The CentOS Artwork Repository

Alain Reguera Delgado

The CentOS Artwork Repository
by Alain Reguera Delgado

This manuals documents relevant information regarding the deployment, organization, and administration of the CentOS Artwork Repository.

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Introduction

Welcome to CentOS Artwork Repository Manual.

The CentOS Artwork Repository Manual describes how The CentOS Project Corporate Visual Identity is organized and produced inside the CentOS Artwork Repository (@url{https://projects.centos.org/svn/artwork/}). If you are looking for a comprehensive, task-oriented guide for understanding how The CentOS Project Corporate Visual Identity is produced, this is the manual for you.

This manual discusses the following intermedite topics:

- The CentOS Brand
- The CentOS Corporate Visual Structure
- The CentOS Corporate Visual Style

This guide assumes you have a basic understanding of your CentOS system. If you need help with CentOS, refer to the help page on the CentOS Wiki (@url{http://wiki.centos.org/Help}) for a list of different places you can find help.

Document convenctions

In this manual the personal pronoun @emph{we} is used to repesent @emph{The CentOS Artwork SIG}. This is, the group of persons building the CentOS Artwork Repository.

In this manual, certain words are represented in different fonts, typefaces, sizes, and weights. This highlighting is systematic; different words are represented in the same style to indicate their inclusion in a specific category. The types of words that are represented this way include the following:

command

Linux commands (and other operating system commands, when used) are represented this way. This style should indicate to you that you can type the word or phrase on the command line and press Enter to invoke a command. Sometimes a command contains words that would be displayed in a different style on their own (such as file names). In these cases, they are considered to be part of the command, so the entire phrase is displayed as a command. For example:

Use the @command{centos-art identity --render='path/to/dir'} command to produce contents inside the @file{trunk/Identity} directory structure.

`file name`

File names, directory names, paths, and RPM package names are represented this way. This style indicates that a particular file or directory exists with that name on your system. Examples:

The @file{init.sh} file in @file{trunk/Scripts/Bash/Cli/} directory is the initialization script, written in Bash, used to automate most of tasks in the repository.

The @command{centos-art} command uses the @file{ImageMagick} RPM package to convert images from PNG format to other formats.

key

A key on the keyboard is shown in this style. For example:

To use **TAB** completion to list particular files in a directory, type @command{ls}, then a character, and finally the Tab key. Your terminal displays the list of files in the working directory that begin with that character.

key-combination

A combination of keystrokes is represented in this way. For example:

The **Ctrl**+**Alt**+**Backspace** key combination exits your graphical session and returns you to the graphical login screen or the console.

`computer output`

Text in this style indicates text displayed to a shell prompt such as error messages and responses to commands. For example:

The @command{ls} command displays the contents of a directory. For example:

```
Config                          help_renameEntry.sh
help_copyEntry.sh               help_restoreCrossReferences.sh
help_deleteCrossReferences.sh   help_searchIndex.sh
```

The output returned in response to the command (in this case, the contents of the directory) is shown in this style.

Additionally, we use several different strategies to draw your attention to certain pieces of information. In order of urgency, these items are marked as a note, tip, important, caution, or warning. For example:

Note: @strong{Note} Remember that Linux is case sensitive. In other words, a rose is not a ROSE is not a rOsE.

Tip: @strong{Tip} The directory @file{/usr/share/doc/} contains additional documentation for packages installed on your system.

Important: @strong{Important} If you modify the DHCP configuration file, the changes do not take effect until you restart the DHCP daemon.

Caution

@strong{Caution} Do not perform routine tasks as root — use a regular user account unless you need to use the root account for system administration tasks.

Warning

@strong{Warning} Be careful to remove only the necessary partitions. Removing other partitions could result in data loss or a corrupted system environment.

Send in your feedback

If you find an error in the *CentOS Artwork Repository*, or if you have thought of a way to make this manual better, we would like to hear from you! Share your suggestions in the appropriate mailing list (http://lists.centos.org/) and/or bug tracker (http://bugs.centos.org/).

When you make suggestion, try to be as specific as possible. For example, if you have found an error in the manual, include the section number and some of the surrounding text so we can find it easily.

