



TS1 UI Design

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		1	/	16



Table of Contents

.....	1
1Introduction.....	3
2Design.....	3
2.1Units.....	4
2.2Colors:.....	4
3Basic Layout.....	4
3.1Proportions.....	5
3.2Tab Design.....	6
3.3Icons.....	7
3.4Customer Logo.....	8
4Full UI.....	8
4.1Windows vista and 7.....	8
4.2Windows XP.....	9
4.3Windows 8.....	11
4.4Windows 2000.....	12
4.5Windows 10.....	13
4.6Windows Phone.....	14
4.7Control Buttons.....	15
5Users and Access Levels.....	17

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		2	/	16

1 Introduction

The intention of this document is to define a common look for PC based IPTE software products.

The design of the IPTE software must convey IPTE design but in addition it must look and feel like first class citizen in used operating system. To achieve tight integration with operating system the design borrows controls (buttons, sliders, progress bars, etc) and UI paradigms (control bar, single document interface, aero on supported systems).

* touch enabled

- minimum touch target should be >7mm

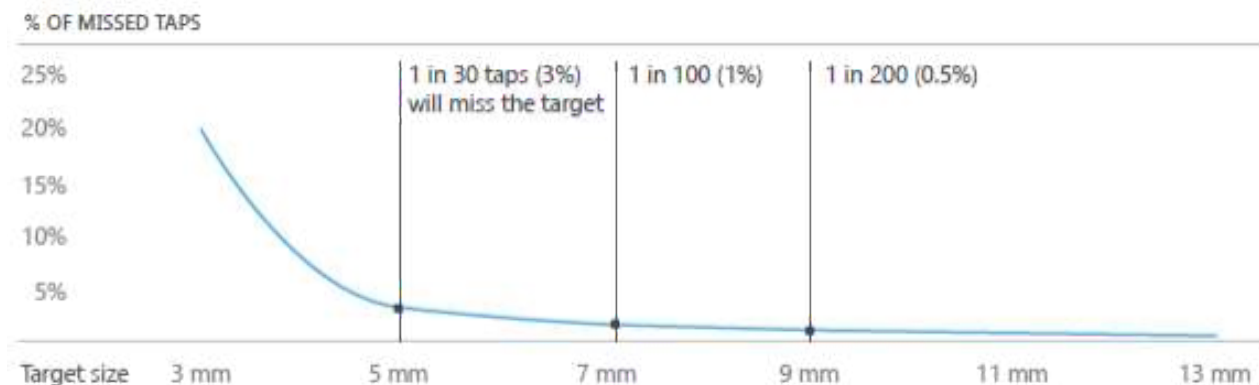


Illustration 1: "Size vs. efficiency: Target size influences error rate" - Windows 8 User experience guidelines

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		3	/	16



2 Design

The application design must be clean and simple. The lines should be aligned and parallel, gradients should be subtle to keep the visual clutter at minimum.

A lot of emphasize must be placed on data representation. It is preferable if numeric data, it's meaning or it's value can be explained by an illustration. If an image does not fit due to availability or design constraints a text block or tool tip can be used to convey the same information. The contents of the tool tips should be written in full sentences. The context should be included whenever possible. Also, for some numeric values it is possible to use color coding – use green font for safe values and red font for unsafe values.

2.1 Units

The length units used by this document are resolution independent pixels. A resolution independent pixel is distance that corresponds to 1 pixel at pixel density of 96 pixels per inch. Usage of resolution independent pixels enables to describe the design in today's terms and to be prepared for future upgrade to high definition "retina" displays.

2.2 Colors:

IPTE red :#D40139 (212, 1, 57)

IPTE green :#00BBB5 (0, 187, 181)

According to IPTE Graphics definition document:

<\\iptebel\file\IPTE\Intersite\MarCom\HouseStyle\2010>

The application control areas should use pastel colors and the application content areas should use bright colors to emphasize the content.

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		4	/	16

3 Basic Layout

The basic layout (Figure 1) is intended for utilities that do not contain state machine, it lacks control bar used for starting/stopping the machine. It consists of a control bar at the top of the application and of the content area in the middle to bottom part of the application.

The control bar supports company logo at the left, page selection buttons at the center and utility buttons on the right. The page selection buttons allow switching between content areas. For more advanced application the content area itself may contain an extra tab control for more grained division.

