IMS Health CLM Guidelines

Version 1.6.2 - December 06, 2015

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About CLM & MI Touch

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From mass market to individual physicians' needs

The Selling dogma has always been:
"the right message to the right customer at the right time"

Bringing the right message requires to know what is the customer's wish.
This information can come from a feedback to a question or to a first message.

Closed-loop marketing (CLM) refers to the feedback from a customer towards a message. This feedback is analyzed and used to adapt the message accordingly
So the complete loop can be seen as:
Defining messages
Addressing messages to customers
Capturing feedback
Analyzing feedback
Adapting message for next interaction

So this is all about capturing information during a detail against a customer and then use this information to deliver personalized content that closely matches physicians' interests

Capturing information during a call has been made possible thanks to the emergence of new technologies.

Using light and user friendly devices to make it acceptable by the reps on one hand.
And using HTML5 capabilities to be able to catch as much data as possible in a training mode, to make it acceptable by the customer on the other hand.

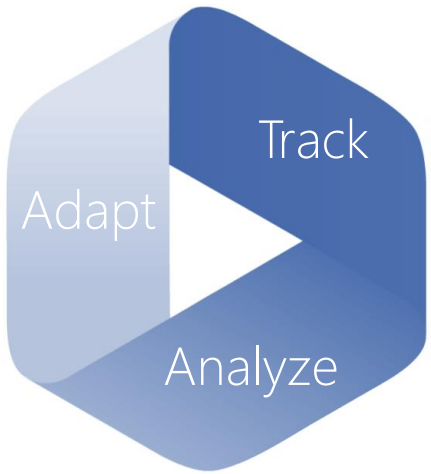
But capturing information is not enough. It is more important to see what can be done through it. How is the data being used? And this is not about data quantity (who cares about the time spent…), but only about data quality.
This is where the link to the CRM system is important.

The CRM aggregates all information regarding the customer, including interests, behavior or else.
This is the material that will be used to define messages and make the customer react on them.

The collected reactions will be used in 2 ways:
At global level: macro analysis will help to understand which messages are the most and the least appreciated, and apply the right corrections.
At customer level: updating automatically the customer profile in the CRM will help to adapt accordingly the message for the next call.

This approach can be optimized when creating "small" presentations, like chapters dedicated to specific thematic. Then, the adaptation and the personalization will be easier and more efficient than working with one single big presentation.

Understanding customers' interests and capturing their feedback helps ensure that future interactions will continue to be valuable.



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Marketing Team

HO team defines the strategy (which message to deliver to which target) based on customer data and reports from previous campaigns.
Creative agency builds the content accordingly.
HO loads and validates the content within MI before distributing it to field force

Field Force

Field force downloads the presentations on their device.
MI Touch suggests which presentation to use for which doctor according to the defined strategy.
MI Touch tracks automatically what is presented to whom. Reps can access this information to prepare the next visit and HO will use the consolidated feedback from the entire sales force to prepare the next cycle and refine the strategy.

Viewer high level overview

Zone 1

Header bar

Allows the user to access the following functions

- ✓ Cancel
- ✓ Switch to another module of MI Touch
- ✓ Select customers
- ✓ End presentation
- ✓ Pause presentation
- ✓ Go to Post call

Zone 2

Footer bar

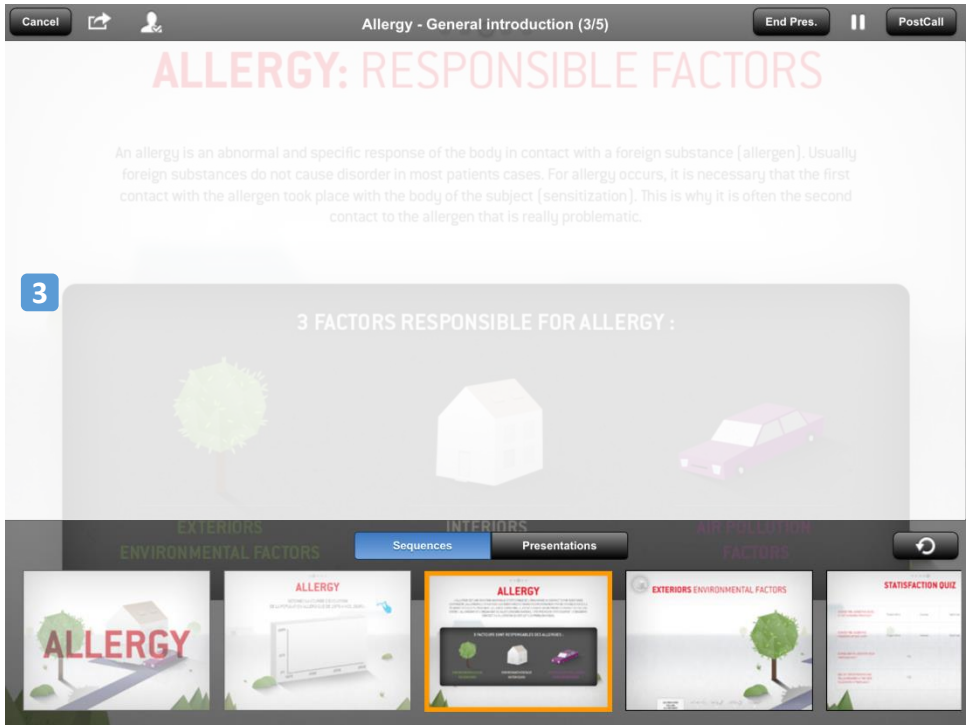
Allows the user to

- ✓ Navigate into the presentation by switching directly to a sequence
- ✓ Switch directly to another presentation
- ✓ Rotate the screen

Zone 3

Feedback recording area

Allows the user to record the customer's feedback to a key message



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Agency role

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Agency Role

Certification Process

Web agencies play an important role in the deployment of digital solutions for representatives and healthcare professionals.

This is particularly true for e-detailing projects implementation where multimedia contents are integrated into CLM software such as Mobile Intelligence.

To propose an all-in-one integrated solution content + software to Pharma Industry, IMS Health has built an Agency Partnership Program dedicated to digital media companies and advertising agencies.

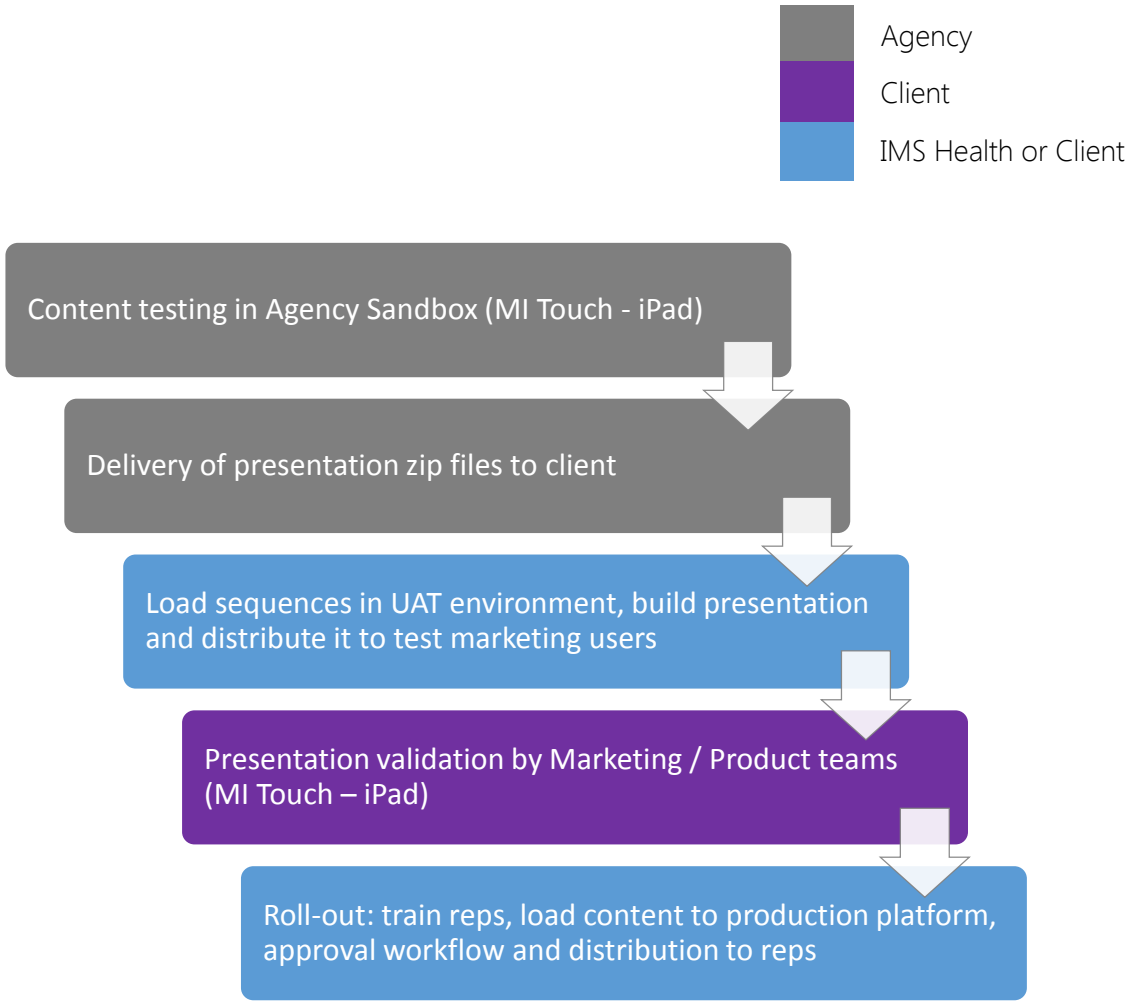
By joining this program, the agency will benefit from:
•An access to MI CLM sandbox environment to test developed presentations
•Dedicated training session on how to build content for MI CLM solution
•Online support tool to get in touch with IMS Health CLM subject matter experts

