

iPad – Innovation or Gadget?

Niels Mathiesen, **mathiesen & mathiesen**, Basel, Switzerland

ABSTRACT

The iPad design - one screen, one button to turn on and off, nothing else is setting new yardsticks for Simplicity. The iPad consistently and radically relies on the simple operation by the finger (touch screen). Incitement for the Software Designer's to meet the challenge for Simplicity.

The dimension: **"From Anywhere and On Any Device"** is what the users expect in the future. The iPad has established itself very quickly to the market.

Apple shows innovation and is defining the computer in a new way with their iPad. The rest of the competitors are following.

The software vendors use the newest software technology, revising their software architectures, in order to achieve the most elegant and simple software.

A new type of applications develops – the name **"App Internet"** may be the best fitting description. **Apple "iApps"** and **Android "Apps"** are examples of this development.

The **Browser Based Software** is another technical way the user is able operate business software **On Any Device**.

With the latest development within HTML (HTML5) the browser is in a good position as candidate for the **"Common Technology Platform"**.

A substantial number of examples of productive applications are ready for use – we demonstrate how they can help pharmaceutical professionals to do their job better. The examples are impressive showcases how "Innovation driven by Technology" is turning software into elegance and simplicity. The innovations are in general also valid for the new generation of Tablet PC's. The possible drawbacks compared to desktop PCs are discussed



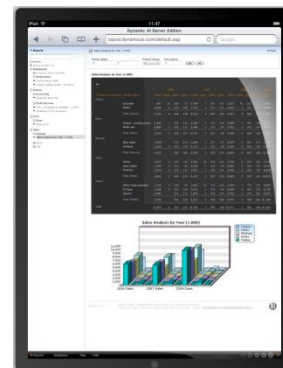
1. INTRODUCTION

The iPad is here. And the world start to discuss and change. The discussion has flamed up again. Do we belong to the fan of Microsoft or do we belong to the fans of Apple. This kind of "battles" belongs for the innovative software developers to the past.

The incitement for the Software Designer is to meet the challenge for **Simplicity**.

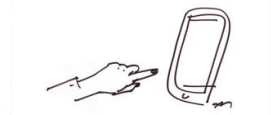
The technology basis is available – the challenge is to use it in the right way. A substantial number of examples of productive business applications are announced, under development or already ready for use.

All with the goal to help professionals to do their job better. And all you Pharmaceutical Professionals will also benefit.



2. SIMPLICITY without compromise

The user decides. iPad has success. The “Apps” have success. And competitors have made the decision to compete with the same success factors. The winners are the users – providers with the ability to offer the most simple and complete solutions / applications succeed. And for the user the point is reached **“from anywhere and on any device”**



Touch

simple operation by the finger

3. CHALLENGE. Bringing the Total Process COMPLETE to the Tablet Computer Category.

The overall simplicity counts. The hardware, the multiuse, the applications, the support of the individual workflow. Pharmaceutical Professionals and Clinical Trial Professionals are working differentiated and very often engaged in the total workflow - from the drug development to the submission. Bringing the total process complete and simple to the Tablet computer category is the challenge.



CDISC

4. TABLET COMPUTER not a full-fledged computer

While the iPad can be used for tasks such as word processing, Web browsing and email, **it is not a full-fledged computer** and is missing many capabilities found in even the most basic Macs and PCs. Like iPods and iPhones, the iPad must be synchronized with a Mac or PC to backup data, synchronize multimedia content and install important software updates.



Toshiba Tablet Folio 100

5. TABLET'S. Apple and the competitors

Apple sold millions of iPad already. The forecast for 2011 is **28 million iPad's** sold. That is the best sales figures for “Tablet” devices ever. The more advanced version 4.1 of the operating system for the iPad will be available in October

In October the first “real” competitors will be on the market. The sizes of the Screen of the competitors are between 7 and 10 Inch. Examples are: **Samsung Galaxy Tab** and **Toshiba Tablet Folio 100**

The operating system will be Android 2.2 from Google. Android is developing very fast “200,000 Android Phones are Sold Daily”. The version Android 3.0 is planned for this year.