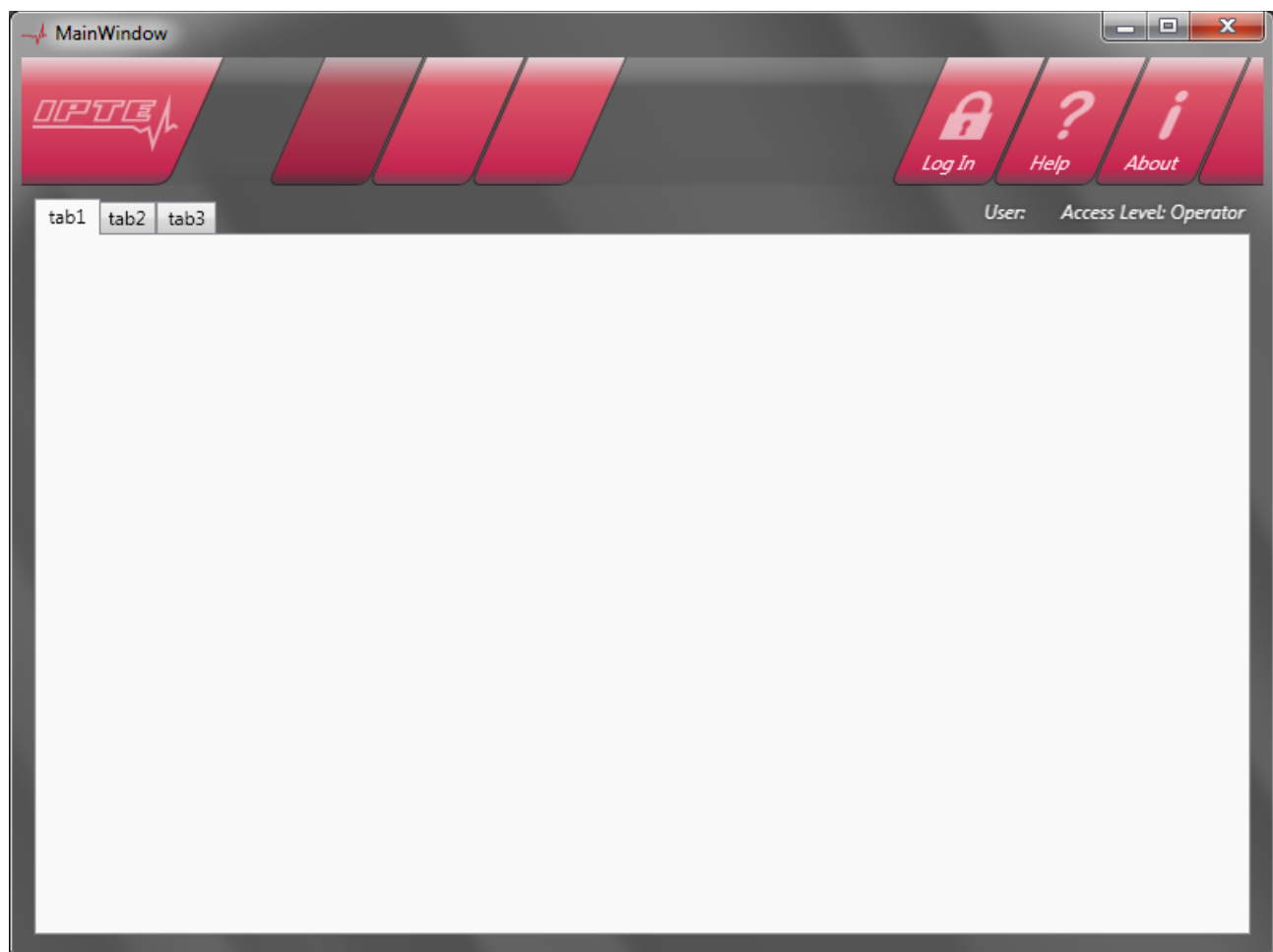


Figure 1: Basic layout

* do not put too much information into windows if possible. Keep it simple.

3.1 Proportions

The basic layout consists of tab strip at the top of the window and content area. The tab strip has fixed height of 81px at pixel density of 96dpi ~ 21.4mm, resizing the window height will only affect the window content area. The content area has 16px margins to the bottom, left and right edge of the window and 8px margin to the bottom edge of the tab strip.

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		5	/	16

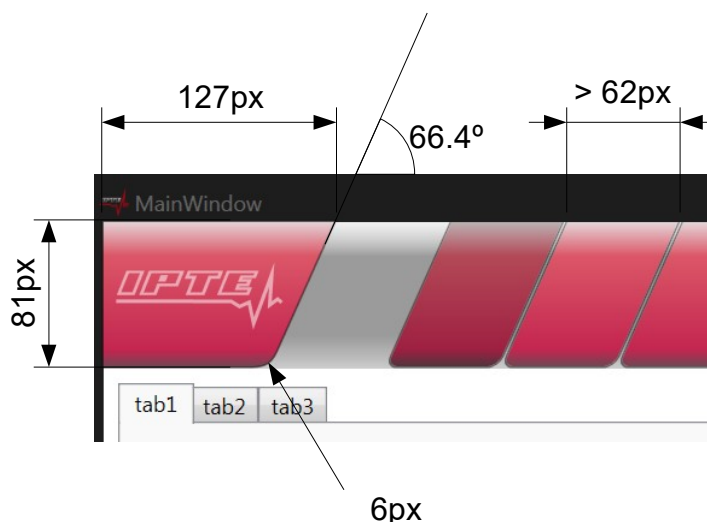


Figure 2: Tab strip

The tab strip starts with inert placeholder for IPTE logo (Figure 2) which is followed by fixed width gap that has width of one tab (63px). The gap is followed by window tabs that switch between content groups. The exact count of window tabs depends on application. The window tabs are followed by a variable length gap (Figure 3). The width of this gap depends on window width, resizing the window will increase or reduce the width of this gap. The gap is followed by three fixed function buttons: log in, help and about buttons. The log in button will open the corresponding dialog, which allows to log in and to manage users. The help button will open the machine documentation and the about button will open about box.



Figure 3: Tab strip scaling.

3.2 Tab Design

Tab border: 1px wide #80000000 (semi transparent black line)

The normal tab gradient (Figure 4) is used with all tabs that are enabled, aren't selected and don't have mouse hovering over them.