Among all our partners, Certified Agencies have demonstrated their expertise by successfully completing the IMS Health certification process which includes the development of a fully functional presentation

Certification is mandatory to work on client projects

Implementation Process

Agencies have to use the MI sandbox tenant to develop and test their content.
The content has to be delivered to clients via file transfer (zip files).
Agency content will the be tested on client UAT environment where brand teams will validate the content.
Once validated, content has to be uploaded in Production environment.



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How to structure the content

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Multi-Sequence vs Mono-Sequence: Effects on Architecture and Tracking in MI Touch

Sequence

CLM presentation for MI Touch has to be split into so-called "sequences".
A sequence is the minimum unit of content that can be loaded into MI.
In other words, a sequence is a zip file containing html or pdf content ready to load into MI.
Each sequence can be associated to a product and a key message.
Sequences are then associated together to build presentations.

MI Touch automatically tracks product and key message, feedback and duration for each sequence and provides standard reports to analyze these data either at representative level or head office level.

Multi-Sequences

Splitting the content into multiple sequences (aka multi-sequences presentation) rather than one unique sequence with many pages (aka mono-sequence presentation) is IMS Health recommended approach since multi-sequences presentations offer many advantages.

Tracking

Using multi-sequences presentation allows to benefit from MI Touch native tracking and reporting at sequence level (product, key message, duration, doctor feedback).
In order to achieve the same with mono-sequence presentation, the developer would have to manually program each and every item to track (using onEnterPage() function for example or addAsset() / addAction() functions), which would add more time and money to the project.

Investment

From an investment standpoint multi-sequences presentations are more cost effective: presentation code is easier to maintain and marketing teams can adapt presentations independently from agencies using MI Touch Admin features which allow brand managers to re-arrange sequences order and add or delete specific sequences..

Navigation

One further benefit of using multi-sequence is that it eases navigation through the presentation. Mono-sequence content requires to develop specific menus inside the presentation to reach the different sections.
Multi-sequences presentations allow to use MI embedded navigation bar to directly reach the desired sequence or simply swipe to go from one sequence to another.
The same MI navigation bar can be used to switch from one presentation to another.

Built-in Tracking

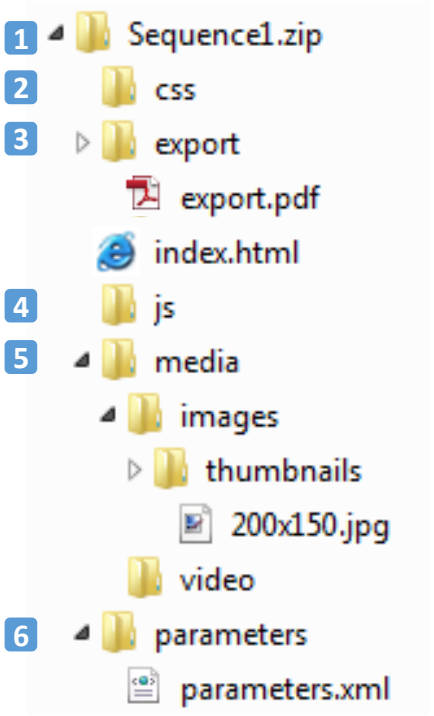
Embedded Navigation

Content Optimization

Multi-Sequence vs Mono-Sequence: Effects on Architecture and Tracking in MI Touch

	MONO-SEQUENCE	MULTI-SEQUENCE recommended approach
Flexibility HO : MI9 Reps : MI10	Not possible to change presentations within MI	• Possible to re-arrange sequences and create new presentation instances • Easier to maintain
Tracking Product + Key message + Duration + Feedback	Agency must use onEnterPage() function in the presentation	Managed by MI natively
Navigation	Presentation must contain internal navigation	Possibility to use MI bottom bar navigation
Update	▪ Full presentation to upload again for any change ▪ Only modified files are sent as update on the iPad	▪ Only modified sequence has to be uploaded ▪ Only modified files are sent as update on the iPad
Administration	▪ Only 1 zip file to load ▪ Mapping page id – key message	▪ 1 zip file per sequence to load ▪ Mapping sequence – key message ▪ Sequences to group together in the presentation in the right order
Transition Management (speed, effect)	Transition between pages is Agency responsibility	Transition between sequences is managed by MI With MI9 SU05 speed is 350 ms / sequence swipe
Memory Management	Agency has to manage the iPad memory. By default the full presentation is loaded	Sequences are automatically loaded and un-loaded in memory at each transition
Compliance	To be managed in the presentation	Mandatory Sequence with MI10

Sequence must be distributed in a zip archive. The architecture should match the following:



1 Root Folder

This folder should contain the sequence's HTML files and the folders css, js, media, etc.
First html file must be index.html (mandatory).

2 Css Folder

This folder contains all style sheet files (recommended).

3 Export Folder

This folder contains the PDF file that will be used to send presentation by email (optional).
If provided by the agency, name of the file must be export.pdf.
Please note that the file cannot be secured by password, and access permission should allow changes to the PDF file content.

4 Js Folder

Contains all JavaScript files (recommended).
It is important to only include js framework, which is actually used in the sequence. Loading unnecessary js libraries might cause performance issues.

5 Media Folder

Contains all media files. They are grouped by type.

- Images Folder: Contains all the image files in the sequence (recommended) and the subfolder thumbnails (mandatory).
- Thumbnails Folder: Contains the thumbnails. Name of the file must be 200x150.jpg (mandatory).
- Music Folder: Contains all the music files in the sequence (recommended).
- Videos Folder: Contains all the video files in the sequence (recommended).

6 Parameters Folder

Contains xml file for the sequence parameters (optional).
If provided by the agency, name of the file must be parameters.xml

Sequences provided by Agency must respect the following recommendations

Format	iPad Resolution: 1024x768 Windows 8 Resolution : Device dependent Responsive design is recommended
	Landscape orientation is recommended ; Portrait orientation is supported ; (90 degree with the clock rotation of the content only)

Files Size Recommendation	It is recommended not to exceed 5MB of images per sequence due to performance issues on iPad

Thumbnail	Format: jpg
	Resolution: 200x150 (For CLM), 150x200 (For Compliant Field Email)

Package	Each Sequence must be provided in one zip file which will contain all of the files required to display the HTML page as defined in the "How to Structure the Content" section Sequence must be independent File paths must be relative Thumbnail must be in the folder media\images\thumbnails and must be named 200x150.jpg Export PDF File for email must be in the folder export and must be named export.pdf (For CLM) Parameter file must be in the folder parameters and must be named parameters.xml External link must be opened in a new window. External Link tag must contain *target="_blank"* and URL parameter *openInSafari=true* Files extension must be part of MIME Type Supported

Hardware & Software Specifications for MI PC Online & MI Touch

	MI PC Online Client	
Hardware	Processor: RAM Memory: Virtual Memory: Display Resolution:	Intel Core Solo or Duo, 1.7 GHz (or better) 32/64 Bit processor Dual core 1.7 GHz x64 (or better) For Windows 8.1 4 GB OS Default Minimum: 1024x768 16/32 Bit Colors
OS	Windows 7 (32 or 64 Bit) Windows 8.1 Professional (32 or 64 Bit) Windows 8.1 Enterprise (32 or 64 Bit) Windows 10 Professional or Enterprise (64 Bit)	
Browser	Internet Explorer version 9.x Internet Explorer version 10.x or 11.x (compatibility mode set as IE9) Firefox version (min.) 26 (Not applicable for MI Analytics) Chrome version (min.) 32 (Not applicable for MI Analytics)	
Connectivity	Network, Wi-Fi, 3G with https or http	