Chapter 1. History

This section describes, briefly, where we've been and where we are going to with the CentOS Artwork Repository.

1.1. 2008

The CentOS Artwork Repository started at CentOS Developers mailing list[1] during a discussion about how to automate the slide images of Anaconda. In such discussion, Ralph Angenendt rose up his hand to ask: Do you have something to show?

To answer the question, Alain Reguera Delgado suggested a bash script which combined SVG and SED files in order to produce PNG images in different languages —together with the proposition of creating a Subversion repository where translations and image production could be distributed inside The CentOS Community—.

Karanbirn Sighn considered the idea intresting and provided the infrastructure necessary to support the effort. This way the CentOS Artwork SIG[2] and the CentOS Artwork Repository[3] were officially created.

Once the CentOS Artwork Repository was available, Alain Reguera Delagdo uploaded the bash script for rendering Anaconda slides; Ralph Angenendt documented it very well and The CentOS Translators started to download working copies of CentOS Artwork Repository to produce slide images in their own languages.

1.2. 2009

The rendition script is at a very rustic state where only slide images can be produced.

The rendition script was redesigned to extend image production to other areas, not just slide images. In this configuration one translated SVG instance was created from the SVG file provided as input in order to produce one translated PNG image as output. The translation of SVG files was made through SED replacement commands and the rendition of PNG images was realized through Inkscape command line internface.

The rendition script was named **render.sh**. The directory structures were prepared to receive the rendition script so images could be produced inside them. Each directory structure had design templates (.svg), translation files (.sed), and translated images (.png).

The rendition script was unified in a common place and linked from different directory structures. There was no need to have the same code in different directory structures if it could be in just one place and then be linked from different locations.

Concepts about corporate identity began to be considered. As referece, it was used the book "Corporate Identity" by Wally Olins (1989) and Wikipedia[4].

The rendition script main's goal becomes to: automate production of a monolithic corporate visual identity structure, based on The CentOS Mission and The CentOS Release Schema.

The documentation of CentOS Artwork Repository started to take form in LaTeX format.

1.3. 2010

The rendition script **render.sh** is no longer a rendition script, but a collection of functionalities grouped into the **centos-art.sh** script where rendition is one functionality among others. The **centos-art.sh** is created to automate most frequent tasks inside the repository. There is no need to have links all around the repository if a command-line

interface can be created (through symbolic links, in the `~/bin` directory) and be called anywhere inside the repository as it would be usually done with regular commands.

Inside **centos-art.sh**, functionalities started to get identified and separated one another. For example, when images were rendered, there was no need to load functionalities related to documentation manual. This moved us onto common functionalities and specific functionalities inside **centos-art.sh** script. Common functionalities are loaded when the script is initiated and are available to specific functionalities.

The **centos-art.sh** script was redesigned to handle options trough **getopt** option parser.

The repository directory structure was updated to improve the implementation of concepts related to corporate visual identity. Specially in the area related to themes which were divided into design models and artistic motifs.

Stoped using LaTeX for documentation and started using Texinfo instead, a documentation system that can produce both online information and a printed manual from a single source. In this configuration the info ouput produced by Texinfo was used by **centos-art.sh** script to provide reading, edition and administration of documentation dynamically, based on repository directory structure.

1.4. 2011

The **centos-art.sh** script was redesigned to start translating SVG and other XML-based files (e.g., XHTML and Docbook files) through the **xml2po** program and shell scripts files (e.g., Bash scripts) through GNU **gettext** tools. This configuration provided a stronger interface for graphic designers, translators and programmers at time of producing localized content. The SED files are no longer used to handle translations.

Improve option parsing through **getopt**.

The **centos-art.sh** script is updated to organize functionalities in two groups: “the administrative functionalities” and “the productive functionalities”. The administrative functionalities cover actions like: copying, deleting and renaming directory structures inside the repository. Also, preparing your workstation for using **centos-art.sh** script, making backups of the distribution theme currently installed, installing themes created inside repository and restoring themes from backup. On the other hand, the productive functionalities cover actions like: content rendition, content localization, content documentation and content maintainance.