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		6	/	16

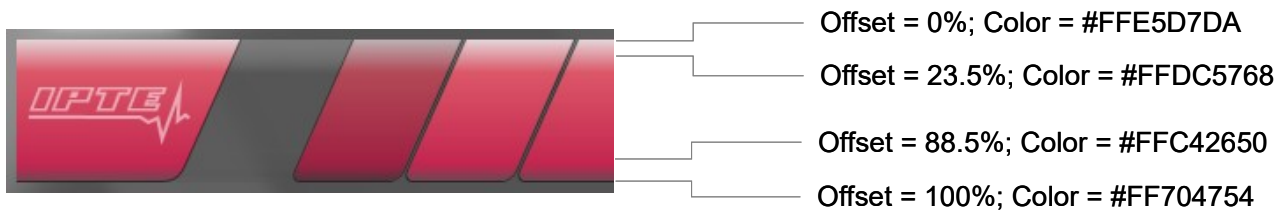


Figure 4: Normal tab gradient

The selected tab gradient (Figure 5) is only used to highlight the active tab, it is not used together with login, help and about buttons.

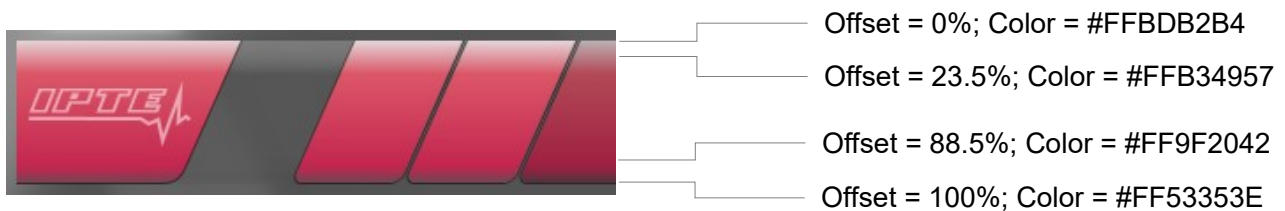


Figure 5: Selected tab gradient

The highlighted tab gradient (Figure 6) is used when mouse hovers the tab. It gives feedback to the operator that the tab is clickable, not just static background image. The gradient is not used with selected and disabled tabs, because technically they aren't active click targets and clicking them does not change application state.

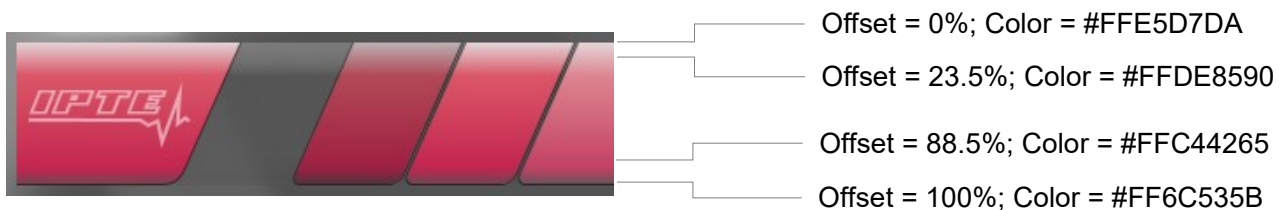


Figure 6: Highlighted tab gradient

The final gradient (Figure 7) is used with disabled tabs.

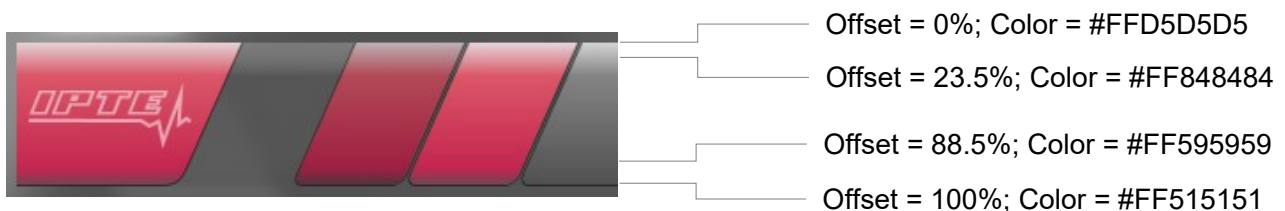
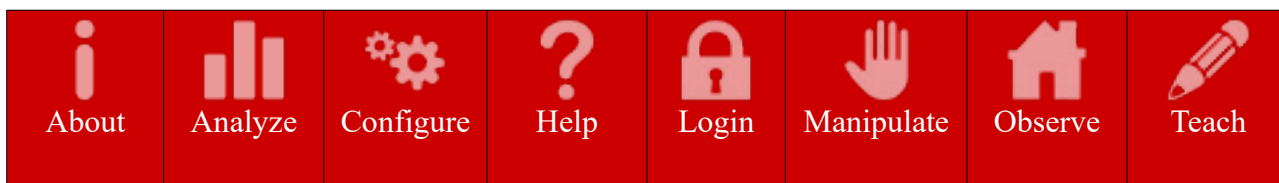


Figure 7: Disabled tab gradient

3.3 Icons

The icons used on the tabs are monochrome white shapes with alpha value set to 0x88. The corresponding color code used with the icons and also for the IPTE logo is #88FFFFFF.

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		7	/	16



3.4 Customer Logo

The customer logo, if present, shall be placed on the right side of the toolbar (Figure 8). The width of the panel containing the customer logo can scale based on size and proportions of the customer logo but it must not be larger than the one containing IPTE logo. A monochrome version of the customer logo is preferred if available. The color of the monochrome logo shall be semitransparent white with code #88FFFFFF to match the rest of the icons on toolbar.