	MI Touch Online	
OS	iOS 8.x, 9.x or Windows 8.1, 10	Supported iPads: ▪ iPad 2 WIFI model ▪ iPad 2 3G model ▪ iPad 3 WIFI (16, 32, 64 GB) ▪ iPad 3 WIFI + 4G (16, 32, 64 GB) ▪ iPad 4 WIFI (16, 32, 64 GB) ▪ iPad 4 WIFI + 4G (16, 32, 64 GB) ▪ iPad 4 WIFI (with Retina display) ▪ iPad Mini WIFI (16, 32, 64 GB) ▪ iPad Mini WIFI + 4G (16, 32, 64 GB) ▪ iPad Air WIFI (16, 32, 64, 128 GB) ▪ iPad Mini Retina WIFI (16, 32, 64, 128 GB)
Browser	Safari Internet Explorer version 11.x	
Display Resolution	TFT: 1024 x 768 pixels	

4

How to customize gestures

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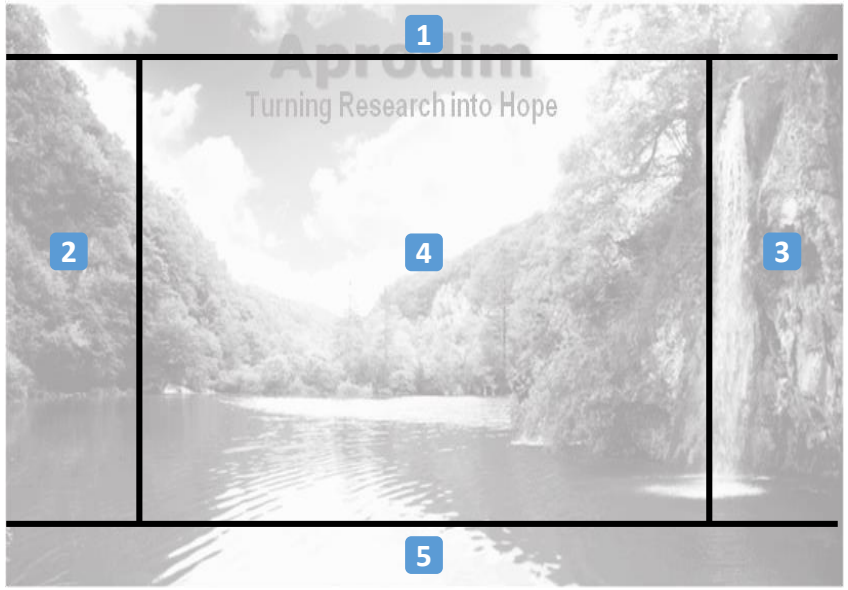
When a presentation is run on an iPad, sequences are played in full screen mode. To allow users to interact with the viewer, several areas are delimited with specific gesture interpretations. Each area owns its rules, which are defined in the Areas' Detail section.

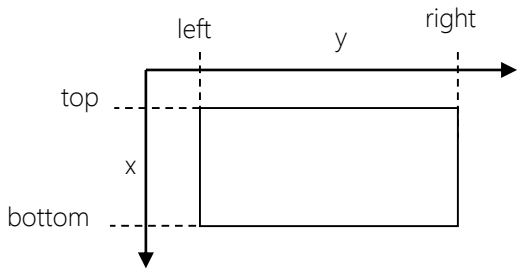
Areas' Organization

There are five areas, or zones, defined as follows



Areas' Positioning Detail

Each area is defined by its properties: top, bottom, left, right. These properties are defined in pixels as shown:



Area	Top	Bottom	Left
1	0	8% Xmax	0
2	8% Xmax	92% Xmax	0
3	8% Xmax	92% Xmax	90% Ymax
4	8% Xmax	92% Xmax	10% Ymax
5	92% Xmax	Xmax	0

Delimited areas with specific gesture interpretations

Zone 1

If a tap action is performed in this area, the header bar is shown above the sequence content.
Every action made in another section hides this bar except in the footer tab zone, if visible

Recommendation

It is strongly recommended not to put interactive elements in this area.

Exception

On a tap action:

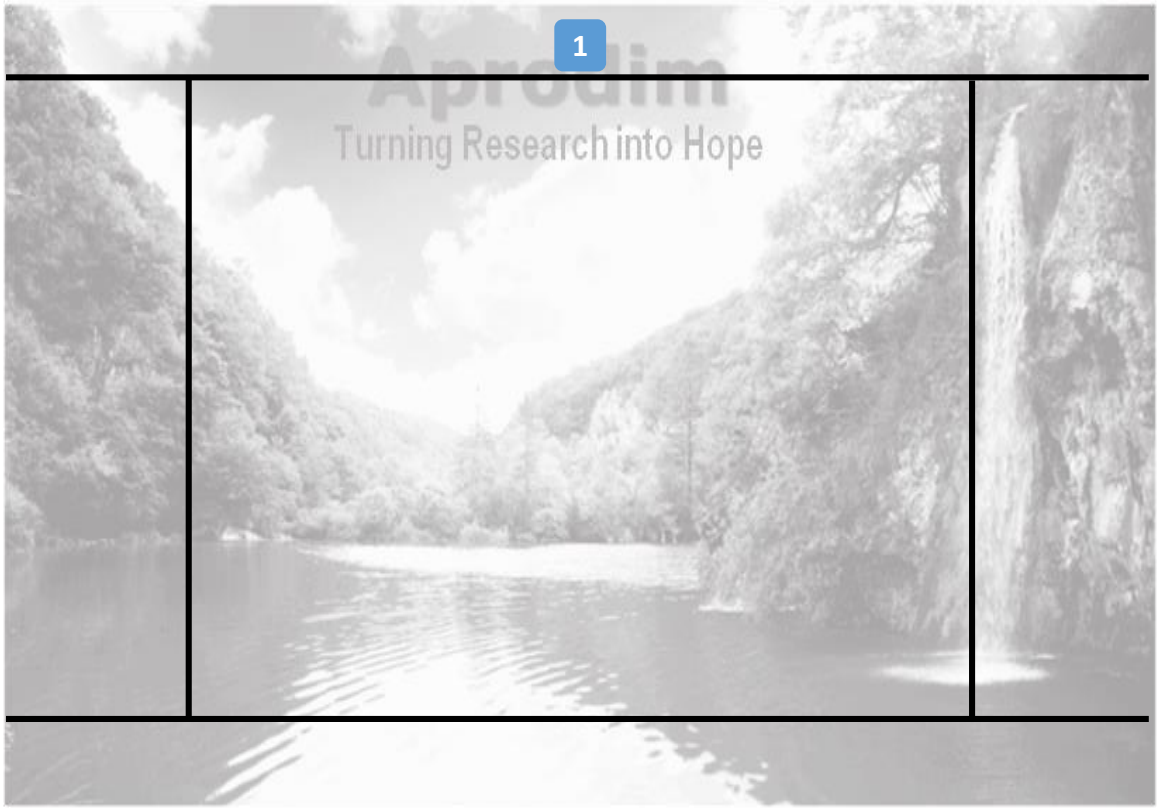
If an interactive element (refer to Interactive HTML Tags) is present in this area, the element action is performed. Example : <button>, <a>, <map>

When placing an interactive element in Zone 1 the particular area occupied by the element should be overridden, so when users tap on other point the MI default behavior will still work.

Every interactive element in this area must be visually well-delineated and must not take more than 30% of the area.

If a non-interactive element is present in this area, the header bar is shown.
Example :

If a non-interactive element is present in this area and it has the property data-prevent-tap set to true, the element action is performed.
Example :



Delimited areas with specific gesture interpretations

Zones 2 & 3

If a tap action is performed in these areas, feedback recording action (Positive, Negative, None) is performed by the viewer.
These buttons are defined with a z-index equal to 1000

Recommendation

No interactive element should be placed in Zone 2 or 3. If this is the case and without specific configuration (see below), it cannot perform the actions.