Notes

1. mailto:centos-devel@centos.org
2. https://projects.centos.org/trac/artwork/
3. https://projects.centos.org/svn/artwork/
4. http://en.wikipedia.org/Corporate_identity

Chapter 2. Copying conditions

2.1. Preamble

The CentOS Artwork Repository organizes files in a very specific way to implement The CentOS Project corporate visual identity. This very specific organization of files is part of **centos-art.sh** script, a bash script that automate most of the frequent tasks inside the repository.

The **centos-art.sh** script and the organization of files it needs to work are not in the public domain; they are copyrighted and there are restrictions on their distribution, but these restrictions are designed to permit everything that a good cooperating citizen would want to do. What is not allowed is to try to prevent others from further sharing any version of this program that they might get from you.

Specifically, we want to make sure that you have the right to give away copies of **centos-art.sh** script, that you receive source code or else can get it if you want it, that you can change this program or use pieces of it in new free programs, and that you know you can do these things.

To make sure that everyone has such rights, we have to forbid you to deprive anyone else of these rights. For example, if you distribute copies of the **centos-art.sh** script, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must tell them their rights.

Also, for our own protection, we must make certain that everyone finds out that there is no warranty for the **centos-art.sh** script. If this program is modified by someone else and passed on, we want their recipients to know that what they have is not what we distributed, so that any problems introduced by others will not reflect on our reputation.

The centos-art.sh script is released as a GPL work. Individual packages used by centos-art.sh script include their own licenses and the centos-art.sh script license applies to all packages that it does not clash with. If there is a clash between the centos-art.sh script license and individual package licenses, the individual package license applies instead.

The precise conditions of the license for the **centos-art.sh** script are found in the GNU General Public License. This manual specifically is covered by the GNU Free Documentation License.

2.2. The CentOS Brand

The CentOS Brand () is the main visual manifestaion of The CentOS Project. The CentOS Project uses The CentOS Brand to connect all its visual manifestions (e.g., GNU/Linux Distributions, Websites, Stationery, etc.) and, this way, it provides recognition among other similar projects.

Both The CentOS Brand and all the visual manifestations that derivate from it are available for you to study and propose improvement around a good citizen's will at The CentOS Community environment, but you are not allowed to redistribute them elsewhere, without the given permission of The CentOS Project.

If you need to redistribute either The CentOS Brand or any the visual manifestatinos that derivate from it, write your intentions to the <centos-devel@centos.org> mailing list.

Chapter 3. Usage convenctions

The CentOS Artwork Repository is supported by Subversion[1], a version control system which allows you to keep old versions of files and directories (usually source code), keep a log of who, when, and why changes occurred, etc., like CVS, RCS or SCCS.

When using Subversion there is one "source repository" and many "working copies" of that source repository. The working copies are independent one another, can be distributed all around the world and provide a local place for designers, documentors, translators and programmers to perform their works in a descentralized way. The source repository, on the other hand, provides a central place for all independent working copies to interchange data and provides the information required to permit extracting previous versions of files at any time.

3.1. Policy

The CentOS Artwork Repository is a collaborative tool that anyone can have access to. However, changing that tool in any form is something that should be requested in the CentOS Developers mailing list[2]. Generally, people download working copies from CentOS Artwork Repository, study the repository organization, make some changes in their working copies, make some tests to verify such changes do work the way expected and finally request access to commit them up to the CentOS Artwork Repository (i.e., the source repository) for others to benefit from them.

Once you've received access to commit your changes, there is no need for you to request permission again to commit other changes from your working copy to CentOS Artwork Repository as long as you behave as a *good community citizen*.

As a good community citizen one understand of a person who respects the work already done for others and share ideas with authors before changing relevant parts of their work, specially in situations when the access required to realize the changes has been granted already. Of course, there is a time when conversation has taken place, the paths has been traced and changing the work is so obvious that there is no need for you to talk about it; that's because you already did, you already built the trust to keep going. Anyway, the mailing list mentioned above is available for sharing ideas in a way that good relationship between community citizens could be constantly balanced.

