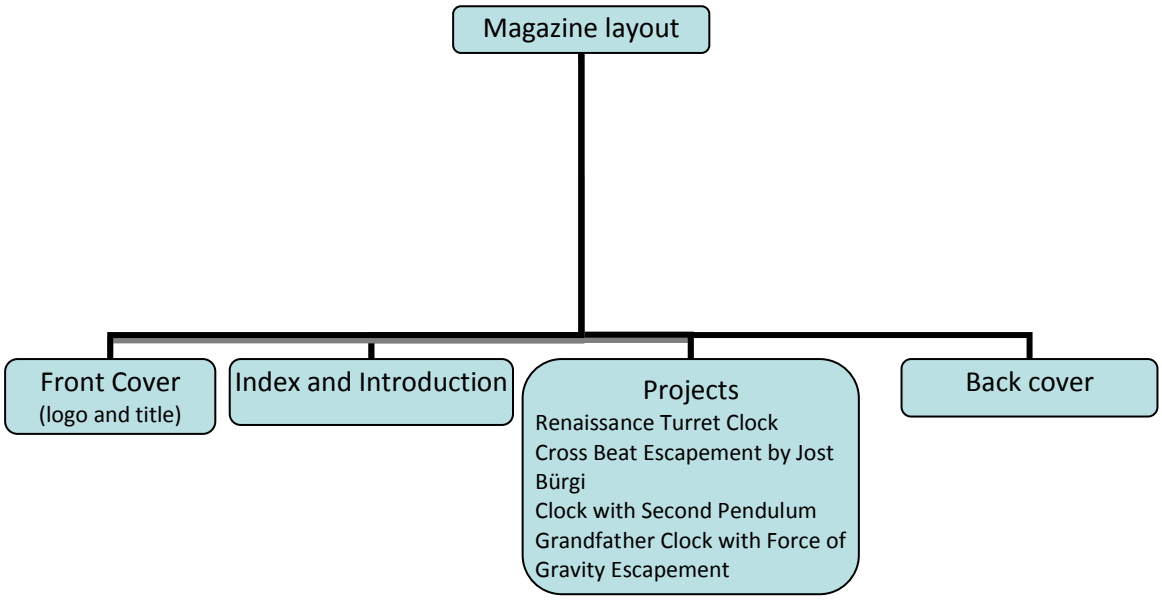
Criterion E: Product development

Complex techniques used:

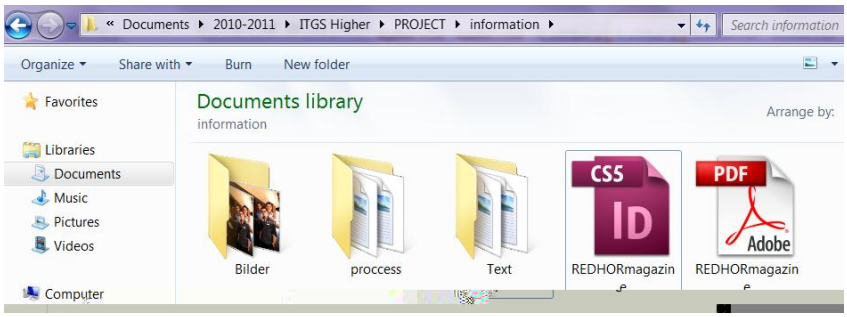
- Integration of components using advanced features from other applications
- Development of an original and unifying template.
- Manipulation of graphics to improve print quality.
- Proficient use of typography.
- Proficient interrelationship of graphical elements, images and text.

Structure and organization of the Redhor magazine files and images:

The magazine has a front and back cover, an index, an introduction and text about each individual project. The following is how it is laid out:



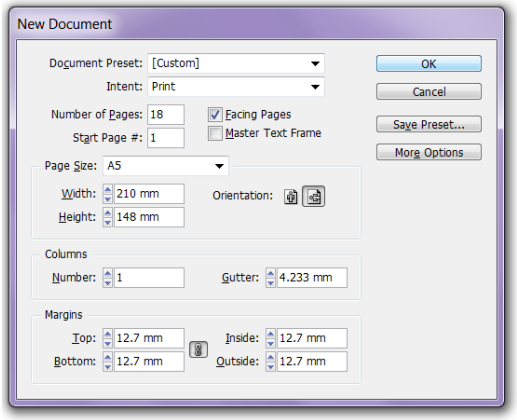
Organization of files:



The **Adobe InDesign** file is called ***REDHORmagazine***, there you also have the PDF version. All of the **images and the logo** are found in the folder called ***Bilder*** (within this folder there are sub folders that contain the pictures of the individual projects in it) and the **text** is in the folder called ***Text***. I also have my **process** which is located in the folder called ***process***.

