Pdf to ptt

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Explore our latest gallery of Editors’ Picks.Browse Editors' FavoritesExperience AI-Powered CreativityThe Motorsport Images Collections captures events from 1895 to today’s most recent coverage.Discover The CollectionCurated, compelling, and worth your time. Explore our latest gallery of Editors’ Picks.Browse Editors' FavoritesExperience AI-Powered Creativity Getting files from Drive Getting files from Dropbox Uploading file 0 of 0 Time left - seconds - Upload speed - MB/S Converting PDF to POWERPOINT... Woops! Something is wrong with your Internet connection... Share — copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt — remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. Attribution — You must give appropriate credit , provide a link to the license, and indicate if changes were made . You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use. ShareAlike — If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original. No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits. You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation . No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. The PDF was developed by Adobe back in the early 90s and it has become increasingly popular since the advent of the Internet and Social Media. PDF files typically contain both text and images and it is these images that can often increase the file size, in some cases dramatically so. Many users, especially those at work, require files that are not prohibitive in size so that when they share or receive these files their mailboxes don't get blown. They also want to ensure they don't use up all their allocated storage on their device. That is why compressing files, specifically bigger files like PDF are so popular. You can use the Zamzar PDF compression tool to reduce the size of your PDF file without impacting the quality of your file thereby still allowing you to share or print these files. I am a student. I created one dissertation and saved it in PDF format with a password. However, I lost the password to open it. To get rid of the protection I tried many free solutions found online, but failed. Then I downloaded Passper for PDF to test it. I have to say that it is really easy to use. I paid for the Passper for PDF 1-year plan and it never disappointed me. If you are a student like me, I recommend it! By Jason M. Contreras Portable Document Format, a digital file format For other uses, see PDF (disambiguation). Portable Document FormatAdobe PDF iconFilename extension.pdfInternet media type application/pdf,[1] application/x-pdf application/x-bzpdf application/x-gzpdf Type codePDF [1] (including a single trailing space)Uniform Type Identifier (UTI)com.adobe.pdfMagic number%PDFDeveloped byAdobe Inc. (1991–2008) ISO (2008–)Initial releaseJune 15, 1993; 31 years ago (1993-06-15)Latest release2.0 Extended toPDF/A, PDF/E, PDF/UA, PDF/VT, PDF/XStandardISO 32000-2Open format?YesWebsiteiso.org/standard/75839.html Portable Document Format (PDF), standardized as ISO 32000, is a file format developed by Adobe in 1992 to present documents, including text formatting and images, in a manner independent of application software, hardware, and operating systems.[2][3] Based on the PostScript language, each PDF file encapsulates a complete description of a fixed-layout flat document, including the text, fonts, vector graphics, raster images and other information needed to display it. PDF has its roots in "The Camelot Project" initiated by Adobe co-founder John Warnock in 1991.[4] PDF was standardized as ISO 32000 in 2008.[5] The last edition as ISO 32000-2:2020 was published in December 2020.[6] PDF files may contain a variety of content besides flat text and graphics including logical structuring elements, interactive elements such as annotations and form-fields, layers, rich media (including video content), three-dimensional objects using U3D or PRC, and various other data formats. The PDF specification also provides for encryption and digital signatures, file attachments, and metadata to enable workflows requiring these features. Main article: History of PDF The development of PDF began in 1991 when John Warnock wrote a paper for a project then code-named Camelot, in which he proposed the creation of a simplified version of PostScript called Interchange PostScript (IPS).[7] Unlike traditional PostScript, which was tightly focused on rendering print jobs to output devices, IPS would be optimized for displaying pages to any screen and any platform.[7] Adobe Systems made the PDF specification available free of charge in 1993. In the early years PDF was popular mainly in desktop publishing workflows, and competed with several other formats, including DjVu, Envoy, Common Ground Digital Paper, Farallon Replica and even Adobe's own PostScript format. PDF was a proprietary format controlled by Adobe until it was released as an open standard on July 1, 2008, and published by the International Organization for Standardization as ISO 32000-1:2008,[8][9] at which time control of the specification passed to an ISO Committee of volunteer industry experts. In 2008, Adobe published a Public Patent License to ISO 32000-1 granting royalty-free rights for all patents owned by Adobe necessary to make, use, sell, and distribute PDF-compliant implementations.[10] PDF 1.7, the sixth edition of the PDF specification that became ISO 32000-1, includes some proprietary technologies defined only by Adobe, such as Adobe XML Forms Architecture (XFA) and JavaScript extension for Acrobat, which are referenced by ISO 32000-1 as normative and indispensable for the full implementation of the ISO 32000-1 specification.[11] These proprietary technologies are not standardized, and their specification is published only on Adobe's website.[12][13][14] Many of them are not supported by popular third-party implementations of PDF. ISO published version 2.0 of PDF, ISO 32000-2 in 2017, available for purchase, replacing the free specification provided by Adobe.[15] In December 2020, the second edition of PDF 2.0, ISO 32000-2:2020, was published, with clarifications, corrections, and critical updates to normative references[16] (ISO 32000-2 does not include any proprietary technologies as normative references).