The relationship between community citizens is monitored by repository administrators. Repository administrators are responsible of granting everything goes the way it needs to go in order for the CentOS Artwork Repository to comply its mission which is: to provide a colaborative tool for The CentOS Community where The CentOS Project Corporate Identity is built and maintained from The CentOS Community itself.

It is also important to remember that all source files inside CentOS Artwork Repository should comply the terms of GNU General Public License () in order for them to remain inside the repository.

3.2. Organization

The CentOS Artwork Repository uses a `trunk`, `branches`, and `tags` organization. The `turnk/` directory organizes the main development line of CentOS Artwork Repository. The `branches/` directory oranizes intermediate development lines taken from the main development line. The `tags/` directory organizes frozen development lines taken either from the main or the intermediate lines of development.

3.3. File names

Inside the CentOS Artwork Repository, file names are all written in lowercase (e.g., `01-welcome.png`, `splash.png`, `anaconda_header.png`, etc.) and directory names are all written capitalized (e.g., `Identity`}, `Themes`, `Motifs`, `TreeFlower`, etc.).

3.4. Work lines

Inside CentOS Artwork Repository there are four major work lines of production which are: "graphic design", "documentation", "localization" and "automation". These work lines describe different areas of content production. Content production inside these specific areas may vary as much as persons be working on them. Producing content in too many different ways may result innapropriate in a collaborative environment like CentOS Artwork Repository where content produced in one area depends somehow from content produced in another different area. So, a "content production standard" is required for each available work line.

3.4.1. Graphic design

The graphic design work line exists to cover brand design, typography design and themes design mainly. Additionally, some auxiliar areas like icon design, illustration design, brushes design, patterns designs and palettes of colors are also included here for completeness.

Inside CentOS Artwork Repository graphic design is performed through Inkscape (@url{http://www.inkscape.org/}) and GIMP (@url{http://www.gimp.org/}). The Inkscape tool is used to create and manipulate scalable vector graphics and export them to PNG format; it also provides a command-line interface that we use to perform massive exportation from SVG files to PNG files in automation scripts. On the other hand, GIMP is used to create and manipulate rastered images, create brushes, patterns and palettes of colors.

> **Tip:** Combine both Inkscape and GIMP specific functionalities and possibilities to produce very beautiful images.

The CentOS Project Corporate Visual Identity is made of different visual manifestations (e.g., Distributions, Web sites, Stationery, etc.). Visual manifestations implement the corporate identity concepts by mean of images. To produce these images, we decompose image production in "design models" and "artistic motifs".

Design models provide the structural information of images (i.e., dimension, position of common elements in the visible area, translation markers, etc.) and they are generally produced as scalable vector graphics to take advantage of SVG standard, an XML-based standard.

Artistic motifs provide the visual style (i.e., the background information, the look and feel) some design models need to complete the final image produced by automation scripts. Artistic motifs are generally produced as rastered images.

The result produced from combining one design model with one artistic motif is what we know as a @emph{theme}. Inside themes directory structure (@pxref{Directories trunk Identity Images Themes}), you can find several design models and several artistic motifs independently one another that can be albitrarily combined through @emph{theme rendition}, a flexible way to produce images for different visual manifestations in very specific visual styles. Inside themes directory structure, theme rendition is performed in @file{trunk/Identity/Images/Themes} directory structure, the required design models are taken from @file{trunk/Identity/Models/Themes} directory structure and the action itself is controlled by the @code{render} functionality of **centos-art.sh** script.

In addition to theme rendition you can find @emph{direct rendition}, too. Direct rendition is another way of image production where there is no artistic motif at all but design models only. Direct rendition is very useful to produce simple content that doesn't need specific background information. Some of these contents are brands, icons and illustrations. Direct rendition is performed in @file{trunk/Identity/Images}, the required design models are taken from @file{trunk/Identity/Models} directory structure and the action itself is controlled by the @code{render} functionality of **centos-art.sh** script.

@xref{Directories trunk Identity}, for more information about The CentOS Corporate Identity and how graphic design fits on it.

3.4.2. Documentation

The documentation work line exists to describe what each directory inside the CentOS Artwork Repository is for, the conceptual ideas behind them and, if possible, how automation scripts make use of them.