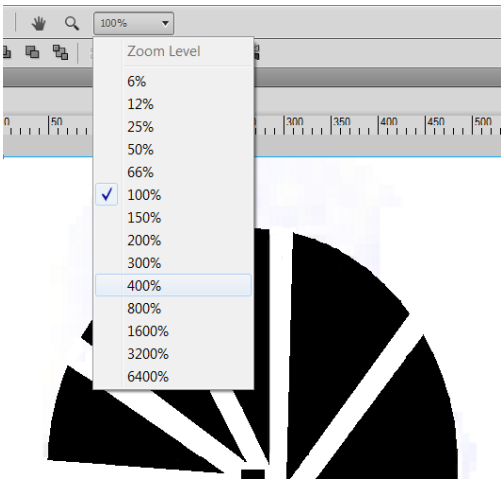
Process:

Integration of components using advanced features from other applications



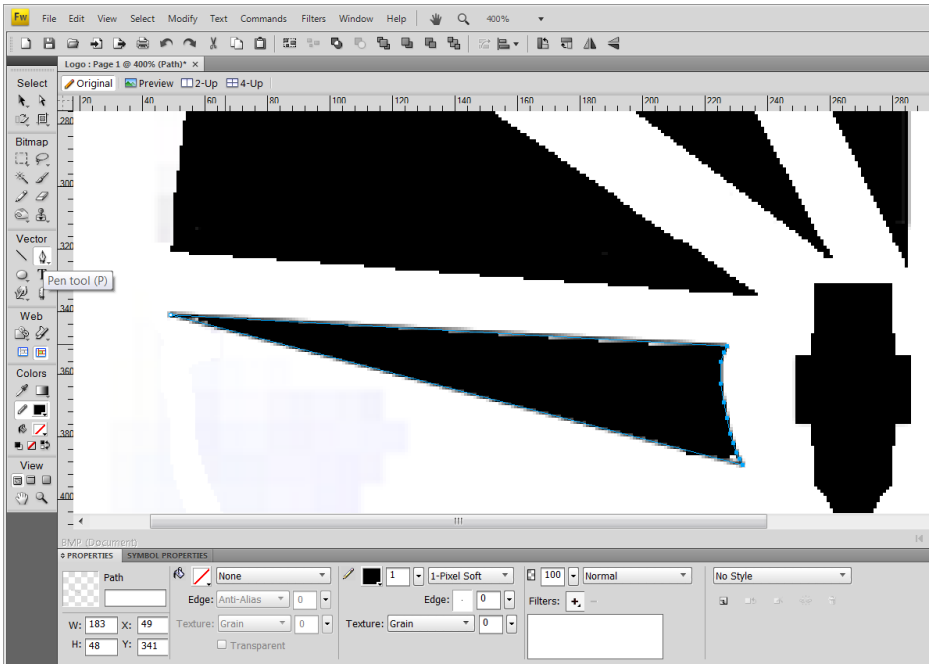
First I used **desktop publishing software** (InDesign) to open a document with the right amount of pages, the right size of pages. As shown, I used a page size of **A5** (210mm by 148mm). This document was landscape with 18 pages, facing each other. (Two pages were deleted because they weren't needed.)

