONEGAP
- ❖ AN ACCOUNT FOR ONLINE INSTANCE

PREPARATION:

- ❖ DEVELOP ON LOCAL ENVIRONMENT
- ❖ MODIFY THE WEB SERVER ADDRESS.
- ❖ PUBLISH/REPLICATE THE APPLICATION.
- ❖ PRO TIP : YOU MAY USE APPZIP TO PUBLISH YOUR APPLICATION TO ONLINE DATABASE INSTANCE
- ❖ SERVE THE APPLICATION FROM COUCHDB, AND CONSUME IT WITH A MOBILE WEBVIEW.



MINDSET

- ▶ Aim towards Single Page Applications (SPA)
- ▶ All Business Logic is on Client Side (JavaScript - Webix)
- ▶ Data Replication is the key - CouchDB <===> PouchDB
- ▶ Filter user data before pull sync (from server to device)
- ▶ Solve document conflicts on client side, before update
- ▶ Detect on-line offline switch in your application (Cordova)
- ▶ Enjoy and have fun!

APPLICATION ARCHITECTURE



★The Database is the Application

INGREDIENTS:

- ❖ ONE OUNCE JAVASCRIPT FRAMEWORK – WEBIX
- ❖ A TEARDROP OF NOSQL DATABASE – COUCHDB
- ❖ NATIVE DATABASE THAT SYNCs – CBLITE
- ❖ A NDK FOR MOBILE DEVICES/IOT
- ❖ AN ONLINE INSTANCE
- ❖ A DECENT TEXT EDITOR

PREPARATION:

- ❖ DEVELOP ON LOCAL ENVIRONMENT
- ❖ MODIFY THE WEB SERVER ADDRESS.
- ❖ COMPILE THE APPLICATION
- ❖ PUBLISH THE APPLICATION.
- ❖ SERVE THE APPLICATION FROM COUCHBASE, AND CONSUME IT WITH A MOBILE FROM YOUR LOCAL DATABASE – COUCHBASE LITE.



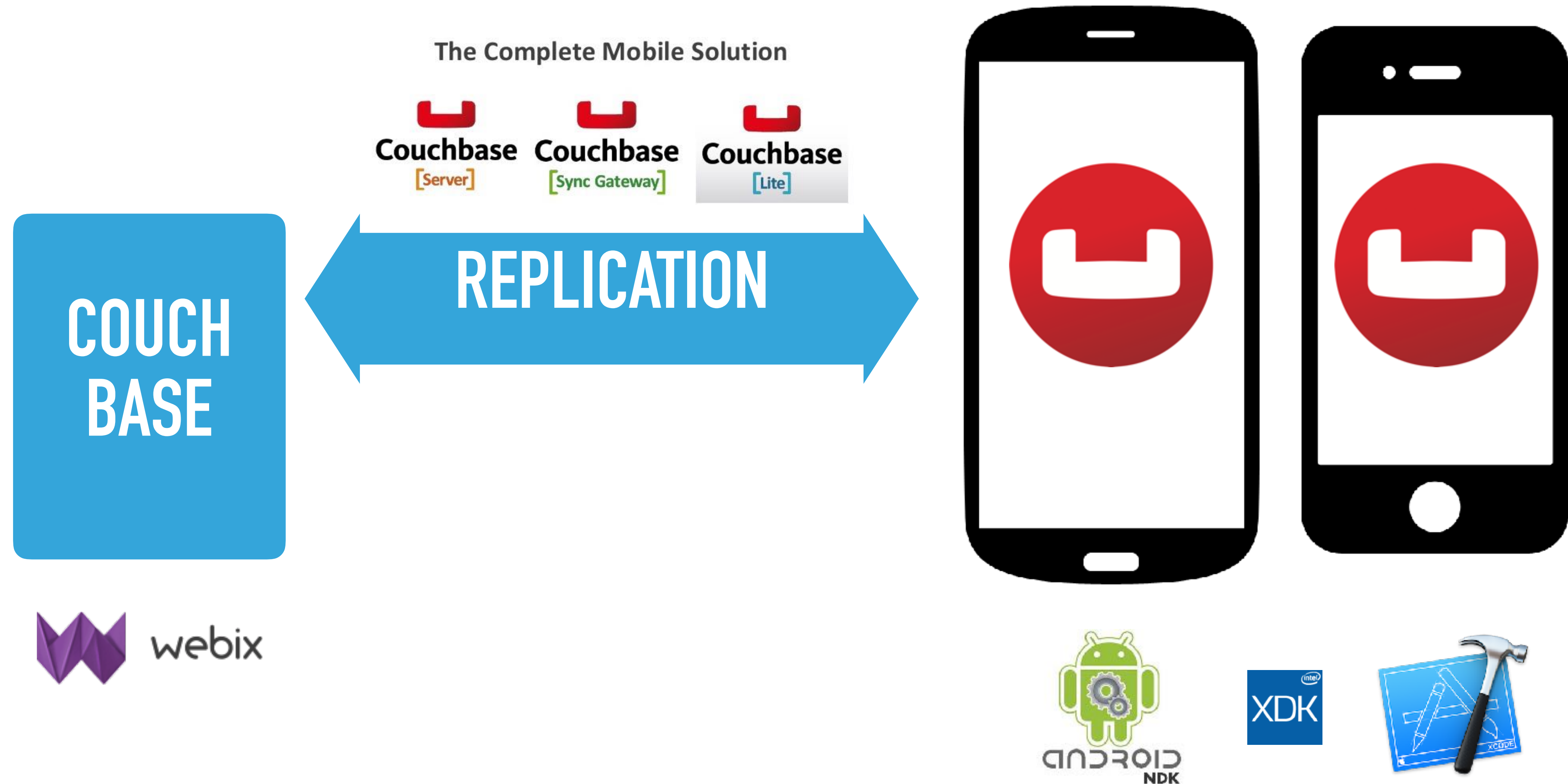
The Complete Mobile Solution



MINDSET

- ▶ Your application is a Package
- ▶ Data and Applications are stored in CouchDB
- ▶ Data Replication and Application distribution use the same mechanism
- ▶ Serve the application from local device web server
- ▶ Replicate data only when needed - keep it local
- ▶ The local network is the mobile
- ▶ Enjoy and have fun!

APPLICATION ARCHITECTURE



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THANK YOU!

QUESTIONS!