The CentOS Artwork Repository documentation is supported by Texinfo, a documentation system that uses a single source file to produce both online information and printed output.

The repository documentation is organized under @file{trunk/Manual} directory and uses the repository directory structre as reference. Each directory in the repository has a documentation entry associated in the documentation manual. Documentation entries are stored under @file{trunk/Manual/Directories} directory and the action itself is controlled by the @code{help} functionality of **centos-art.sh** script.

The @code{help} functionality let you create, edit and delete documentation entries in a way that you don't need to take care of updating menus, nodes and cross reference information inside the manual structure; the functionality takes care of it for you. However, if you need to write repository documentation that have nothing to do with repository directories (e.g., Preface, Introduction and similar) you need to do it manually, there is no functionality to automate such process yet.

@xref{Directories trunk Manual}, for more information on documentation.

3.4.3. Localization

The localization work line exists to provide the translation messages required to produce content in different languages. Translation messages inside the repository are stored as portable objects (e.g., .po, .pot) and machine objects (.mo) under @file{trunk/Locales} directory structure.

The procedure used to localize content is taken from @command{gettext} standard specification. Basically, translatable strings are retrived from source files in order to create portable objects and machine objects for them. These portable objects are editable files that contain the information used by translators to localize the translatable strings retrived from source files. On the other hand, machine objects are produced to be machine-redable only, as its name implies, and are produced from portable objects.

Since @command{gettext} needs to extract translatable strings form source files in order to let translators to localize them, we are limitted to use source files supported by @command{gettext} program. This is not a limitation at all since @command{gettext} supports most popular programming laguages (e.g., C, C++, Java, Bash, Python, Perl, PHP and GNU Awk just to mention a few ones). Nevertheless, formats like SVG, XHTML and Docbook don't figure as supported formats in the list of @command{gettext} supported source files.

To translate XML based source files like SVG, XHTML and Docbook we use the @command{xml2po} program instead. The @command{xml2po} comes with the @file{gnome-doc-utils} package and retrives translatable strings from one XML file to produce portable objects for them.

> **Note:** Portable objects produced by @command{xml2po} have the same format that portable objects produced by @command{gettext}. This make the localization process quite consistent from translators' point of view. No matter what the source file be, the translator will always face the same translation file format (i.e., the portable object format).

With the portable object in place, the @command{xml2po} program is used again to create the final translated XML, just with the same definition of the source file where translatable strings were taken from (e.g., if we extract translatable strings from a SVG file, as result we get the same SVG file but with translatable strings already localized ---obviously, for this to happen translators need to localize translatable strings inside the portable object first, localization won't appear as art of magic---). When using @command{xml2po}, the machine object is used as temporal file to produce the final translated XML file.

> **Tip:** If you want to have your content localized inside CentOS Artwork Repository be sure to use source files supported either by @command{gettext} or @command{xml2po} programs.

@xref{Directories trunk Locales}, for more information.

3.4.4. Automation

The automation work line exists to standardize content production in CentOS Artwork Repository. There is no need to type several tasks, time after time, if they can be programmed into just one executable script.

The automation work line takes place under @file{trunk/Scripts} directory structure. Here is developed the **centos-art.sh** script, a bash script specially designed to automate most frequent tasks (e.g., rendition, documentation and localization) inside the repository. Basically, the **centos-art.sh** script is divided in several functionalities independent one another that perform specific tasks and relay on repository organization to work as expected.

> **Tip:** If you need to improve the way content is produced, look inside automation scripts and make your improvement there for everyone to benefit.

@xref{Directories trunk Scripts}, for more information on automation.

3.5. Connection between directories

In order to produce content in CentOS Artwork Repository, it is required that all work lines be connected somehow. This is the way automation scripts can know where to retrive the information they need to work with (e.g., design model, translation messages, output location, etc.). We build this kind of connection using two path constructions named @emph{master paths} and @emph{auxiliar paths}.

The master path points only to directories that contain the source files (e.g., SVG files) required to produce base content (e.g., PNG files) through automation scripts. Each master path inside the repository may have several auxiliar paths associated, but auxiliar paths can only have one master path associated.