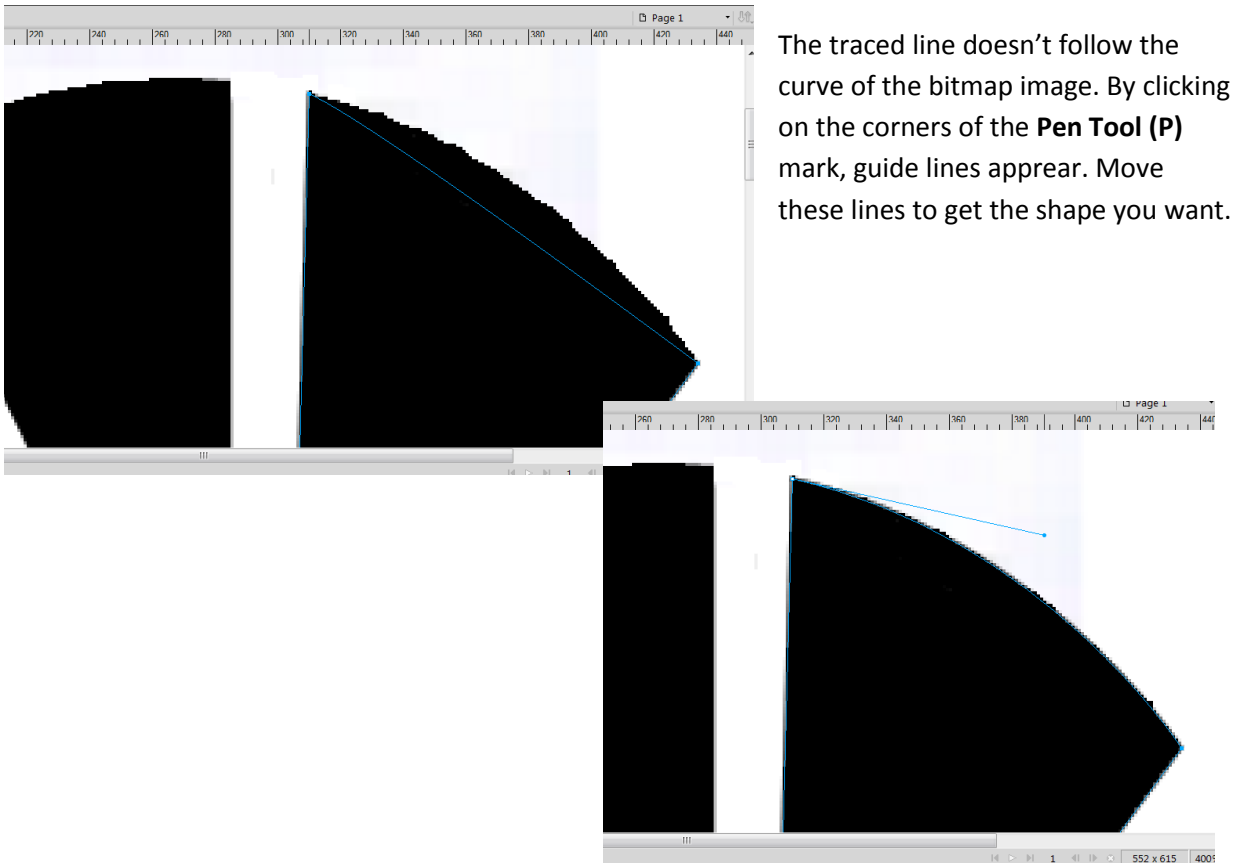
Then, I edited the logo with **vector graphics editor**. I changed the low resolution **JPEG bitmap file into a vector file in Adobe Fireworks**.



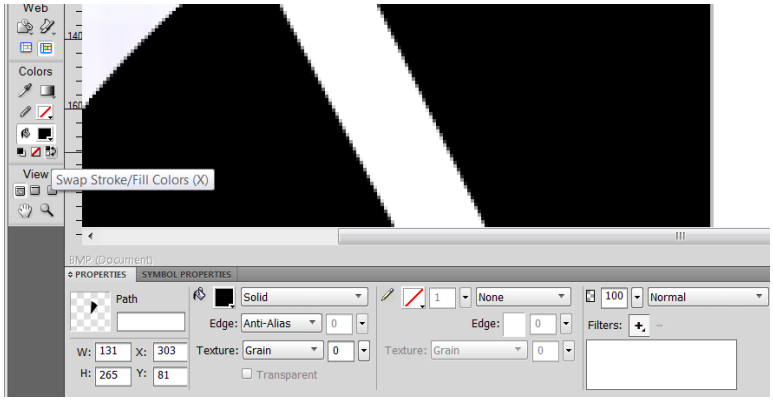
First I zoomed into the bitmap file 400% to work more closely with one section of the image.

The edges of the bitmap image were not smooth. This is why changed the image into a vector image, smoothing out the edges. Click onto the **Pen Tool (P)** and than you can **trace** over the bitmap with the **Pen Tool (P)** (blue line).