Interdiction

No element with a z-index equal or superior to 1000 should be placed in this zone. If this is the case, it cannot perform the actions

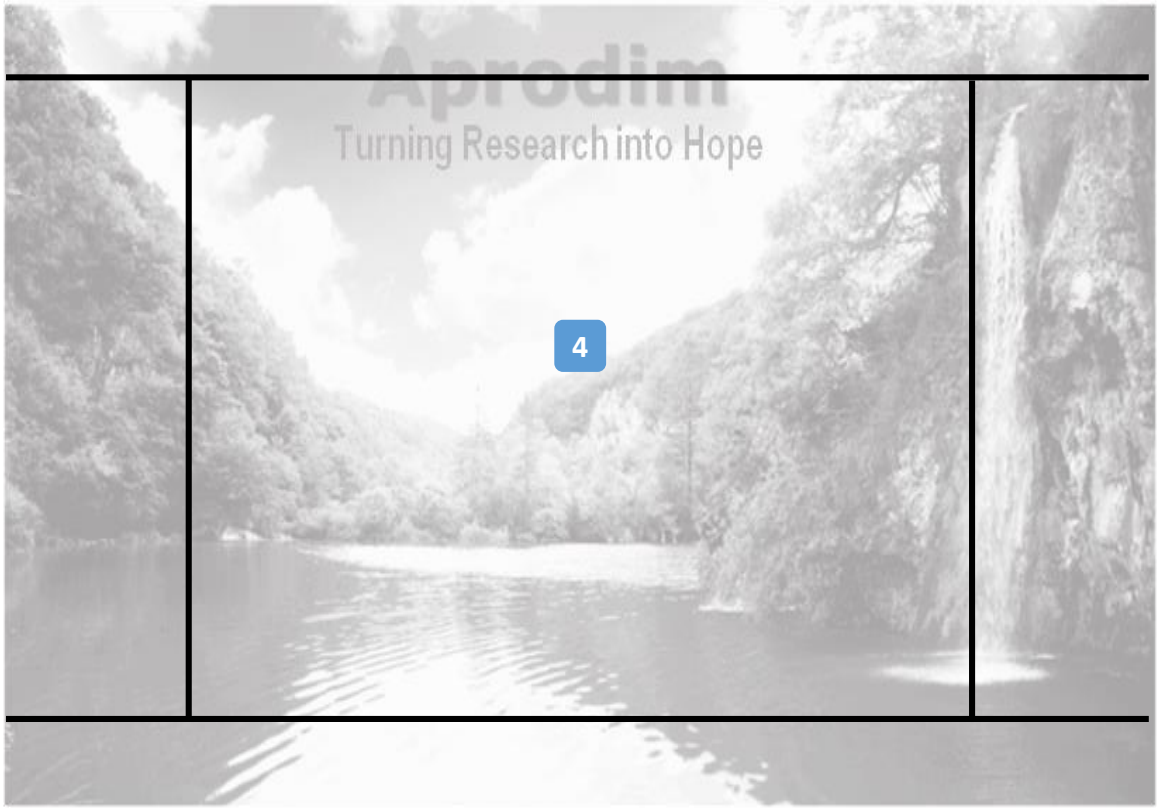
Exception

During sequence definition, admin user will be able to deactivate feedback for a specific sequence to allow usage of interactive elements in these zones 2 and 3.

Delimited areas with specific gesture interpretations

Zone 4

If a left swipe action is done in Zone 4, viewer navigates to next sequence.
In the same way, if a right swipe is performed, the previous slide is shown



Recommendation

If a sequence normally needs left/right swipe action, these should be replaced by next/previous action buttons.
Pinch and double-tap actions are reserved by the viewer to take control of the zoom.

Interdiction

Pinching and double-tap actions must not be used by the sequence content page.

Exception

If a sequence is composed of several slides, you can prevent the swipe left/right action.
To do this, the body HTML element must have the property data-prevent-left-swipe and/or data-prevent-right-swipe set to true. (Refer to Prevent Default Behavior section for usage.)

Default viewer behavior for swipe left/right action must be restored when last/first slide is shown to let the viewer jump to next/previous sequence. (Refer to Restore Default Behavior section for usage.)

ATTENTION: If the default behavior is not restored, the integrity of the viewer is compromised

Delimited areas with specific gesture interpretations

Zone 5

If a tap action is performed in Zone 5, the footer bar will be shown above the sequence content. Every action done in another section hides this bar.

Recommendation

It is strongly recommended not to put interactive elements in this area.

Exception

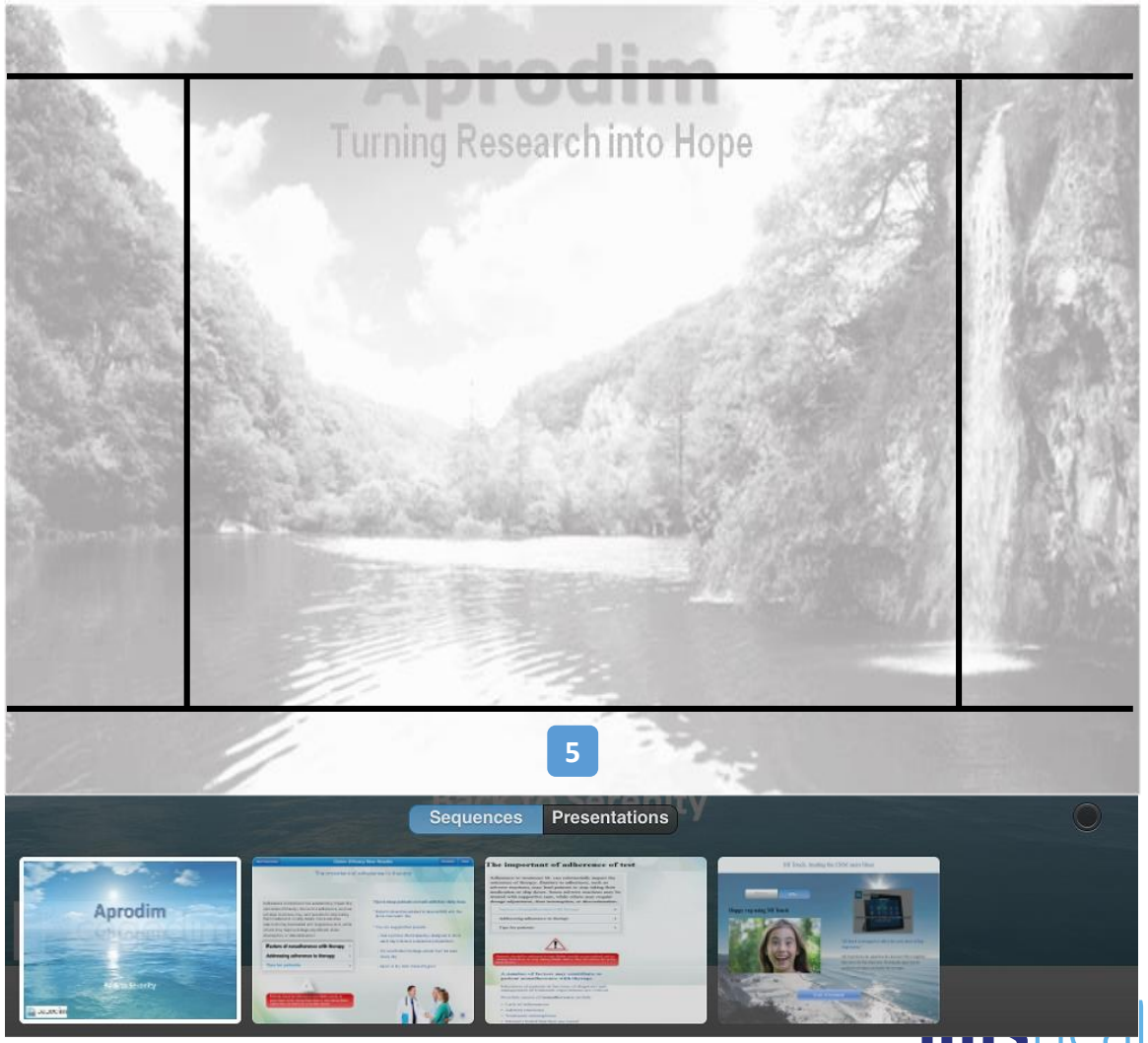
On a tap action:
If an interactive element (refer to Interactive HTML Tags) is present in this area, the element action is performed. Example : <button>, <a>

When placing an interactive element in Zone 5 the particular area occupied by the element should be overridden, so when users tap on other point the MI default behavior will still work.

Every interactive element in this area must be visually well-delineated and must not take more than 30% of the area.

If a non-interactive element is present in this area, the footer bar is shown.
Example :

If a non-interactive element is present in this area and it has the property data-prevent-tap set to true, the element action is performed
Example :



Summary

* Conditionally (refer to Zone 2 & 3 sections)
** Conditionally (refer to Zone 4 section)

Area	Gestures	Default Behavior	Override Allowed
1	Tap	Show header bar	True
2	Tap	Hidden action	True*
3	Tap	Hidden action	True*
4	Swipe Left	Next sequence	True**
4	Swipe Right	Previous Sequence	True**
4	Double Tap	Zoom in/out	False
4	Pinching	Zoom in/out	False
5	Tap	Show footer bar	True

Interactive HTML Tags

The following list contains all the HTML elements that the viewer considers interactive by default:

- A
- AUDIO
- BUTTON
- INPUT
- MAP
- OPTGROUP
- OPTION
- SELECT
- VIDEO

Prevent Default Behavior

Default actions can be overridden to perform specific sequence actions.
To prevent the viewer from performing default actions on an HTML element, *data-** property must be part of the element's attributes.
Then every default action handling is revoked on this element and on its children.

Usage

```
<body data-prevent-left-swipe="true">
...
</body>
```

or

```
<div data-prevent-tap="true">
...
</div>
```

Etc.

Restore Default Behavior

To restore the default behavior, the *data-** value must be set to "false".