The auxiliar paths can point either to directories or files. When an auxiliar path points to a directory, that directory contains information that modifies somehow the content produced from master paths (e.g., translation messages) or provides the output information required to know where to store the content produced from master path. When an auxiliar path points to a file, that file has no other purpose but to document the master path it refers to.

The relation between auxiliar paths and master paths is realized combining two path informations which are: the master path itself and one second level directory structure from the repository. Generally, the master path is considered the path identifier and the second level directory structure taken from the repository is considered the common part of the path where the identifier is appended.

Path	Suffix	Identifier	Prefix	Type
A		trunk/Identity/Models/Brands		Directory
B	trunk/Manual/	trunk/Identity/Models/Brands	.texi	File
C	trunk/Locales/	trunk/Identity/Models/Brands		Directory
D		trunk/Identity/Images/Brands		Directory
E	trunk/Locales/	trunk/Identity/Images/Brands	.texi	File

A = Master path.
B = Auxiliar path to documentation entry.
C = Auxiliar path to translation messages.
D = Auxiliar path to final content output.
E = Auxiliar path to documentation entry.

The path information described above (@pxref{Path construction}) is used by direct rendition and can be taken as reference to add other components that are equally produced in the repository. To add new components that make use of direct rendition inside the repository, change just the component name used above (e.g., @file{Brands}) to that one you want to add, without changing the path structure around it.

The file organization used by theme rendition extends direct rendition by separating design models information from backgrounds information. To better understand this configuration, you can consider it as two independent lists, one of design models and one of artistic motifs, which are arbitrary combined between themselves in order to render images in specific ways. The possibilities of this configuration are endless and let us describe visual manifestations very well. For example, consider the organization used to produce @file{Anaconda} images; for CentOS distribution major release 5; using @file{Default} design models and version @file{3} of @file{Flame} artistic motif:

Path	Suffix	Identifier	Prefix	Ty
A		trunk/Identity/Models/Themes/Default/Distro/5/Anaconda		Di
B	trunk/Manual/	trunk/Identity/Models/Themes/Default/Distro/5/Anaconda	.texi	Fi
C	trunk/Locales/	trunk/Identity/Models/Themes/Default/Distro/5/Anaconda		Di
D		trunk/Identity/Images/Themes/Flame/3/Distro/5/Anaconda		Di

```
-----+---------------+-----------------------------------------------------+------+---
  E  | trunk/Locales/|trunk/Identity/Images/Themes/Flame/3/Distro/5/Anaconda|.texi | Fi
-----+---------------+-----------------------------------------------------+------+---

  A = Master path.
  B = Auxiliar path to documentation entry.
  C = Auxiliar path to translation messages.
  D = Auxiliar path to final content output.
  E = Auxiliar path to documentation entry.
```

The path information described above (@pxref{Path construction extended}) is used by theme rendition and can be taken as reference to add other components that are equally produced in the repository.

In this configuration we can change both design model name (e.g., @file{Default}) and artistic motif name (e.g., @file{Flame/3}) to something else in order to achieve a different result. The only limitations impossed are the storage space provided in the server machine and your own creativeness as graphic designer.

> **Note:** A theme ready for implementation may consume from 100 MB to 400 MB of storage space. The exact space consumed by a theme depends on the amount of screen resolutions the theme supports. The more screen resolutions the theme supports, the more storage space demanded for it.

In this configuration we saw how to build the path information for @file{Anaconda} component as part of CentOS Distribution visual manifestation, but that is not the only component we have inside CentOS Distribution visual manifestation. There are other components like Syslinux, Grub, Rhgb, Gdm, Kdm, Gsplash and Ksplash that share a similar file organization to that described above for @file{Anaconda} component.

3.6. Syncronizing path information

Syncronizing path information is the action that keeps all path information up to date in the repository. This action implies both @emph{file movement} and @emph{file content replacement} in this very specific order. File movement is related to duplicate, delete and rename files and directories in the repository. File content replacement is related to replace information, path information in this case, inside files in the repository.