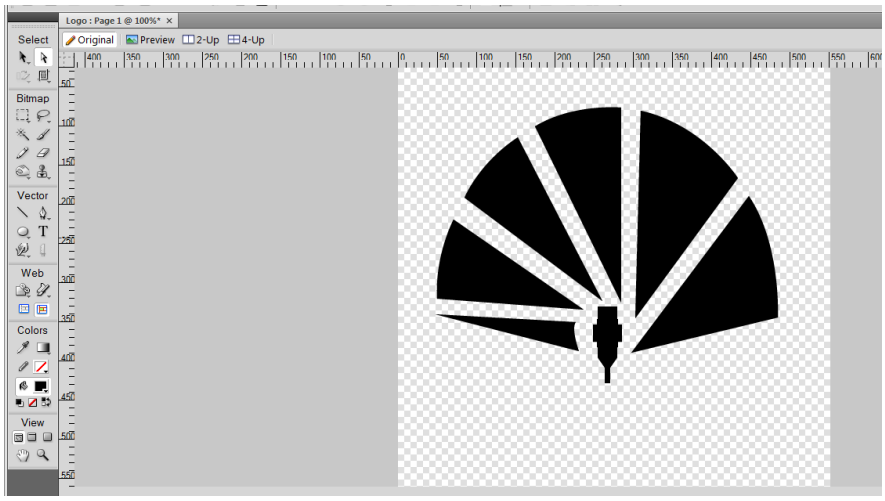




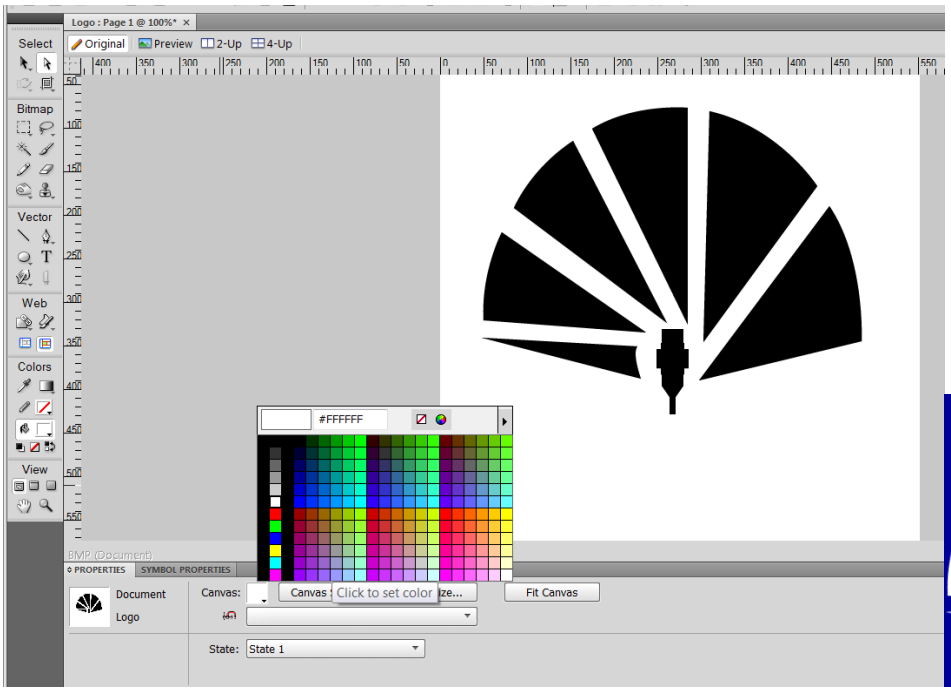
The traced line doesn't follow the curve of the bitmap image. By clicking on the corners of the **Pen Tool (P)** mark, guide lines apprear. Move these lines to get the shape you want.



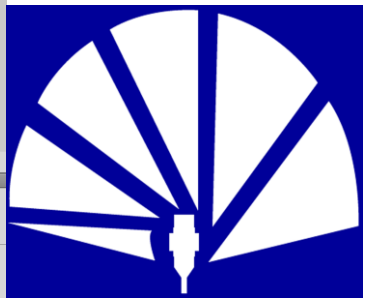
For each section use the **Swap Stroke/Fill Colors (X)** tool. Without it, the lines you traced will only be outlined and you want the whole shape coloured in.



Once done copy every individual new vector image onto another opened file and recreate the logo. Now the image has nice smooth edges to it and it can be scaled to the required size without loss of quality.

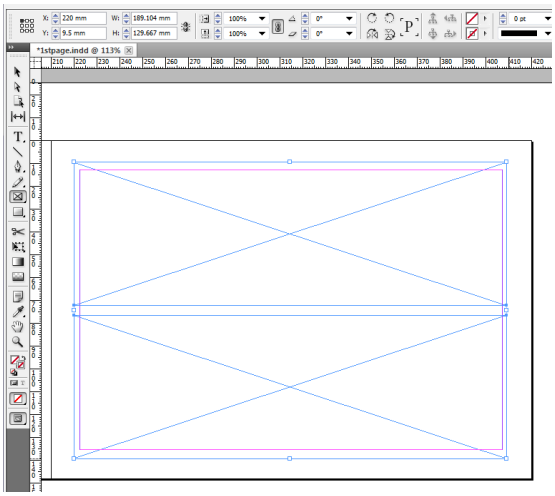


Then change the colour of the canvas and the vectors to your liking. My client wanted Royal Blue and Whitw.