JavaScript example:

```
document.getElementById("idElement").dataset.
preventTap = "false";
or
document.getElementById("idElement").dataset.
preventLeftSwipe = "false";
```

Prevent Event List

Gestures	Prevent	Description
Tap	data-prevent-tap	Override Tap
Swipe Left	data-prevent-left-swipe	Override Left Swipe
Swipe Right	data-prevent-right-swipe	Override Right Swipe

5

How to manage PDFs

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PDF sequence

PDF files can be loaded as .pdf file without zip structure. The thumbnail will be automatically generated as in the below example:

Important notice:

We have stopped supporting the getPdf function due to several critical issues introduced by iOS8.

To prevent it in the future we switched to the internal iOS pdf viewer in order to minimize the risk of bugs in UIWebView.

Currently we do not plan to renew our support of this function. Digital agencies can use it at their own responsibility.

From our side we suggest to replace a pdf file with a simple sequence using PNG files.

Function "GetPdf"

Function returns browser adapted html node in order to get an scroll-enabled embedded PDF

Usage

window.parent.PDFHelper.GetPdf (pdfPath, window);
pdfPath : relative pdf path from index.html of the sequence . Cannot start with «/»
window : window object of index.html of the sequence

Example

Html:

```
<div id="pdfcontainer"
style="position:absolute;top:768px;left:0px;width:1024px;height:768px;overflow:auto;ba
ckground-color:rgba(166,166,166,0.8);">
</div>
```

Javascript:

```
if(document.getElementById("pdfcontainer").children.length == 0)
{
        // get an scroll-enabled embedded PDF
        var pdf = window.parent.PDFHelper.GetPdf('media/pdf/study.pdf', window);

        //Set desired size (same size than old iframe tag)
        pdf.style.width = "500px";
        pdf.style.height = "768px";

        //Add it to the pdf container div
        document.getElementById("pdfcontainer").appendChild(pdf);

        //Set aligment
        document.getElementById("pdfcontainer").style.textAlign="center";
}
```

Function "OpenPDF" (only for MI Touch on iOS)

Function opens a PDF document in a native full screen window
Available in MI9 SU5

Usage

window.parent.PDFHelper.OpenPDF (pdfPath, window, showSendMailAndPerPageNavigation);

pdfPath : relative pdf path from index.html of the sequence . Cannot start with «/»
window : window object of index.html of the sequence
showSendMailAndPerPageNavigation : show or hide send mail button and navigation per page in PDF screen

Example

```
if (window.parent.PDFHelper.OpenPDF)
    window.parent.PDFHelper.OpenPDF('media/pdf/study.pdf', window, true);
else
    window.open('media/pdf/study.pdf');
```

Event "pdfclosed" (Only for MI Touch on iOS)

Occurs when the user closes PDF document opened with OpenPDF function
Available in MI9 SU5

Example

window.parent.addEventListener('pdfclosed', onPdfClosed, false);

getPDF alternative in iOS 8.x

Since the getPDF() function is not supported starting from version 8 we're suggesting to replace it with the below HTML content. The code snippet can be also used in previous iOS versions as a pdf replacement.

Usage

Series of png files should be used in a pngPopup container to simulate PDF viewer and allow additional interaction (like 'Close' button defined in an example below).

Example

```
<!-- popup container -->
<div data-role="popup" id="pngPopup" class="ui-content" style="overflow-y:auto; height:710px; width:960px;”>

<!-- close button -->
<div class="closeButton" style="width:97%; position:relative;">
<a href="#" data-rel="back" data-role="button" data-theme="a" data-icon="delete" class="ui-btn-right">Close</a>

</div>
      <!-- define png files below -->
      <img src="media/images/2.png"><br>
      <img src="media/images/3.png"><br>
      <img src="media/images/4.png"><br>
</div>
```

6

How to manage device resolution

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Manage Retina Resolution for iPad

The term Retina mentioned in the title of this post is a friendly word used by Apple to lay emphasis on the double density pixels screen of its devices

CSS pixel is an abstract unit used by the browsers to draw images and other content on a web page. CSS pixels are DIPs which means they are device independent pixels. They readjust themselves according to the pixel density of the screen they are rendered in.
For more details : http://www.sitepoint.com/css-techniques-for-retina-displays/

Example

css

```
#main {
    width: 1024px;
    height: 768px;
    margin: 0 0;
    overflow: hidden;
}
/* for low resolution display */
.main {
    background-image: url(../media/images/lowreslogo.jpg);
    background-size: 1024px 768px;
}
/* for high resolution display */
@media only screen and (min--moz-device-pixel-ratio: 2),
only screen and (-o-min-device-pixel-ratio: 2/1),
only screen and (-webkit-min-device-pixel-ratio: 2),
only screen and (min-device-pixel-ratio: 2) {
          .main {
                    background:
url(../media/images/highreslogo.jpg) no-repeat;
                    background-size: 1024px 768px;
          }
}
```

html

```
<!DOCTYPE html>
<html>
<head>
     <meta charset="utf-8">
     <meta name="apple-mobile-web-app-capable" content="yes">
     <meta name="viewport" content="user-scalable=no,
     width=device-width, initial-scale=1, maximum-scale=1">
     <link rel="stylesheet" href="css/main.css">
</head>

<body>
     <div id="main" class="main" />
</body>
</html>
```

Manage Responsive Design Resolution for Tablet

Responsive web design (RWD) is a web design approach aimed at crafting sites to provide an optimal viewing experience—easy reading and navigation with a minimum of resizing, panning, and scrolling—across a wide range of devices (from mobile phones to desktop computer monitors).

A site designed with RWD adapts the layout to the viewing environment by using fluid, proportion-based grids, flexible images and CSS3 media queries, an extension of the @media rule.

The fluid grid concept calls for page element sizing to be in relative units like percentages, rather than absolute units like pixels or points.

Flexible images are also sized in relative units, so as to prevent them from displaying outside their containing element.

Media queries allow the page to use different CSS style rules based on characteristics of the device the site is being displayed on, most commonly the width of the browser.

Example

css

```
#main {
    width: 100%;
    height: 100%;
    margin: 0 0;
    overflow: hidden;
}
.main {
    background-image: url(../media/images/logo.jpg);
    background-size: 100% 100%;
}
```

html

```
<!DOCTYPE html>
<html>
    <head>
        <meta charset="utf-8">
        <meta name="apple-mobile-web-app-capable" content="yes">
        <meta name="viewport" content="user-scalable=no, width=device-width,
initial-scale=1, maximum-scale=1">
        <link rel="stylesheet" href="css/main.css">
    </head>

    <body>
        <div id="main" class="main" />
    </body>

</html>
```

7

How to insert MI data

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The sequence must be able to adapt itself to the attendee(s).
A json structure is provided to the viewer and the sequence must implement a specific span HTML element that will be interpreted by the viewer while loading it.
All MI data are in a json structure accessible with window.parent.context

Json structure					Description
context					
	presentations				Array to access presentations
		id			Primary key of the presentation (IMS Health internal id)
		name			Name of the presentation (defined by Admin user)
		products			Product Name linked to the presentation (defined by Admin user)
		code			Code of the presentation (Health Authority Approval Code – defined by approval user)
		externalid			Client Identifier of the presentation (can be defined by admin user)
		thumbnail			Path of the thumbnail of the presentation
		seen			Indicates if the presentation has been seen or not during this session (updated by viewer)
		sequences			Array to access sequences
			id		Primary key of the sequence (IMS Health internal id)
			name		Name of the sequence (defined by Admin user)
			externalid		Client Identifier of the sequence (defined in Parameters.xml)
			thumbnail		Path of the thumbnail of the sequence
			product_id		Product Id linked to the sequence (defined by Admin user)
			message_id		Product Message Id linked to the sequence (defined by Admin user)
			seen		Indicates if the sequence has been seen or not during this presentation (updated by viewer)
			feedback		Feedback of the sequence (updated by viewer)
			timeElapsed		Time elapsed on the sequence (updated by viewer)
			data		Array to access fields stored with addData
				id	Id of the data
				value	Value of the data
			pages		Array to access pages
				page_id	Page Id
				message_id	Product Message Id linked to the page (defined by Admin user)

All MI data are in a json structure accessible with window.parent.context

Json structure					Description
context					
	presentations				Array to access presentations
		sequences			Array to access sequences
			actions		Array to access fields stored with addAction
				action	Type of the action
				detailed_time	Detailed time of the action
				from_time	Start Date Time of the action
				to_time	End Date Time of the action
				page	Page ID of the action
				message_id	Product Message Id linked to the page (defined by Admin user)
				slide_order	Slide order of the action
				category	Category of the action
				reaction_type	Feedback of the action
				questions_raised	Question raised by the action
				extra_1	Extra Field 1 of the action
				extra_2	Extra Field 2 of the action
				extra_3	Extra Field 3 of the action
				extra_4	Extra Field 4 of the action
				extra_5	Extra Field 5 of the action
			assets		Array to access fields stored with addAsset
				description	Description of the asset
				start_date_time	Start Date Time of the asset
				duration	Duration of the asset
				external_id	External Id of the asset