Nokia is bringing the operating system „MeeGo OS“ on the market this year. The competition is there.

The Tablet's offer all connecting to Applications over the Browser and parallel special “Apps” Application programs.



Samsung Galaxy Tab

6. "APP INTERNET" Applications dedicated to the Tablet

Applications running on the Tablet. A new type of applications develops – the name “App Internet” can be the best description. **Apple “iApps”** and **Android “Apps”** are examples of this development. Apple informs that they have sold 60 Millions iApps. (status August 2010).

Android is using the same concept with Apps. The Apps world is partly exclusively to the operating system. Closed systems are less competitive in the long run.



Apple App store

7. “THE BROWSER” Applications used from overall

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Applications running in the browser. Applications running in the browser is extreme flexible. You only need a device with a browser. Then the application can be used on the desktop browser, the iPad browser etc. The challenge is to deliver the application with the necessary **simplicity**.



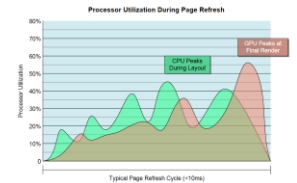
Safari 5 - Top Sites

8. "THE BROWSER" The open standard HTML5

Based on the limitations in the Browser technology from the past it has been necessary to implement a number of Plug-ins in order to be powerful, lively and informative by the presentation in the browse. An example is "**FLASH**" from Adobe.

It can be done without.

The new standard HTML5 is eliminating the need for plug-ins. All the browser vendors support HTML5 – Microsoft with **Internet Explorer 9** coming this year..



IE9 preview

http://ie.microsoft.com/testdrive/Graphics/_AreaChart/Default.xhtml

9. "INFORMATION ANYWHERE" Speed and simplicity

Speed and simplicity. These are the main **challenges** for the software developers. A iPad connected over 3G has only a fraction of the connection speed compared to a modern Wifi connection. The technology behind is AJAX.



SuperProber

iPad Webbrowser

10. "THE BROWSER" Technique AJAX

AJAX stands for **Asynchronous JavaScript and XML**. It is a technique used to make Web pages faster to use. If they are programmed with AJAX, they seem to react faster. They only send small bits of information to the server. That way the whole web page does not need to reload, only small parts of it. Small parts are transported quickly and fast even with a limited connection. Google is the most prominent company demonstrating the Power of AJAX.

Google Instant is a newly introduced search enhancement that shows results as you type. A good example of the use of the AJAX technology.

Within the last years JavaScript libraries have become very mature. Best example is jQuery, which has a huge developer community and even Microsoft contributing.



Google Instant

11.0 "APP INTERNET" Business Applications

The iPad **iAPP's** market continues its rapid growth and today just passed the 20,000 mark in the App Store. Apple informs that they have sold 60 Million iApps. A fraction is business Applications.



11.1 "iAPP" Business Application Examples

Among the most popular Business Applications for the iPad are:

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1. Keynote



Apple has launched an iPad version of their presentation software. It is fully functional presentation software with a completely reworked user interface to allow an easy to use handling. This presentation is actually presented with Keynote on my iPad.



2. Dropbox



Dropbox is a Web-based file **hosting service**, which uses cloud computing to enable users to store and share files and folders with others across the Internet using file synchronization



3. Super Prober



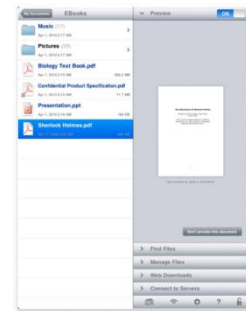
Super Prober – Advanced Multi-Function **Web Browser** for the iPad is a new web browser that is extremely feature rich, easy to use and makes web browsing on the iPad a more enjoyable experience than using Safari on the iPad.



4. GoodReader



With GoodReader on your iPad, you can **read** virtually anything, anywhere. Books, movies, maps, pictures; GoodReader puts it all in a single app, right in your pocket. From the very first time you use it, GoodReader is sure to be the most used app you will ever buy. It easily integrates with MobileMe iDisk, Google Docs, **Dropbox**, box.net, and other popular servers.