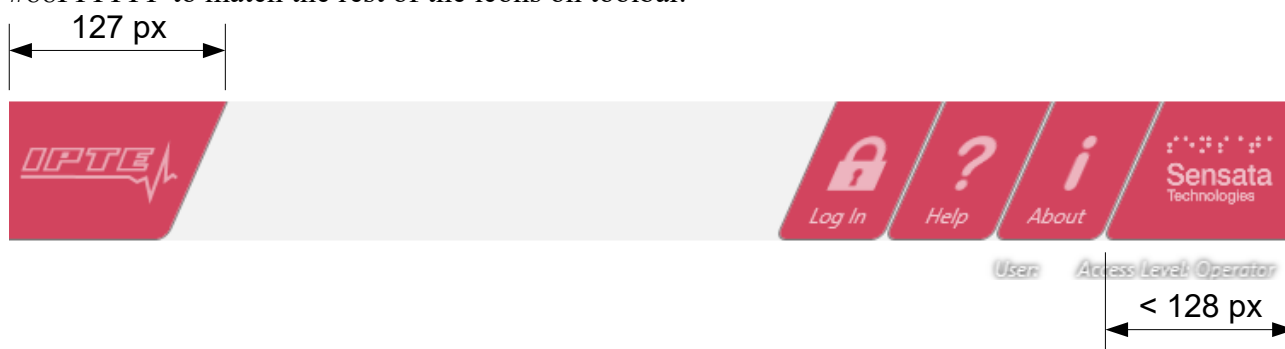


Figure 8: Customer logo

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		8	/	16

4 Full UI

The full layout (Figure 9) adds control bar below content area. The content bar has fixed height and is horizontally centered the bottom of the window. The theme specifics should conform to operating system system and accommodate the specific look and feel of the system.

4.1 Windows vista and 7

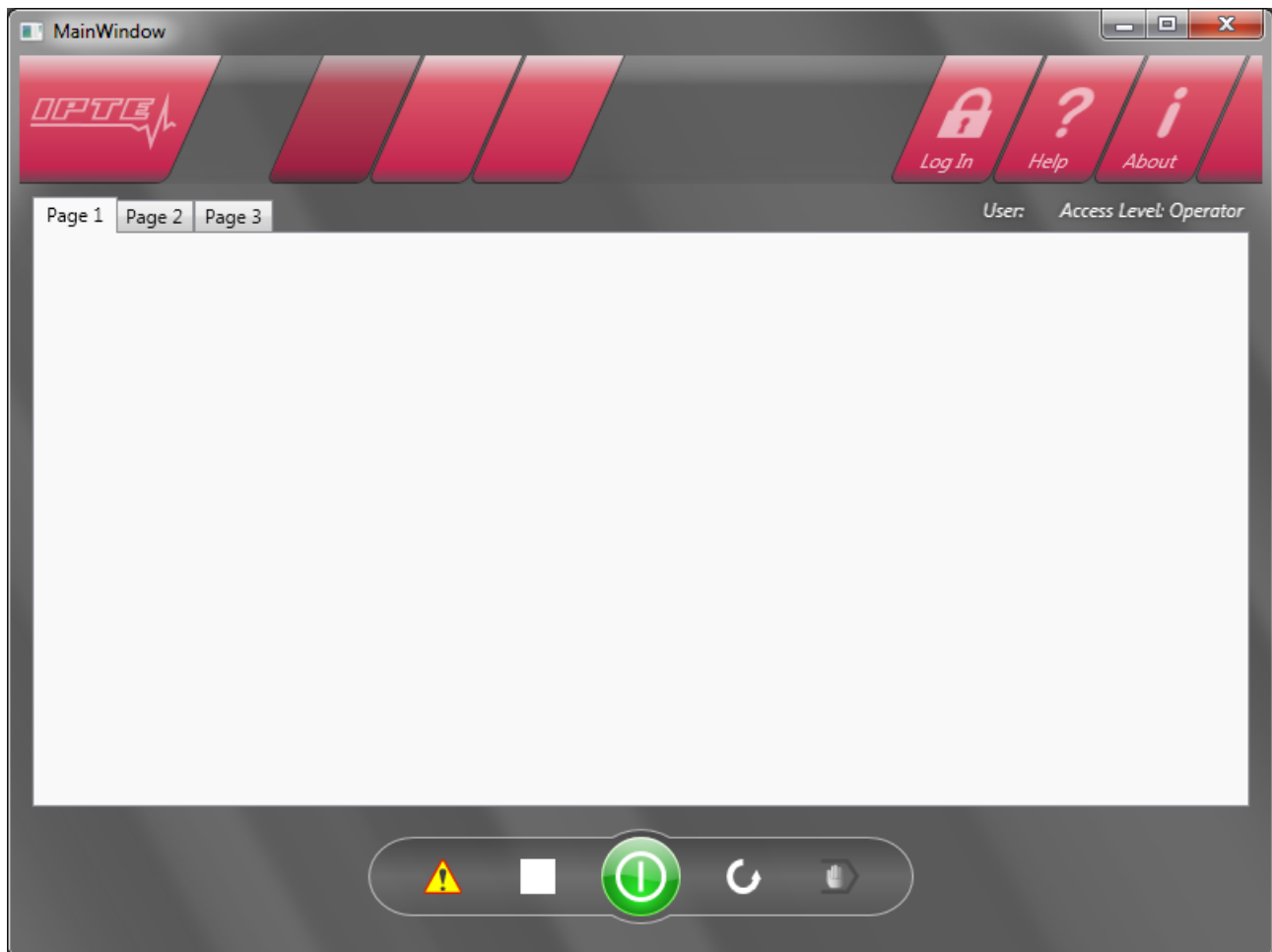


Figure 9: Full layout; Windows Vista and Windows 7

Semitransparent window relying on aero glass. Controls (tabs and control buttons) use gradients; similar to windows xp theme only with transparent background.