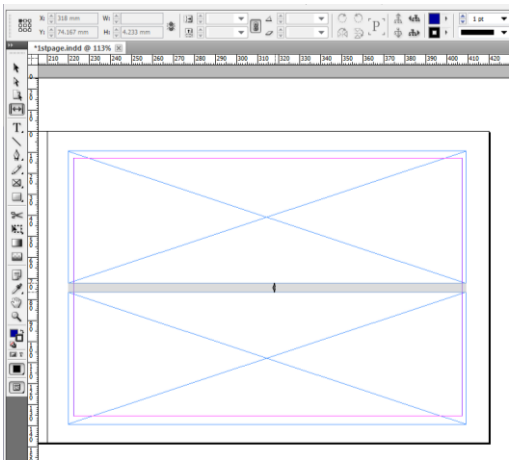
I exported the image with the right scale for the front cover with 300 dpi as a PNG file to use in desktop publishing software.

Development of an original and unifying template

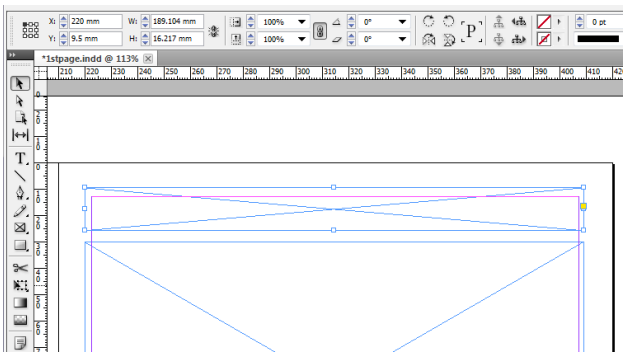


To create a unique template I used the **Rectangle Frame Tool (F)** on Adobe InDesign. This tool creates boxes of equal sizes. As you draw the box use the arrow key to split the big box into more sections.

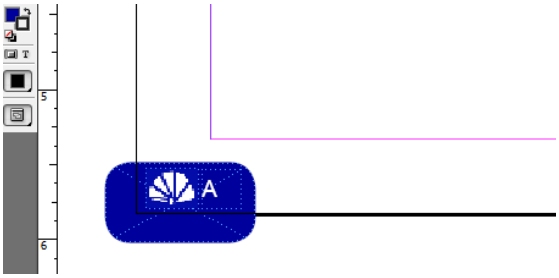
In my template the boxes where 0.3inches in.



Boxes set, use the **Gap Tool (U)** to streatch or shrink the boxes symetrically.

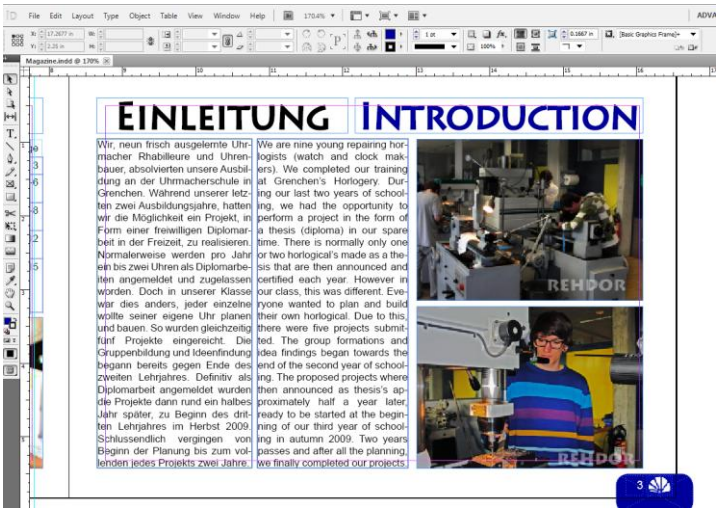


Footers were created using **A-master** to insert page numbers.