11.2 "iAPP" Business Intelligence Examples

1. QlickView



QlickView for iPad provides mobile professionals with access to decision-critical business intelligence information through an intuitive touch interface. Built from the ground up to support the Apple iPad's native multi-touch interface, QlickView for iPad takes mobile business intelligence to a new level of touch-based interactivity, enabling freeform exploration of business data without the limits of static reporting. With QlickView for iPad, business users on the go can access the exact BI information they need, when they need it



2. Dynamic AI

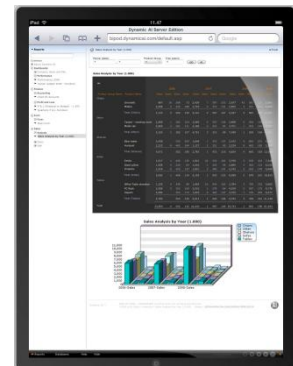


With **Dynamic AI** you can explore your reporting, dashboards, forms etc. with the award winning interface of the iPhone/iPod touch.

Drill-down at your finger-tips - suddenly gets the right meaning!

iPhone/iPod touch access is available from all Dynamic AI editions including the Free Personal edition.

(Revised version expected end September 2010)



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3. TARGIT iTop



TARGIT iTop displays all your business performance indicators directly on your iPad. TARGIT iTop enables you to analyze the underlying trends and data as well as communicate your decisions more powerfully with the supporting data.

TARGIT iTop is an add-on for the Desktop client in TARGIT BI Suite, which provides you with a lightening quick overview of relevant business data and information on your iPhone or iPad.

A fast overview at the exact time you need it. Once you made your decision, the TARGIT iTop will allow you to communicate and collaborate with your colleagues directly, and thereby make the response time for your entire organization faster.



4. Roambi



Roambi is an innovative app that quickly transforms your business reports and data – from many popular business applications – into secure, interactive mobile dashboards, instantly delivered to any iPad. It lets you easily view and interact with up-to-the-minute company information –giving you the insight you need for on-th-go analysis, omprompt presentations and smart decision-making. Roambi puts the pulse of your business.



5. BI Flash™



Deliver Powerful Business Intelligence to iPhone® Any SAS macros, programs or data can be delivered to iPhone. By simply registering the programs or SAS libraries, you can make this available to specified users who connect via standard 3G or Wifi network and results are delivered into a viewer on iPhone. This is executed in real time so the user gets always the latest data.

(For the moment as iPhone application)

Obs	PATNUM	STUDY	AGE	AGEG	AGEG1	AGEG2	EVAL
21	34006	ABC12	61	40-64	<65	<65	YES
22	34007	ABC12	45	40-64	<65	<65	YES
23	34007	ABC12	45	40-64	<65	<65	YES
24	34007	ABC12	45	40-64	<65	<65	YES
25	34007	ABC12	45	40-64	<65	<65	YES
26	34007	ABC12	45	40-64	<65	<65	YES
27	34007	ABC12	45	40-64	<65	<65	YES

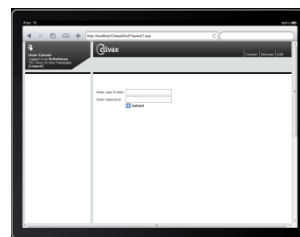
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12. "iPad – BROWSER" eCRF

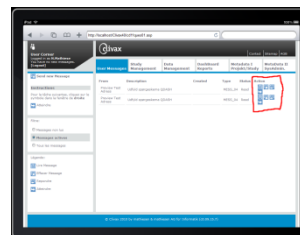
The iPad has exactly the right size for the eCRF. The participant can fill in the questionnaires' in an easy and handsome way. To succeed with on finger.