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		9	/	16



4.2 Windows XP

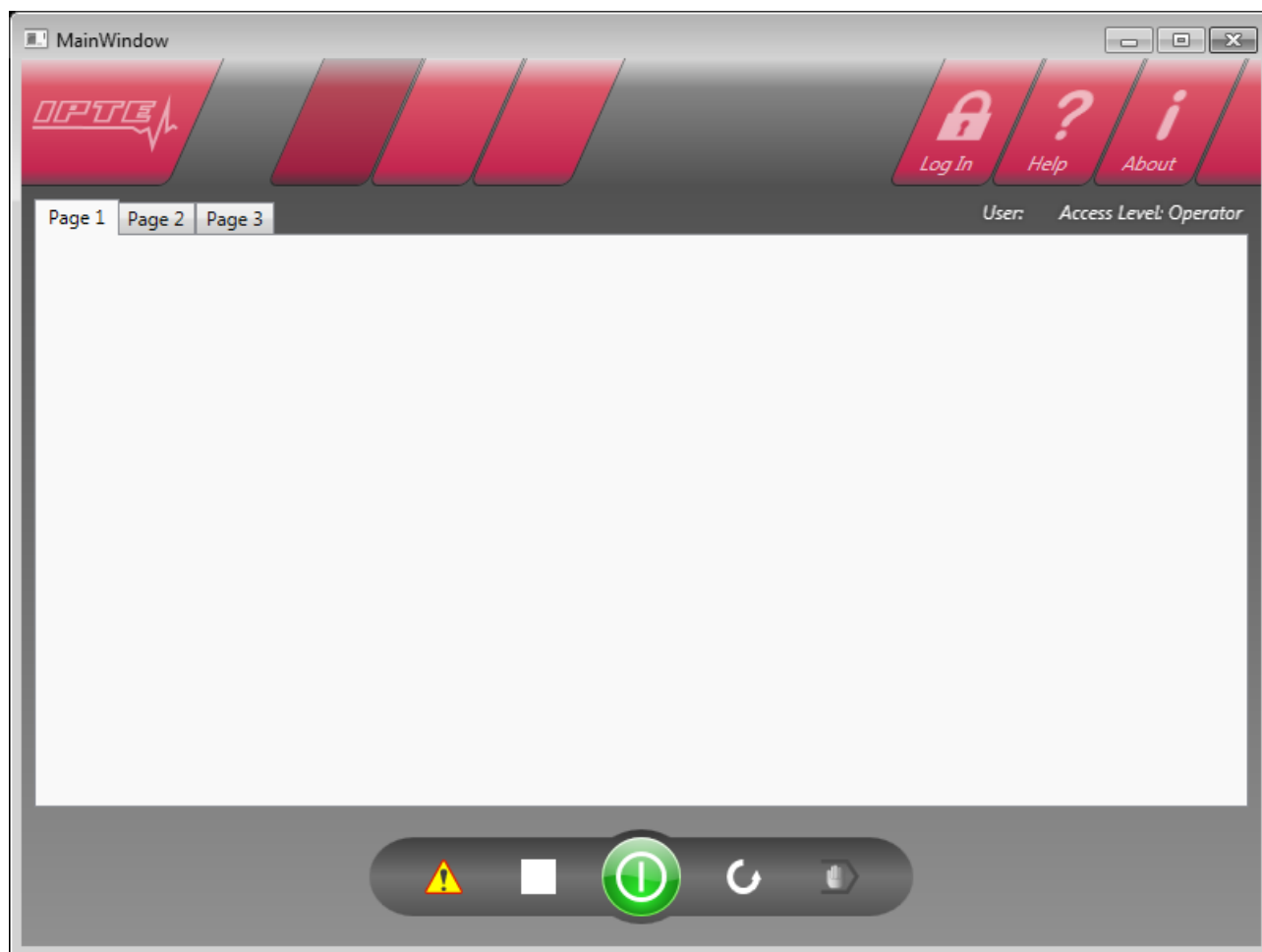


Figure 10: Full layout; Windows XP

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		10	/	16