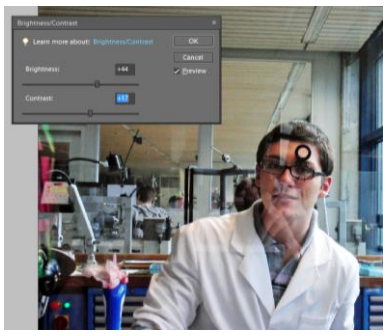
I created a box using the **Rectangle Frame Tool (F)**. On that box I added two smaller boxes. One for the logo and another for the page number. Before inserting this logo I resized the image. To insert the page numbers I used the help of a website: http://help.adobe.com/en_US/InDesign/6.0/WS144D32C3-94EF-46d6-9A3E-03B260487A79.html

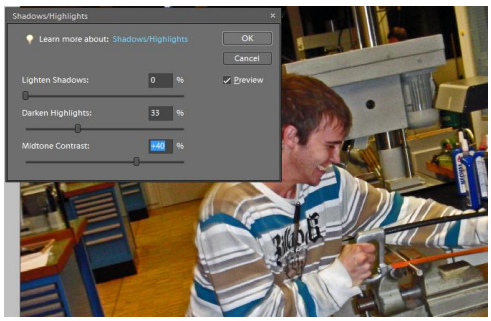
For the page number footer, I went to **Type→Insert Special Character→Markers→Current Page Number**. After I applied the **A-mater** page to the whole document, excluding the front and back cover. To do that right click on the pages on the document and go to **Apply Master to Pages…→** then indicate the pages it should apply to.

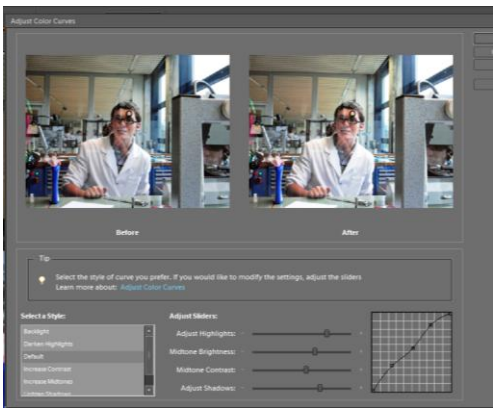


Manipulations of graphics to improve print quality

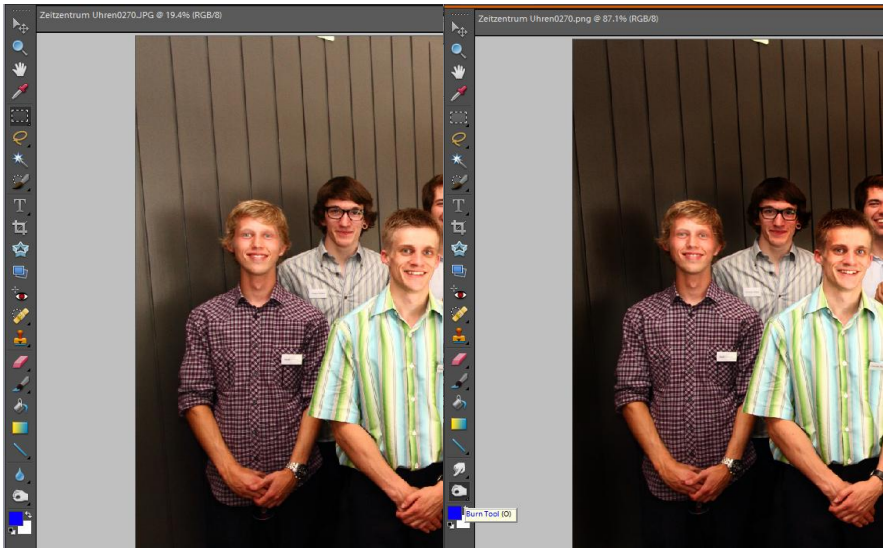
All the images have one thing in comon. I always used the **BrightnessContrast** tool to change the image. As well as the **ShodowsHighlights** tool to darken or lighten the image. Another thing I did to every image is to adjust its colour using the **Adjust Color Curve** tool. I didn't give all of the images the same adjustments and changes.