All MI data are in a json structure accessible with window.parent.context

Json structure					Description
context					
	customers				Array to access customers
		id			Primary key of the customer (IMS Health internal id)
		lastname			Last Name of the customer
		firstname			First Name of the customer
		customertype			Type of the customer (code)
		specialty			Specialty of the customer (code)
		onekeyid			OneKey Identifier for customer
		externalid			Client Identifier of the customer
		email			Email of the customer
		segments			Segments Array (ratings)
			segmentid		Primary key of the segment
			name		Name of the segment
			valuemin		Minimum Value of the segment
			valuemax		Maximum Value of the segment
			externalid		Client Identifier of the segment
		addresses			Addresses Array
			addressid		Primary key of the address
			line1		First line of the address
			city		City of the address
			state		State of the address
			postalarea		Postal area (zip code) of the address

All MI data are in a json structure accessible with window.parent.context

Json structure				Description
context				
	parameters			Array to access additional information
		employee_name		Name of the employee
		event_date		Date of the event
		event_time		Time of the event

Insert MI data

Access Current Presentation

To access the current presentation index from a sequence, use:
window.parent.getCurrentPresentation()

Access Current Sequence

To access the current sequence index from a sequence, use:
window.parent.getCurrentSequence()

Access Sequence with externalid

To access a sequence of the presentation with the externalid, use:
window.parent.getIndexSequence(externalId)
Returns the index of the sequence with the externalid provided. Returns -1 if not found

Specific Element

To make the viewer load a data element, the sequence must contain a span element whose class is template. Furthermore, it must have a data-template attribute where the template pattern is specified with the language defined by jQuery template framework. (https://github.com/BorisMoore/jquery-tmpl).

Usage

```
<span class='template' data-template='template'></span>
```

Dynamic Fields Examples

Print First User's Information

Sequence code:

```
<span class='template' data-template='
  <ul>
    <li><i>${context.customers[0].firstname}</i>
${context.customers[0].name}</li>
  </ul>
'>
</span>
```

Interpreted code:

```
<ul>
  <li><i>GORVEL</i> Gael</li>
</ul>
```

Make a List of All Users

This is useful in case the presentation is shown to several attendees.

Sequence code:

```
<span class='template' data-template='
  <ul>
    {{each context.customers}}<li><i>${firstname}</i>
${lastname}</li>{{/each}}
  </ul>
'></span>
```

Interpreted code:

```
<ul>
  <li><i>MORELLI</i> Nicolas</li>
  <li><i>GORVEL</i> Gael</li>
  <li><i>BOURRAS</i> Thomas</li>
</ul>
```

8

How to update MI data

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Update MI data

Function "addAction"

To add action, use:
window.parent.addAction (action, detailed_time, from_time, to_time, product_id, page,message_id,slide_order,category,reaction_type,questions_raised,extra_1,extra_2,extra_3,extra_4,extra_5)
action: string (200): Description of the action
detailed_time: number: Time spent on the action
from_time: number: Start time of the action
to_time: number: End time of the action
product_id: number: Id of the product of the sequence
page: string (200): Name of the page
message_id: number: Id of the product message of the sequence
slide_order: number: Order of presenting the sequence
category: string (4): Category of the sequence
reaction_type: string (4): Feedback of the sequence
questions_raised: string(4): Question Raised
extra_1: string (200): Extra 1
extra_2: string (200): Extra 2
extra_3: string (200): Extra 3
extra_4: string (200): Extra 4
extra_5: string (200): Extra 5

This will update the event_presentation_detail table in the MI Database.

Example

```
<input type="text" id="183"
onchange="window.parent.addAction('ENTER TEXT', Date.Now(),
'4', '183')"/>
```

Update MI data

Function "addAsset"

Object dependent on Action (action = MESS).
To add asset, use:
window.parent.addAsset(description, start_date_time, duration, external_id)
description: string (200): Description of the asset
start_date_time: datetime : Start time of the asset
duration: number (9): Duration of the asset
external_id: string(200) : External Id of the asset
This will update the event_presentation_asset table in the MI Database.

Example

Basic example:

```
<input type="text" id="183"
onchange="window.parent.addAsset('ENTER
TEXT', Date.now(), '4', '183')"/>
```

How to track button clicks. In the below example we log info when user click on "Before" and "After" buttons:

```
<script>
var start = Date.now();
function OnBeforeClick(){
var end = Date.now();
var elapsed = parseInt((end - start) /
1000);
window.parent.addAsset('BEFORE', start,
elapsed, '1');
start = Date.now();
}
function OnAfterClick(){
var end = Date.now();
var elapsed = parseInt((end - start) /
1000);
window.parent.addAsset('AFTER',
Date.now(), elapsed, '2');
start = Date.now();
}
</script>
```

Function "updateFeedback"

To update sequence feedback, use:
window.parent.updateFeedback(type)
type: "POSI", "NONE", "NEGA", null

Example

```
<input type="text" id="183"
onchange="window.parent.updateFeedback('
POSI')"/>
```

Pages

A sequence can contain several pages. During the creation of the sequence, the user will be able to map each page with a key message. In such case, tracking of duration, feedback and key message will be done at page level.

Pages Definition

Pages definition is a list of pages defined in the sequence. The pages are defined as a child of the sequence node in the parameter file (parameters.xml)

Example

```
<Sequence Id="AGENCY-001"
xmlns="urn:param-schema">
  <Pages>
    <Page pageid="AGENCY-PAGE-001" />
    <Page pageid="AGENCY-PAGE-002" />
    <Page pageid="AGENCY-PAGE-003" />
  </Pages>
</Sequence>
```

Function "onEnterPage"

To start tracking on a page, use
window.parent.onEnterPage(pageid)
pageid: string (200)

Example

```
window.parent.onEnterPage('AGENCY-PAGE-
001');
```

Function "onLeavePage"

To stop tracking on the current page, use
window.parent.onLeavePage()

onLeavePage function is automatically called if :

- onEnterPage is called on another page
- user navigates to another sequence or presentation
- user leaves the presentation

Example

```
window.parent.onLeavePage();
```

Call Dialog Definition

Call dialog definition is a list of questions + responses defined in the sequence.
The call dialog is defined as a child of the sequence node in the parameter file (parameters.xml)

Question node has the following attributes

id: id of the tag in html file (string)
text: text of the question (string)
type: type of the question (string)

- DROP: Dropdown
- MSG: Message (no answer)
- TEXT: Free Text
- CHBX: CheckBox
- NUM: Numerical
- RAD: Radio Button

Response node has the following attributes

id: id of the tag in html file (string)
text: text of the question (string)
goto: id of the next question (string)

goto functionality will be used only in the edition of the calldialog in the postcall page

Example

```
<Sequence xmlns="urn:param-schema">
<CallDialog>
            <Questions>
                        <Question id="Q181" text="Do you like my product?" type="DROP">
                                    <Responses>
                                                <Response id="R201" text="Yes" />
                                                <Response id="R202" text="No" />
                                    </Responses>
                        </Question>
                        <Question id="Q182" text="Do you like my product?" type="MSG" />
                        <Question id="Q183" text="Do you like my product?" type="TEXT" />
                        <Question id="Q184" text="Do you like my product?" type="CHBX" >
                                    <Responses>
                                                <Response id="R203" text="Yes" goto="Q185" />
                                                <Response id="R204" text="No" goto="Q186" />
                                    </Responses>
                        </Question>
                        <Question id="Q185" text="Do you like my product?" type="NUM" />
                        <Question id="Q186" text="Do you like my product?" type="RAD">
                                    <Responses>
                                                <Response id="R206" text="Yes" />
                                                <Response id="R207" text="No" />
                                    </Responses>
                        </Question>
            </Questions>
</CallDialog>
</Sequence>
```

Call Dialog Answers

To send the answer of the calldialog to the viewer, use:

- window.parent.addDataFromElement(element)

element has to contain element.id and element.value

- window.parent.addData(id, value)

id: identifier of the question or identifier of the response (string)
value: identifier of the response or free text (string)

Example

The html file must look as follows:

```
<form>
            <label>DROP : Do you like Glidim?</label>
            <select id="Q181" onchange="
window.parent.addDataFromElement(this[this.selectedIndex])">
              <option id="R201" value="R201">Yes</option>
              <option id="R202" value="R202">No</option>
            </select>
            <br />
            <label id="Q182">MSG : Do you like Glidim?</label>
            <br />
            <label>TEXT : Do you like Glidim?</label>
            <input type="text" id="Q183" onchange="window.parent.addData(this.id,
this.value)"/>
            <br />
            <label id="Q184">CHBX : Do you like Glidim?</label>
            <input type="checkbox" id="R203" value="R203" onclick="
window.parent.addDataFromElement(this)">Yes</input>
            <input type="checkbox" id="R204" value="R204" onclick="
window.parent.addDataFromElement(this)">No</input>
            <br />
            <label>NUM : Do you like Glidim?</label>
            <input type="text" id="Q185" onchange="window.parent.addDataFromElement(this)"/>
            <br />
            <label>RAD : Do you like Glidim?</label>
            <input type="radio" name="group1" id="R206" value="R206" onclick="window.parent.
addData('Q185','R206')">Yes</input>
            <input type="radio" name="group1" id="R207" value="R207" onclick="window.parent.
addData('Q185','R207')">No</input>
</form>
```

9

Sequence Parameters

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Additional attributes of Parameter file

This file contains parameters attached to the sequence. It also contains the definition of the call dialog (list of questions + responses defined in the sequence).