4.3 Windows 8

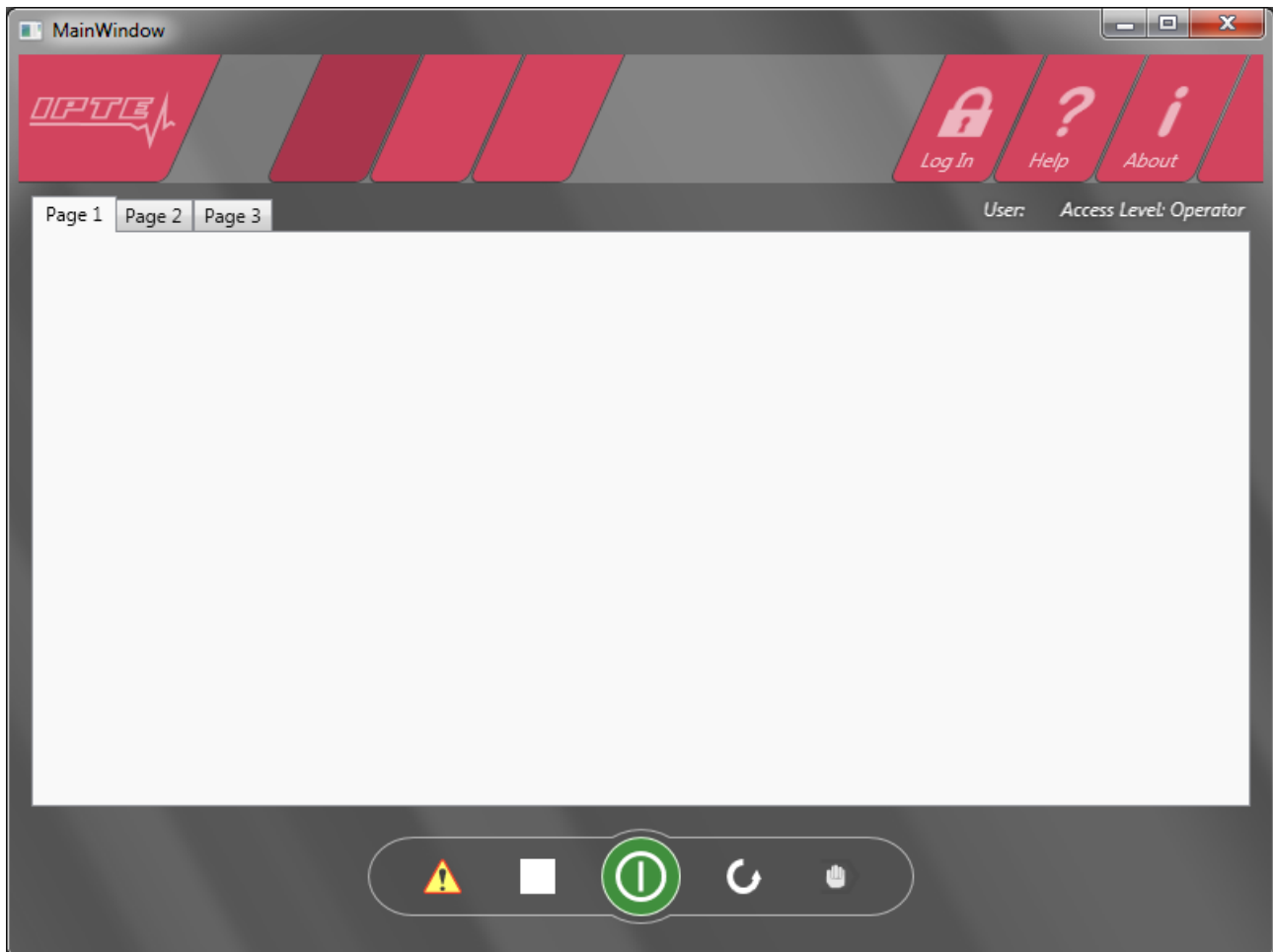


Figure 11: Full layout; Windows 8

Flat gradientless theme without transparency (windows 8 does not support aero or window blur)