[17] In April 2023 the PDF Association made ISO 32000-2 available for download free of charge.[15] A PDF file is often a combination of vector graphics, text, and bitmap graphics. The basic types of content in a PDF are: Typeset text stored as content streams (i.e., not encoded in plain text); Vector graphics for illustrations and designs that consist of shapes and lines; Raster graphics for photographs and other types of images; and Other multimedia objects. In later PDF revisions, a PDF document can also support links (inside document or web page), forms, JavaScript (initially available as a plugin for Acrobat 3.0), or any other types of embedded contents that can be handled using plug-ins. PDF combines three technologies: An equivalent subset of the PostScript page description programming language but in declarative form, for generating the layout and graphics. A font-embedding/replacement system to allow fonts to travel with the documents. A structured storage system to bundle these elements and any associated content into a single file, with data compression where appropriate. PostScript is a page description language run in an interpreter to generate an image.[7] It can handle graphics and has standard features of programming languages such as branching and looping.[7] PDF is a subset of PostScript, simplified to remove such control flow features, while graphics commands remain.[7] PostScript was originally designed for a drastically different use case: transmission of one-way linear print jobs in which the PostScript interpreter would collect a series of commands until it encountered the showpage command, then execute all the commands to render a page as a raster image to a printing device.[18] PostScript was not intended for long-term storage and real-time interactive rendering of electronic documents to computer monitors, so there was no need to support anything other than consecutive rendering of pages.[18] If there was an error in the final printed output, the user would correct it at the application level and send a new print job in the form of an entirely new PostScript file. Thus, any given page in a PostScript file could be accurately rendered only as the cumulative result of executing all preceding commands to draw all previous pages—any of which could affect subsequent pages—plus the commands to draw that particular page, and there was no easy way to bypass that process to skip around to different pages.[18] Traditionally, to go from PostScript to PDF, a source PostScript file (that is, an executable program) is used as the basis for generating PostScript-like PDF code (see, e.g., Adobe Distiller). This is done by applying standard compiler techniques like loop unrolling, inlining and removing unused branches, resulting in code that is purely declarative and static.[18] The result is then packaged into a container format, together with all necessary dependencies for correct rendering (external files, graphics, or fonts to which the document refers), and compressed. Modern applications write to printer drivers that directly generate PDF rather than going through PostScript first. As a document format, PDF has several advantages over PostScript: PDF contains only static declarative PostScript code that can be processed as data, and does not require a full program interpreter or compiler.[18] This avoids the complexity and security risks of an engine with such a higher complexity level. Like Display PostScript, PDF has supported transparent graphics since version 1.4, while standard PostScript does not. PDF enforces the rule that the code for any particular page cannot affect any other pages.[18] That rule is strongly recommended for PostScript code too, but has to be implemented explicitly (see, e.g., the Document Structuring Conventions), as PostScript is a full programming language that allows for such greater flexibilities and is not limited to the concepts of pages and documents. All data required for rendering is included within the file itself, improving portability.[19] Its disadvantages are: A loss of flexibility, and limitation to a single use case.[citation needed] A (sometimes much) larger file size.[20] PDF since v1.6 supports embedding of interactive 3D documents: 3D drawings can be embedded using U3D or PRC and various other data formats.[21][22][23] A PDF file is organized using ASCII characters, except for certain elements that may have binary content. The file starts with a header containing a magic number (as a readable string) and the version of the format, for example %PDF-1.7. The format is a subset of a COS ("Carousel" Object Structure) format.[24] A COS tree file consists primarily of objects, of which there are nine types:[17] Boolean values, representing true or false Real numbers Integers Strings, enclosed within parentheses ((...)) or represented as hexadecimal within single angle brackets (). Strings may contain 8-bit characters. Names, starting with a forward slash (/) Arrays, ordered collections of objects enclosed within square brackets ([...]) Dictionaries, collections of objects indexed by names enclosed within double angle brackets () Streams, usually containing large amounts of optionally compressed binary data, preceded by a dictionary and enclosed between the stream and endstream keywords. The null object Comments using 8-bit characters prefixed with the percent sign (%) may be inserted. Objects may be either direct (embedded in another object) or indirect. Indirect objects are numbered with an object number and a generation number and defined between the obj and endobj keywords if residing in the document root. Beginning with PDF version 1.5, indirect objects (except other streams) may also be located in special streams known as object streams (marked /Type /ObjStm). This technique enables non-stream objects to have standard stream filters applied to them, reduces the size of files that have large numbers of small indirect objects and is especially useful for Tagged PDF. Object streams do not support specifying an object's generation number (other than 0). An index table, also called the cross-reference table, is located near the end of the file and gives the byte offset of each indirect object from the start of the file.