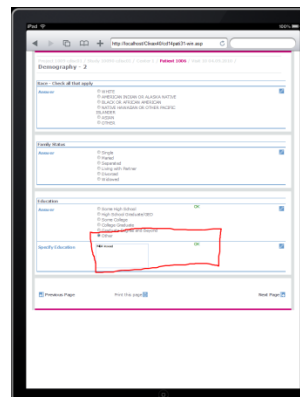
1. Login First step Login



2. Communication Hit the button "go there"
Everything is shown in the language of the participants



3. CRF (Fill in) Fill in CRF.



4. Complete And a thank you when succeeded

13. "iPad – BROWSER" Signal Framework

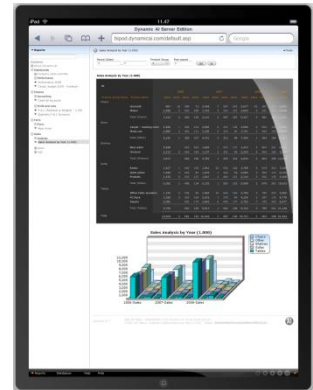
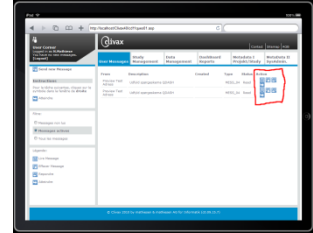
Project management. Let's repeat the 3 steps.

1. Login First step Login

2. Communication Hit the button "go there"

3. Study the graphs The up-to-date information's are shown. Real time creation from the database.

Simplicity without compromise

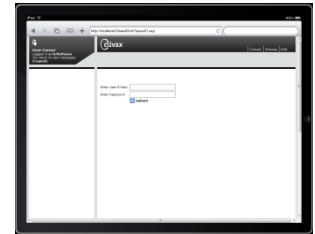


14. "iPad – BROWSER" Business Applications

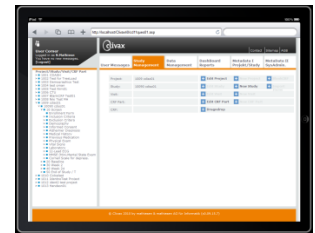
Design of eCRF and Data Management. The administration of the fully clinical trials process done on the iPad.



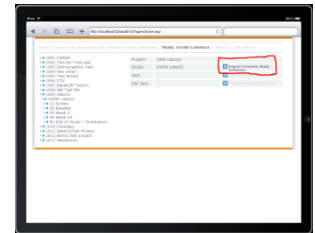
1. Login



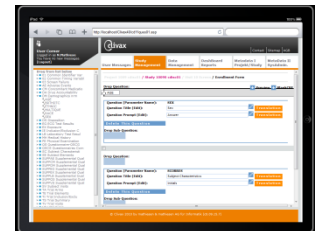
- 2. Administration**
1. The menu possibilities according to your rights.
 2. The data shown according to your rights.
(Role / belonging to Center / Study)



- 3. Metadata**
- By the help of **"Cut and Paste"** all the worth full experiences from previous studies can be used. The copy process is designed for **"one finger"** use

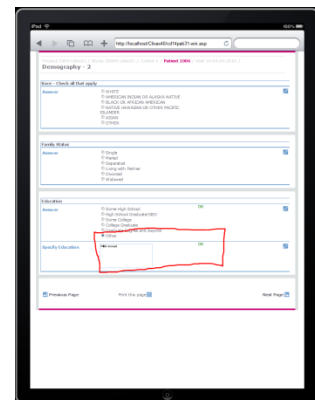


- 4. CRF Create**
- Adaption / create of CRF by **"Drag and Drop"**



- 5. Preview**
- Check the layout and all the functionalities in the **preview**.

- Layout
- Help
- Validations
- Messages



- 6. CDISC**
- Need the "standards" from CDISC
- Generate Blank CRF
 - Export SDTM
 - Define.xml



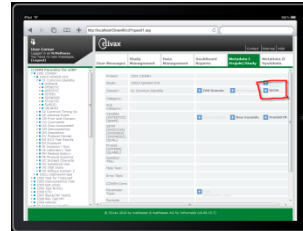
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7. Blank CRF Print the **Blank CRF** for documentations, forwarding to colleges and control.

The image shows a web-based form titled "Vital Signs" with a header "Page 12 of 18" and "November, 05/05/2010". The form contains several sections: "1. Patient ID", "2. Weight", "3. Height", "4. Body Frame Size" (with radio buttons for LARGE, MEDIUM, SMALL), "5. Sitting Blood Pressure" (with a sub-section for "Diastolic in mmHg"), and "6. Standing Blood Pressure" (with a sub-section for "Diastolic in mmHg"). Each section has a "DOCUMENT WHEN VISITING" button.