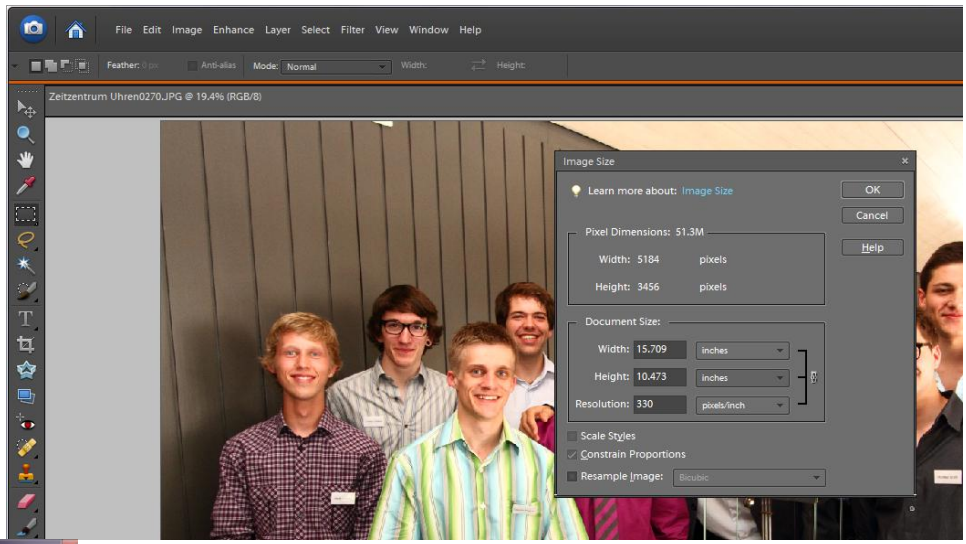


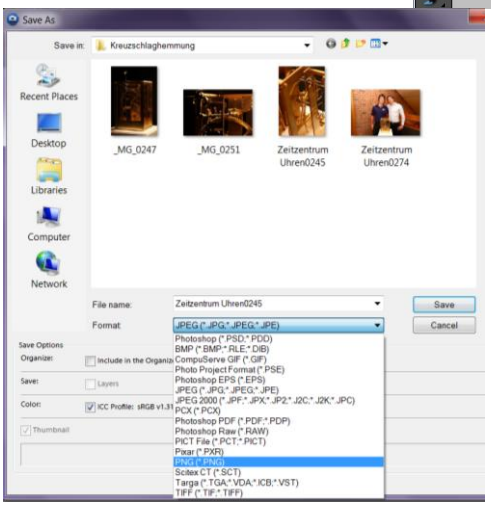
Some Images I manipulated more using the **Burn Tool (O)**. This tool allowed me to darken images more in specific areas.



I scaled the images to the right size for when inserting them into the template of the **Adobe InDesign** document.

I went to **Image→Image size**. The sizes of the images changed respectively to the size for the template, but the resolution of every image was set to **300pixels/inch**.

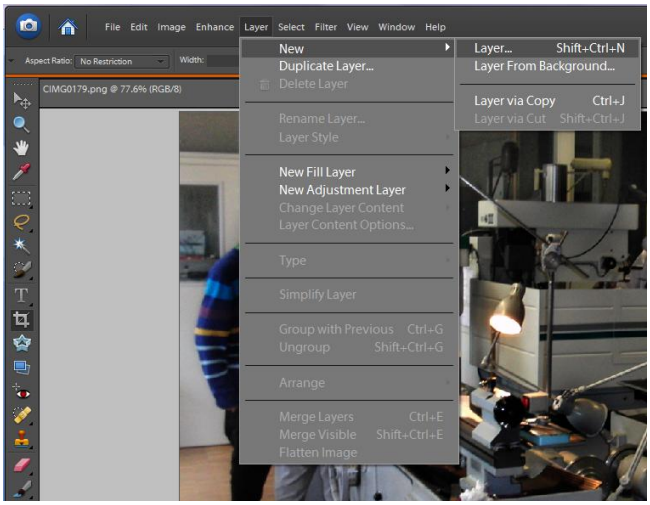




All images where saved as a **PNG** file from its JPEG original. This way a copy of the original is saved and no image data is lost since it is a **lossless compression**.