Be careful XML tags are case sensitive. The tag `<sequence>` is different from the tag `<Sequence>`

Namespace

We provide an xsd file (parameters.xsd) in the Appendix to check the xml schema of the parameter file. In order to validate the parameters.xml Sequence node has to be declared in the correct namespace

Example

```
<Sequence xmlns="urn:param-schema">
…
</Sequence>
```

Sequence Id

The Id of the sequence is defined as an attribute of the sequence Id.
This Id must be unique. It allows you to manage the link between sequences.
As several agencies can deliver sequences for same client we recommend to add an agency prefix code.

Example

```
<Sequence Id="AGENCY-001"
xmlns="urn:param-schema">
…
</Sequence>
```

Orientation

The orientation is defined as an attribute of the sequence Orientation.
It can be Portrait or Landscape. By default, sequence is Landscape.

Example

```
<Sequence Orientation="Landscape"
xmlns="urn:param-schema">
```

Additional attributes of Parameter file

This file contains parameters attached to the sequence. It also contains the definition of the call dialog (list of questions + responses defined in the sequence).

Be careful XML tags are case sensitive. The tag `<sequence>` is different from the tag `<Sequence>`

Number of slides

The number of slides is defined as an attribute of the sequence NumberOfSlides.

Example

```
<Sequence NumberOfSlides="3"
xmlns="urn:param-schema">
…
</Sequence>
```

Links

The links between sequences use in the sequence are defined as the node Links.
This node contains all link nodes with the attribute SequenceId.
During the creation of a presentation, a warning will be displayed if the presentation doesn't contain all linked sequences.

Example

```
<Sequence Id="AGENCY-001"
xmlns="urn:param-schema">
  <Links>
    <Link SequenceId="AGENCY-002" />
    <Link SequenceId="AGENCY-003" />
    <Link SequenceId="AGENCY-004" />
  </Links>
</Sequence>
```

External link

An External Link must be opened in a new window. The External Link tag must contain target="_blank" and URL parameter openInSafari=true

Example

```
<a
href="http://google.com?openInSafari=tru
e" target="_blank">google</a>
```

Additional attributes of Parameter file / Links

This file contains parameters attached to the sequence. It also contains the definition of the call dialog (list of questions + responses defined in the sequence).

Be careful XML tags are case sensitive

Link between sequences

To define a link between sequences, use :

```
window.parent.navigateToSequence(id)
```

id : id of the sequence

```
window.parent.navigateToSequence(id, animation)
```

id : id of the sequence

animation : “noanimation” to navigate without animation

Example

```
window.parent.navigateToSequence('AGENCY-002');
window.parent.navigateToSequence('AGENCY-002', 'noanimation');
```

Internal link

An internal link is a link to a document delivered in the zip sequence (for example pdf file). A function must be developed to go back to the sequence after the document has been displayed.

10

Events & Functions

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Events

Event "viewappearing"
Occurs when the view is appearing

Example
```
window.parent.bind(this,
'viewappearing', onviewappearing);
```

Event "viewdisappearing"
Occurs when the view is disappearing

Example
```
window.parent.bind(this,
'viewdisappearing', onviewdisappearing);
```

Event "viewappeared"
Occurs when the view has appeared

Example
```
window.parent.bind(this, 'viewappeared',
onviewappeared);
```

Event "viewdisappeared"
Occurs when the view has disappeared

Example
```
window.parent.bind(this,
'viewdisappeared', onviewdisappeared);
```

Event "play"
Occurs when the user clicks on play button

Example
```
window.parent.bind(this, 'play',
onplay);
```

Event "preview"
Occurs when the user clicks on preview button

Example
```
window.parent.bind(this, 'preview',
onpreview);
```

Event "pause"
Occurs when the user clicks on pause button

Example
```
window.parent.bind(this, 'pause',
onpause);
```

Event "postcall"
Occurs when the user clicks on postcall button
Callback function needs to call window.parent.postcall() at the end of the function
Available in MI9 SU6

Example
```
window.parent.bind(this, 'postcall',
onpostcall);

function onpostcall() {
          // here is your code
          …

          // postcall function
execution
          window.parent.postcall();

}
```

Functions

Function "cancel"
Function called when user clicks on Cancel Button

Example
```
setTimeout(function () {
 window.parent.cancel();
}, 400);
```

Function "postcall"
Function called when user clicks on PostCall Button

Example
```
setTimeout(function () {
 window.parent.postcall();
}, 400);
```

Function "sendEmail"
Function called when user clicks on Email Button

Example
```
window.parent.sendEmail();
```

Function "goNextSequence"
Function navigates to next sequence

Example
```
window.parent.goNextSequence();
```

Function "goPreviousSequence"
Function navigates to previous sequence

Example
```
window.parent.goPreviousSequence();
```

Function "getCurrentMode"
Function returns current viewer mode : 1 (PlayMode), 2 (PreviewMode), 3 (PauseMode)

Example
```
window.parent.getCurrentMode();
```

Function "refreshTemplate"
Function refreshes span with template class

Example
```
window.parent.refreshTemplate();
```

11

How to manage memory

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Memory management

During a presentation the sequence can be unloaded. Agency has to manage state of the sequence. That can be done with saveState and loadState functions.
For example when an interactive element has been selected or moved, state object can be used to store the value and retrieve it when we come back to that sequence.

Function "saveState"

Function saves state of the sequence

Usage

window.parent.saveState (window, state);
window : window object of index.html of the sequence
state : object which contains the state of the sequence

Example

```
window.parent.saveState(window, state);
```

Function "loadState"

Function loads state of the sequence

Usage

window.parent.loadState (window);
window : window object of index.html of the sequence

Example

```
var state =
window.parent.loadState(window);
```

Function "memoryWarning"

Occurs when memoryWarning is received. Sequence should free as much memory as it can.

Example

```
window.parent.bind(this,
'memoryWarning', onmemoryWarning);
```

12

How to test and debug

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Unit Test by Sequence

Communication Agency should always check for issues on all supported browsers before deployment to a client.

A sequence must be tested on the environment used by the Home Office for Preview.
It can be either:

- Chrome (Windows)
- Firefox 11.0 and above (Windows)
- Internet Explorer 9.0 and above (Windows)

A sequence must be tested on the environment used by the Rep
It can be either:

- Safari (iPad)
- Internet Explorer ModernUI (Windows 8 Tablet)

XSD Validator

You can use the tool to validate your parameters.xml file
http://www.utilities-online.info/xsdvalidation/#.UlKxVdJ7Ia8

Final Test by Presentation

Final testing must always be performed within MI Touch application.

For that purpose it is recommended that Agency joins IMS Health Certification Program. A dedicated test MI environment will then be provided for testing and certification purposes

Debugging Web Content on iOS

https://developer.apple.com/library/ios/documentation/AppleApplications/Reference/SafariWebContent/DebuggingSafarioniPhoneContent/DebuggingSafarioniPhoneContent.html

13

Content best practices

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Content best practices

Reps adoption is the key!

Less is more

Doctor time is precious and limited. Don't overload your reps with useless content.
With optimized content reps will better adopt the presentation, use it more often and will provide more impactful message to the doctor.
From a technical standpoint administration will also become easier.

Usability

Reps have to focus first on the doctor and the message to deliver not on the tool and the technology.
It's important to remember that there are no mouse-pointer or right-clicks with mobile devices. Think about what is possible with only a finger touch..
Therefore content must be as simple as possible and everything needs to be easy to navigate and interact with. Reps should know where they are in the presentation at any time. Use of breadcrumbs is recommended.
Limit the number of interactive elements which could be tapped or clicked by mistake.
Use animation with parsimony to not distract the reps and the doctors from the essential.
Long videos should be avoided since time will not permit to watch them and their size will unnecessarily overload the device memory.

Visibility

It's natural that, because of the limited space, one may tend to make font sizes smaller to save space for more objects. However, bear in mind that it will be hard for end users to see anything if everything is small in a cramped space. Best practices define that everything should be visible and easy to navigate. Users will navigate the user interface with their fingers. That means each touch point in the UI needs to be large enough to point with a finger, not a mouse.
Moreover tablet will be presented to the doctor. Obviously the content should be adapted to be perfectly well seen by the doctor.