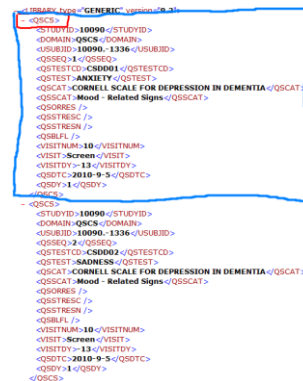
- 8.1 Export SDTM SDTM export of data. Choose your business format.

- XML
- SAS format
- CSV format



- 8.2 SDTM.xml Have a look at the SDTM data before forwarding:

- Statistician
- FDA



15. POSSIBILITIES ENDLESS. With Browser Applications

The flexibility and possibilities with browser based applications are endless. Optimize the layout for the device and the screen size. The business logic part is unchanged behind.

1. Adaptability For an existing browser application different screen size optimised user interfaces can be provided easily.

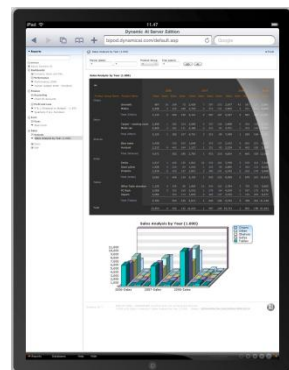
This enables the combination of the easy to use feeling of an iApp with the operating system independence of browser applications.

2. Compatibility Web based Applications may often be merged and allow additional comfort. **Example:** Dynamic AI with Clivax

3. Example User is only given access to the data where he has **permission** to. Therefore the entrance into the Business Intelligence system is via the browser application Clivax.

Your Signal Framework is extended with the reporting possibilities of the BI – application and the original data permission control is still active!

Therefore not only study administrators get the possibility to create new reports. Every user can work with the data he is allowed to see.



BI in the iPad browser

16. "ePRINT" from anywhere to anywhere

One weakness of Apple's iPad, is the lack of simple printing solutions.

1. HP ePrint

HP **ePrint** is printing from any email device to any HP ePrint printer. The ePrint enabled printer will be connected directly to the Internet via your router. Each printer will have its own email address.

To print a document you will email it to the printer and it will then print it for you.

You don't have to do anything to the device like install software or drivers.

This technology brings a new simplicity to all browser based applications:

It allows a one-touch instant print from anywhere out of your web browser.



HP Photosmart D110a
(e-All-in-One)

17. "FROM ANYWHERE AND ON ANY DEVICE" Commitment

Go for the whole – use the technology in a clever way.

1. SAP



2011, SAP will bring an enterprise platform for **mobile devices** on the market, Business Analytics (Business Objects), Sybase Unwired and cleverly combined in-memory technology.

"In nine months, our customers have a platform with which they can use SAP **from anywhere and on any device**".

Can SAP reach the goal by existing technologies and combinations of existing technologies? My best guess is that HTML5 / AJAX will be the very central technology fundament

Statement August 2010

18. CONCLUSION

The iPad has established itself very quickly to the professional computer user world. Apple shows innovation and is defining the personal computer in a new way with their iPad. The rest of the competitors are following.

The direction for the future improvements is clear: **Simplicity**.

The potential is tremendous.

The basic technologies are here.

The tablets are here (OS, browser (HTML5), internet connection and touch screen). A Browser is always included.

With the latest development within HTML (HTML5) the browser is in a good position as a candidate for the **"Common Technology Platform"**.

Now the challenge is placed at the software developers side.

The users will be asking for the maximum:

FROM ANYWHERE AND ON ANY DEVICE + **SIMPLICITY**

CONTACT INFORMATION

Your comments and questions are valued and encouraged.

Contact the author at:

Niels Mathiesen
mathiesen & mathiesen
AG für Informatik
Peter Merianstrasse 45
Postfach
CH-4002 Basel

Mail: Niels.Mathiesen@m-m.ag
Web: **www.Clivax.com**

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Tel: www.m-m.ag
+41 61 271 69 42