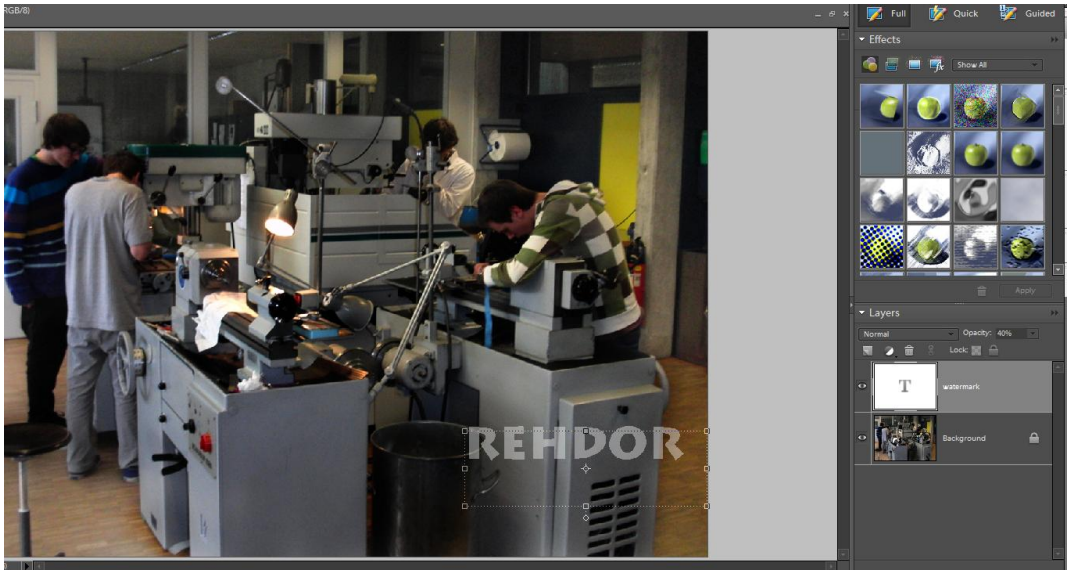
Watermarks

Watermarks were made to ensure **copyrights**.



I used **Adobe Photoshop Element 6.0**. I opened the image and went to **layer→new**. I called this new layer **watermark** and set it at **40% transparency**.

On this new layer I **created a text box** and wrote **REDHOR** which would represent the copyright symbol.



Proficient use of typography

The Text I received was in German so I translated it. All of the text documents from the groups came in different formats and different sizes of the text. I decided on a text font, **Arial**, for the body, **Lithos Pro,** for the titles and **Century Gothic,** for the group names.

To have a consistent style throughout the magazine I decided that the size of the body=10, titles=16-30, names=9.

Standuhr mit Schwerkrafthemmung Grandfather clock with a SCHWERKRAFTHEMMUNG

Im Sommer 2009 begannen wir mit der Planung unseres Projekts. Unser Ziel war eine Grossuhr mit Gewichtantrieb und Pendelregulierung zu berechnen, planen und selber herzustellen. Die Idee war eine technisch interessante und optisch moderne Standuhr zu gestalten.
In the summer of 2009 we began with our plan for our thesis. Our goal was to calculate, plan and manufacture a weight driven pendulum and regulation in a Grandfather clock. The idea was to create a visually modern, interesting and technical Grandfather clock.
Wir entschieden uns auf Gewicht und Gegengewicht, die an lose Rollen befestigt sind, um so die Gangdauer zu verdoppeln und so eine 31 Tage Uhr zu erhalten. Auf der Walzenachse ist ein Gegengesperr angebracht, damit die Uhr während dem aufziehen nicht stehen bleibt. Im Zentrum drehen sich das Minuten-, das Stunden- und das Hemmungsrad, um so den Blick des Betrachters ins Zentrum zu führen. Wo sich an der Front die imposante Hemmung bewegt. Das Sekundenrad wird über ein fünfer Trieb angetrieben, das nach Altmodischer weise als Laternentrieb hergestellt wurde, da es heutzutage kein Werkzeug gibt um ein solches herzustellen.
We decided that the weight and counterweight to be installed on loose wheels which gave us double the length of the horologe's duration and so we could achieve a 31 day working horologe. On the axel cylinder there is an anti-stop installed which makes it possible that the horologe does not stand still during rewinding. Installed in the center are the minute, hour and the HEMMUNGSRAD which has the task to catch the viewer's eyes to the center. In the front where the impressive HEMMUNG is moving, the seconds hand wheel is driven over a fifth transmission which was build after an old model called LATERNENTRIEB. This was done because now a day's no tools exist to manufacture this piece.
Unsere Standuhr wird von einer im 17. Jahrhundert von Edmund Beckett Denison erfundene Schwerkrafthemmung reguliert. Bis Ende des 18. Jahrhundert galten die Uhren mit dieser Art Hemmung als die genausten der Welt und hatten eine Gangabweichung von 1/10 Sekunde pro Tag. Jedoch die zeitaufwendige Herstellung und das schwierige Einstellen dieser Hemmung liess sie schnell in Vergessenheit geraten. Das konstruieren dieser Hemmung war für uns eine sehr grosse Herausforderung, da es nur wenige Pläne und Bücher gibt. Nur mit Hilfe eines erfahrenen Uhrenbauer Miki Eleta gelang es uns diese Schwerkrafthemmung nach Denison zu konstruieren und herzustellen. Die Pendelstange ist aus Quarzglas gefertigt, um so eine kleine Ausdehnung bei Temperaturveränderungen zu garantieren.
Our Grandfather clock is from the 1700s. Edmund Beckett Denison discovered the SCHWERKRAFTHEMMUNG adjustment. Until the 1800s the horologes with the

Proficient interrelationship of graphical elements, images and text

Once the layout of the magazine was done I could add the text and images onto the template.

Word count: 946