The order followed to syncronize path information is relevant because the versioned nature of the files we are working with. We don't perform file content replacement first because that would imply a repository change which will immediatly demmand a commit in order for actions like duplicate, delete or rename to take place. However, if we perform file movement first, it is possible to commit both file moved and file content replacements as if they were just one change. In this case the file content replacement takes palce in the target location that have been duplicated or renamed, not the one use as source location. This configuration is specially useful when files are renamed (i.e., one file is copied from a source location to a target location and then the source location of it is removed from repository).

> **Warning**
>
> There is no support for URLs actions inside **centos-art.sh** script. The **centos-art.sh** script is designed to work with local files inside the working copy only. If you need to perform URL actions directly, use Subversion commands instead.

When one master path is changed it is required that all related auxiliar paths be changed, too. This is required in order for master paths to retain their relation with auxiliar paths. This way, automation scripts are able to know where to retrive translation messages from, where to store final output images to and where to look for documentation. If relation between master paths and auxiliar paths is lost, there is no way for automation scripts to know where to retrive the information they need.

The auxiliar paths should never be modified under any reason but to satisfy the relationship with the master path. Liberal change of auxiliar paths may suppress the conceptual idea they were initially created for; and certainly, automation scripts may stop working as expected. The update direction to rename path information must be from master path to auxiliar path and never the opposite.

The relation between master and auxiliar paths is useful to keep repository organized but introduce some complications when we work with files that use master path information as reference to build structural information. This is the case of repository documentation manual source files where inclusions, menus, nodes and cross references are built using master path information as reference. Now, to see what kind of complication we are talking about, consider what would happen to a structural definitions (i.e., inlusions, menus, nodes and cross refereces) already set in the manual from one master path that is suddenly renamed to something different. If the path information is not syncronized, at this point, we lose connection between the master path and the auxiliar path created to store the related documentation entry, as well as the related structural definitions that end up pointing to a master path that no longer exist.

The syncronization of path information is aimed to solve these kind of issues.

3.7. Extending repository organization

Occasionly, you may find that new components of The CentOS Project Corporate Identity need to be added to the repository in order to work them out. If that is the case, the first question we need to ask ourselves, before start to create directories blindly all over, is: @emph{What is the right place to store it?}

The best place to find answers is in The CentOS Community (see page @url{http://wiki.centos.org/GettingHelp}), but going there with hands empty is not good idea. It may give the impression you don't really care about. Instead, consider the following suggestions to find your own comprehension in order to make your own propositions based on it.

When extending respository structure it is very useful to bear in mind The CentOS Project Corporate Identity Structure (@pxref{Directories trunk Identity}) The CentOS Mission and The CentOS Release Schema. The rest is just matter of choosing appropriate names. It is also worth to know that each directory in the repository responds to a conceptual idea that justifies its existence.

To build a directory structure, you need to define the conceptual idea first and later create the directory. There are some locations inside the repository that already define some concepts you probably want to reuse. For example, @file{trunk/Identity/Images/Themes} to store theme artistic motifs, @file{trunk/Identity/Models/Themes} to store theme design models, @file{trunk/Manual} to store documentation files, @file{trunk/Locales} to store translation messages, @file{trunk/Scripts} to store automation scripts and so on.

To illustrate this desition process let's consider the @file{trunk/Identity/Images/Themes/TreeFlower/3} directory structure as example. This directory can be read as: the theme development line of version @file{3} of @file{TreeFlower} artistic motif. Additional, we can identify that artistic motifs are part of themes as well as themes are part of The CentOS Project Corporate Identity. These concepts are better described independently in each documentation

entry related to the directory structure as it is respectively shown in the list of commands bellow.

- **centos-art help --read turnk**
- **centos-art help --read turnk/Identity**
- **centos-art help --read turnk/Identity/Images**
- **centos-art help --read turnk/Identity/Images/Themes**
- **centos-art help --read turnk/Identity/Images/Themes/TreeFlower**
- **centos-art help --read turnk/Identity/Images/Themes/TreeFlower/3**

The concepts behind other location can be found in the same way described above, just change the path information used above to the one you are trying to know concepts for.

Notes

1. http://subversion.tigris.org/
2. mailto:centos-devel@centos.org

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Version 2, June 1991

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