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		11	/	16



4.4 Windows 2000

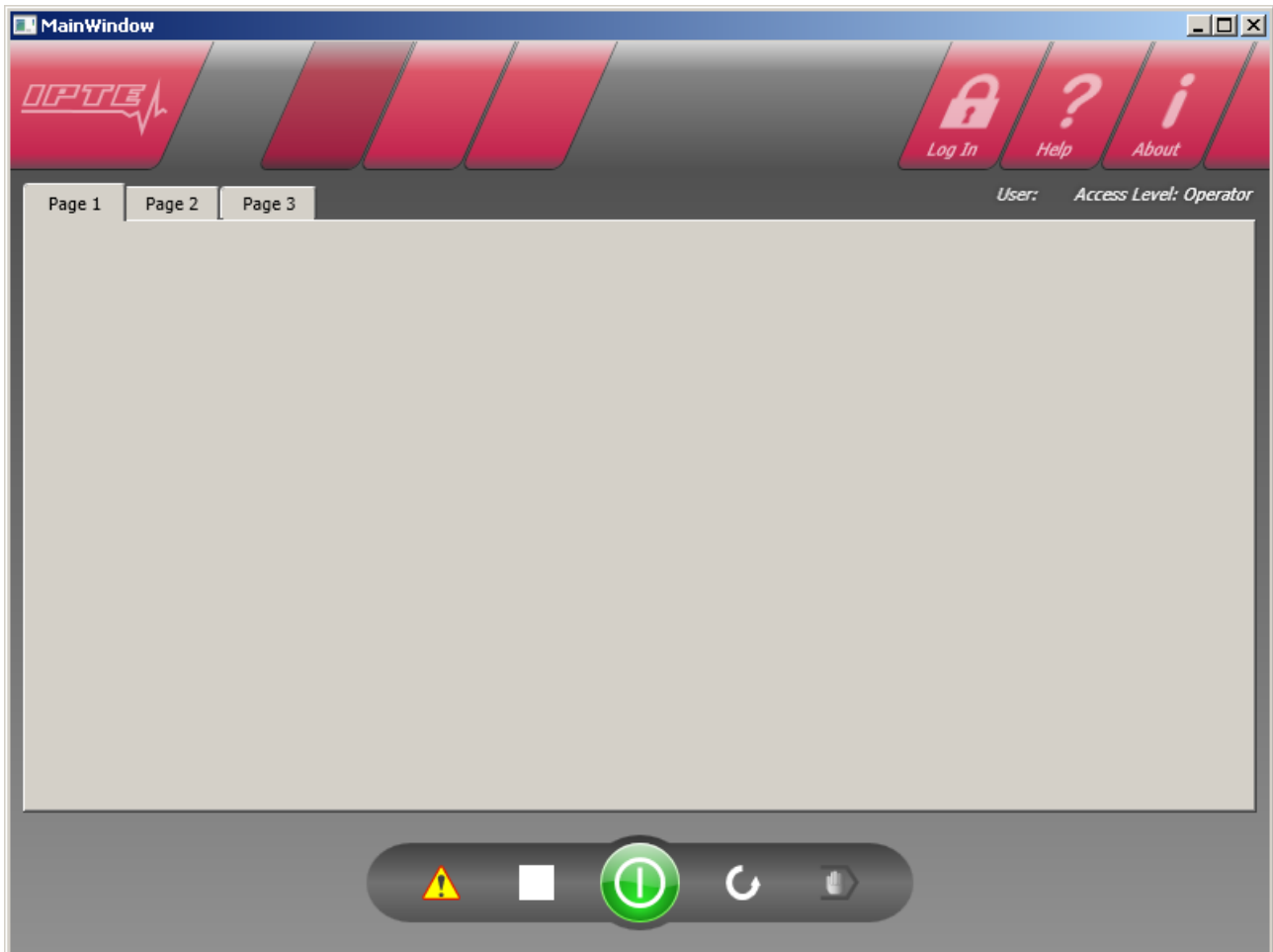


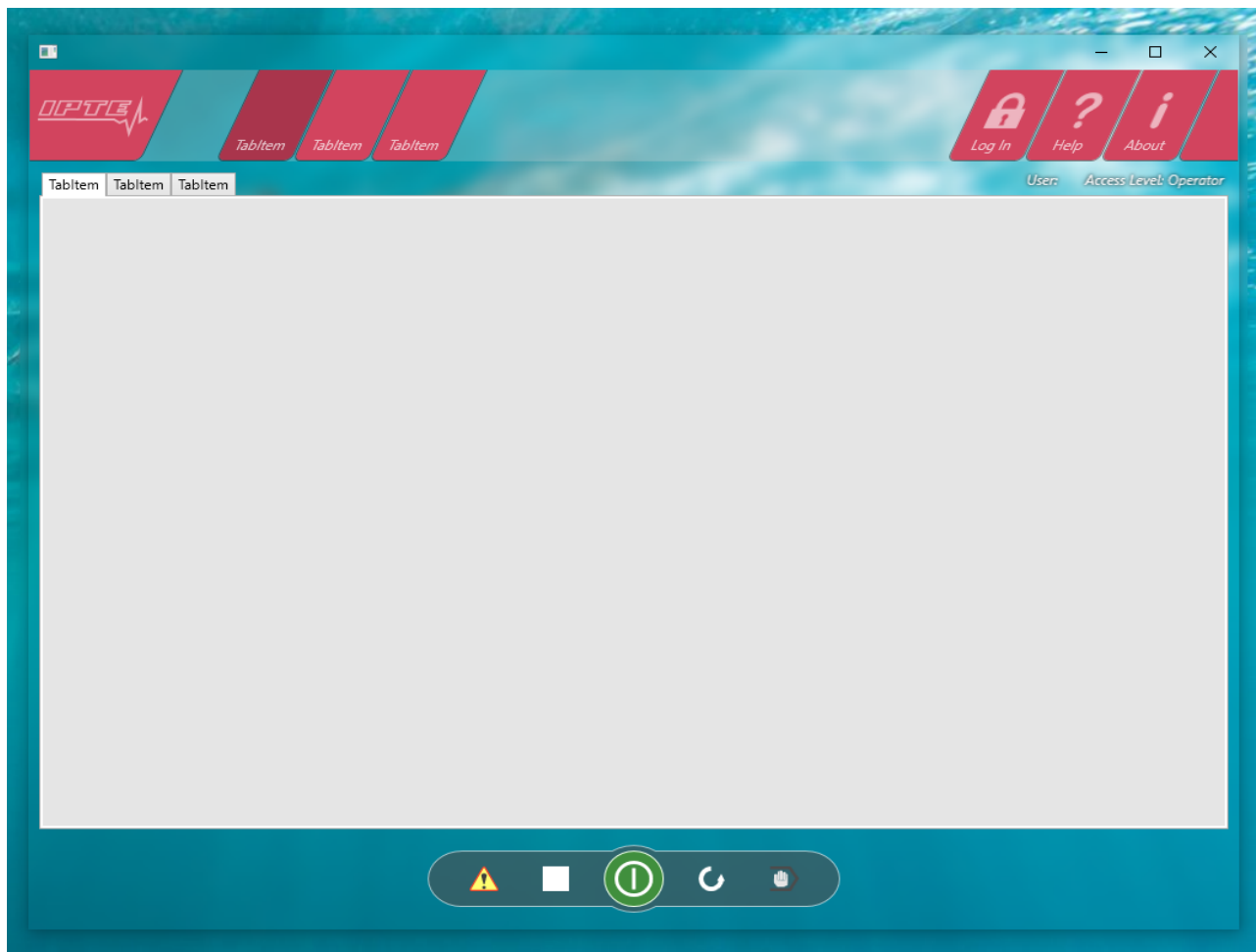
Figure 12: Full layout; Windows 2000

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		12	/	16



4.5 Windows 10

Transparent aero window (not unlike windows 7 theme) with flat gradientless controls.



Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		13	/	16

4.6 Control Buttons

The control bar (Figure 13) shares design paradigm with windows picture viewer and windows media player control bars. The design paradigm is widely used and thus is understood even by operators that have had moderate exposure to computing.



Figure 13: Control bar

The contains three buttons and two indicators: an alarm indicator, stop button, start button, reset button and service indicator.

The state of the indicators and availability of the buttons depends on machine state – only the actions that actually do something should be available, other buttons should be disabled. For instance, if machine is stopped and in auto mode, then only the start button should be available (Figure 14):



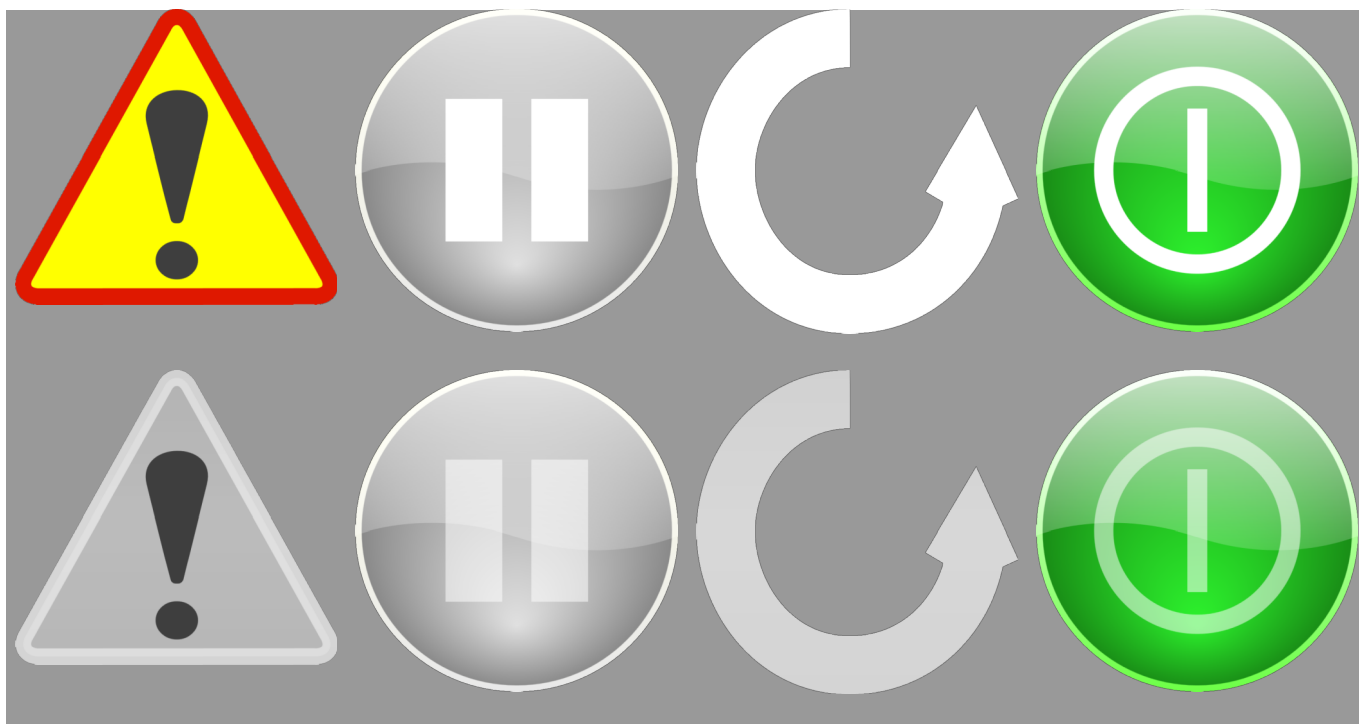
Figure 14: Control bar when machine is ready for start

The control button state should be mirrored in hardware i.e. if start button is available on control bar then the hardware start button light should be on.

* the buttons have color coded background

* during stat change the buttons pulse, hardware light blinks.

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		14	/	16



Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)	
Document – Number				Robert Hudjakov		15	16



5 Users and Access Levels

The application must not require log-in in start, instead it must launch in limited access mode.

The applications must provide four access levels. Three levels used by the machine customer and one reserved for IPTE service:

- Operator – default and limited access level. The application must not trust the knowledge or skills of the default machine operator: all controls and settings, that pose threat to operator, machine or process should be disabled for operator.
- Maintenance – the access level for factory service personal. The maintenance level users can teach new products, access hardware controls for diagnostics and change common settings.
- Supervisor – advanced access level. Can create, modify and delete operator, maintenance and supervisor level users.
- Administrator – user level with unlimited access; reserved for IPTE employees. Has access to advanced configuration pages and diagnostics utilities, that are not meant to be used by the customer. Can create/modify/delete administrator level users.

The access levels are incremental; every next access level enables all controls of previous levels and adds new perks.

Issued / changed	22.03.2013	Released / checked	13.01.2016	Signed	MC - Number	Page / Page (s)		
Document – Number				Robert Hudjakov		16	/	16