Design vs. performance

While designers need to be involved early, so do developers. Mobile devices are very underpowered compared to traditional computers, so the performance impact of design elements is even more exacerbated on mobile devices. It is important to balance design directions with the realities of what can be executed well on mobile devices

14 Appendix

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Parameters.xsd

```
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema"
    xmlns="urn:param-schema"
    elementFormDefault="qualified"
    targetNamespace="urn:param-schema"
            xmlns:tns="urn:param-schema">
            <xsd:element name="Sequence">
                        <xsd:complexType>
                                    <xsd:sequence>
                                                <xsd:element ref="CallDialog" minOccurs="0"/>
                                                <xsd:element ref="Links" minOccurs="0"/>
                                                <xsd:element ref="Pages" minOccurs="0"/>
                                    </xsd:sequence>
                                    <xsd:attribute name="NumberOfSlides" type="xsd:long"/>
                                    <xsd:attribute name="Orientation" type="OrientationType"/>
                                    <xsd:attribute name="Id" />
                        </xsd:complexType>
            </xsd:element>
            <xsd:element name="CallDialog">
                        <xsd:complexType>
                                    <xsd:sequence>
                                                <xsd:element ref="Questions"/>
                                    </xsd:sequence>
                        </xsd:complexType>
            </xsd:element>
            <xsd:element name="Questions">
                        <xsd:complexType>
                                    <xsd:sequence>
                                                <xsd:element ref="Question" minOccurs="1" maxOccurs="unbounded"/>
                                    </xsd:sequence>
                        </xsd:complexType>
            </xsd:element>
```

Parameters.xsd

```
            <xsd:element name="Question">
                        <xsd:complexType>
                                    <xsd:sequence>
                                                <xsd:element ref="Responses" minOccurs="0"/>
                                    </xsd:sequence>
                                    <xsd:attribute name="id" type="xsd:string" use="required"/>
                                    <xsd:attribute name="text" type="xsd:string" use="required"/>
                                    <xsd:attribute name="type" type="QuestionType" use="required"/>
                        </xsd:complexType>
            </xsd:element>
            <xsd:element name="Responses">
                        <xsd:complexType>
                                    <xsd:sequence>
                                                <xsd:element ref="Response" minOccurs="1" maxOccurs="unbounded"/>
                                    </xsd:sequence>
                        </xsd:complexType>
            </xsd:element>
<xsd:element name="Response">
                        <xsd:complexType>
                                    <xsd:attribute name="id" type="xsd:string" use="required"/>
                                    <xsd:attribute name="text" type="xsd:string" use="required"/>
                                    <xsd:attribute name="goto" type="xsd:string"/>
                        </xsd:complexType>
            </xsd:element>
            <xsd:element name="Links">
                        <xsd:complexType>
                                    <xsd:sequence>
                                                <xsd:element ref="Link" minOccurs="1" maxOccurs="unbounded"/>
                                    </xsd:sequence>
                        </xsd:complexType>
            </xsd:element>
            <xsd:element name="Link">
                        <xsd:complexType>
                                    <xsd:attribute name="SequenceId" use="required"/>
                        </xsd:complexType>
            </xsd:element>
```

Parameters.xsd

```
            <xsd:element name="Pages">
                        <xsd:complexType>
                                    <xsd:sequence>
                                                <xsd:element ref="Page" minOccurs="1" maxOccurs="unbounded"/>
                                    </xsd:sequence>
                        </xsd:complexType>
                        <xsd:unique name="PageIDMustBeUnique">
                                    <xsd:selector xpath="tns:Page"/>
                                    <xsd:field xpath="@pageid"/>
                        </xsd:unique>
            </xsd:element>
            <xsd:element name="Page">
                        <xsd:complexType>
                                    <xsd:attribute name="pageid" use="required"/>
                        </xsd:complexType>
            </xsd:element>
    <xsd:simpleType name="OrientationType">
                        <xsd:restriction base="xsd:token">
            <xsd:enumeration value="Landscape"/>
            <xsd:enumeration value="Portrait"/>
            </xsd:restriction>
            </xsd:simpleType>
            <xsd:simpleType name="QuestionType">
                        <xsd:restriction base="xsd:token">
            <xsd:enumeration value="DROP"/>
            <xsd:enumeration value="MSG"/>
            <xsd:enumeration value="TEXT"/>
            <xsd:enumeration value="CHBX"/>
            <xsd:enumeration value="NUM"/>
            <xsd:enumeration value="RAD"/>
            </xsd:restriction>
            </xsd:simpleType>
</xsd:schema>
```

Parameters.xml

Content

```
<?xml version="1.0"?>
<Sequence Id="AGENCY-0001" NumberOfSlides="3" Orientation="Landscape" xmlns="urn:param-schema">
              <CallDialog>
                            <Questions>
                                          <Question id="Q181" text="Do you like my product?" type="DROP">
                                                        <Responses>
                                                                      <Response id="R201" text="Yes" />
                                                                      <Response id="R202" text="No" />
                                                        </Responses>
                                          </Question>
                                          <Question id="Q182" text="Do you like my product?" type="MSG" />
                                          <Question id="Q183" text="Do you like my product?" type="TEXT" />
                                          <Question id="Q184" text="Do you like my product?" type="CHBX" >
                                                        <Responses>
                                                                      <Response id="R203" text="Yes" goto="Q185" />
                                                                      <Response id="R204" text="No" goto="Q186" />
                                                        </Responses>
                                          </Question>
                                          <Question id="Q185" text="Do you like my product?" type="NUM" />
                                          <Question id="Q186" text="Do you like my product?" type="RAD">
                                                        <Responses>
                                                                      <Response id="R206" text="Yes" />
                                                                      <Response id="R207" text="No" />
                                                        </Responses>
                                          </Question>
                            </Questions>
              </CallDialog>
              <Links>
                            <Link SequenceId="AGENCY-0002" />
                            <Link SequenceId="AGENCY-0003" />
                            <Link SequenceId="AGENCY-0004" />
              </Links>
              <Pages>
                            <Page pageid="PAGEID-0001" />
                            <Page pageid="PAGEID-0002" />
                            <Page pageid="PAGEID-0003" />
              </Pages>
</Sequence>
```

iPad multimedia limitations

Please note that some multimedia limitations have been found on the iPad:

- Can't screenshot a video frame
- Can't play sound and video together from different sources
- Can't play multiple sounds or videos at the same time
- Can't control volume or mute using JavaScript
- Can't play sound or video without user interaction
- Multiple HTML5 video elements on the same page cause bugs

Supported MIME types

Please note that iOS uses UTI instead of direct use of mime types. You can refer to the below link for more info:https://developer.apple.com/library/ios/documentation/FileManagement/Conceptual/understanding_utis/understand_utis_conc/understand_utis_conc.html#//apple_ref/doc/uid/TP40001319-CH202-CHDHIJDE	
Agencies are strongly advised to use https://html5test.com (or any other similar site) site to check for non-supported features per browser/platform.	

15 Recommendations

MIME type supported

.xht	Avoid using heavy frameworks (like Adobe Edge)
	Avoid using excessive JavaScript code in presentations at it will impact performance
	Try to free as much memory as possible when memory warning event fires up
	Try to use safe state when you need to keep page definition after slide or sequence change
	Please note that two attributes are causing application crash starting from iOS 8.0: *-webkit-overflow-scrolling:touch* and *-webkit-backface-visibility:hidden* and need to be removed from any presentation.
	Sequences should never navigate away from original index.html
	In case of any problems with getting values via jQuery, please check how it looks on DOM side – it may be defined as table instead of single variable.

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Publication Record

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Publication record

Revision	Publication date	Overview of revisions
0.23	November 5, 2013	Call Dialog Enhancement (MI9 SU6) - Manage AlphaNumeric Identifier - AddData(question_id, response_id)
0.24	November 25, 2013	Add OpenPDF function (MI9 SU5) Add pdfclosed event (MI9 SU5)
0.25	December 6, 2013	Update example for OpenPDF and GetPDF Add list of MIME Type Supported Add Unit Test by Sequence Section Add Final Test by Presentation Section For email functionality, agency has to provide export.pdf
0.26	January 6, 2014	Add postcall event (MI9 SU6)
0.27	January 30, 2014	Add refreshTemplate function (MI9 SU7) Rename sendMail function (new name is sendEmail) Update function "postcall" Update function "cancel"
1.0	March 14, 2014	Official release
1.1	July 8, 2014	Windows 8 Resolution
1.2	September 5, 2014	Add parameters in window.parent.context (chapter 7)
1.3	September 24, 2014	Correct example on how to use event pdfclosed
1.4	December 8, 2014	Add info related to z-index of Feedback Zone
1.5.1	April 24, 2015	Modified slide 25 – implement a GetPDF alternative through a series of PNG files
1.5.2	September 9, 2015	Add info related to MIME type (slide 66)
1.6	October 7, 2015	Clarifications about the getPDF() function (slide 23) & minor adjustments on slides 16 & 19

Publication record

Revision	Publication date	Overview of revisions
1.6.2	December 6, 2015	Removed the list of supported MIME types

Thank you

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