[25] This design allows for efficient random access to the objects in the file, and also allows for small changes to be made without rewriting the entire file (incremental update). Before PDF version 1.5, the table would always be in a special ASCII format, be marked with the xref keyword, and follow the main body composed of indirect objects. Version 1.5 introduced optional cross-reference streams, which have the form of a standard stream object, possibly with filters applied. Such a stream may be used instead of the ASCII cross-reference table and contains the offsets and other information in binary format. The format is flexible in that it allows for integer width specification (using the /W array), so that for example, a document not exceeding 64 KiB in size may dedicate only 2 bytes for object offsets. At the end of a PDF file is a footer containing The startxref keyword followed by an offset to the start of the cross-reference table (starting with the xref keyword) or the cross-reference stream object, followed by The %%EOF end-of-file marker. If a cross-reference stream is not being used, the footer is preceded by the trailer keyword followed by a dictionary containing information that would otherwise be contained in the cross-reference stream object's dictionary: A reference to the root object of the tree structure, also known as the catalog (/Root) The count of indirect objects in the cross-reference table (/Size) Other optional information Within each page, there are one or multiple content streams that describe the text, vector and images being drawn on the page. The content stream is stack-based, similar to PostScript.[26] The maximum size of an Acrobat PDF page, superimposed on a map of Europe. There are two layouts to the PDF files: non-linearized (not "optimized") and linearized ("optimized"). Non-linearized PDF files can be smaller than their linear counterparts, though they are slower to access because portions of the data required to assemble pages of the document are scattered throughout the PDF file. Linearized PDF files (also called "optimized" or "web optimized" PDF files) are constructed in a manner that enables them to be read in a Web browser plugin without waiting for the entire file to download, since all objects required for the first page to display are optimally organized at the start of the file.[27] PDF files may be optimized using Adobe Acrobat software or QPDF. Page dimensions are not limited by the format itself. However, Adobe Acrobat imposes a limit of 15 million by 15 million inches, or 225 trillion in2 (145,161 km2).[2]:1129 The basic design of how graphics are represented in PDF is very similar to that of PostScript, except for the use of transparency, which was added in PDF 1.4. PDF graphics use a device-independent Cartesian coordinate system to describe the surface of a page. A PDF page description can use a matrix to scale, rotate, or skew graphical elements. A key concept in PDF is that of the graphics state, which is a collection of graphical parameters that may be changed, saved, and restored by a page description. PDF has (as of version 2.0) 25 graphics state properties, of which some of the most important are: The current transformation matrix (CTM), which determines the coordinate system The clipping path The color space The alpha constant, which is a key component of transparency Black point compensation control (introduced in PDF 2.0) As in PostScript, vector graphics in PDF are constructed with paths. Paths are usually composed of lines and cubic Bézier curves, but can also be constructed from the outlines of text. Unlike PostScript, PDF does not allow a single path to mix text outlines with lines and curves. Paths can be stroked, filled, fill then stroked, or used for clipping. Strokes and fills can use any color set in the graphics state, including patterns. PDF supports several types of patterns. The simplest is the tiling pattern in which a piece of artwork is specified to be drawn repeatedly. This may be a colored tiling pattern, with the colors specified in the pattern object, or an uncolored tiling pattern, which defers color specification to the time the pattern is drawn. Beginning with PDF 1.3 there is also a shading pattern, which draws continuously varying colors. There are seven types of shading patterns of which the simplest are the axial shading (Type 2) and radial shading (Type 3). Raster images in PDF (called Image XObjects) are represented by dictionaries with an associated stream. The dictionary describes the properties of the image, and the stream contains the image data. (Less commonly, small raster images may be embedded directly in a page description as an inline image.) Images are typically filtered for compression purposes. Image filters supported in PDF include the following general-purpose filters: ASCII85Decode, a filter used to put the stream into 7-bit ASCII, ASCIIHexDecode, similar to ASCII85Decode but less compact, FlateDecode, a commonly used filter based on the deflate algorithm defined in RFC 1951 (deflate is also used in the gzip, PNG, and zip file formats among others); introduced in PDF 1.2; it can use one of two groups of predictor functions for more compact zlib/deflate compression: Predictor 2 from the TIFF 6.0 specification and predictors (filters) from the PNG specification (RFC 2083), LZWDecode, a filter based on LZW Compression; it can use one of two groups of predictor functions for more compact LZW compression: Predictor 2 from the TIFF 6.0 specification and predictors (filters) from the PNG specification, RunLengthDecode, a simple compression method for streams with repetitive data using the run-length encoding algorithm and the image-specific filters, DCTDecode, a lossy filter based on the JPEG standard, CCITTFaxDecode, a lossless bi-level (black/white) filter based on the Group 3 or Group 4 CCITT (ITU-T) fax compression standard defined in ITU-T T.4 and T.6, JBIG2Decode, a lossy or lossless bi-level (black/white) filter based on the JBIG2 standard, introduced in PDF 1.4, and JPXDecode, a lossy or lossless filter based on the JPEG 2000 standard, introduced in PDF 1.5. Normally all image content in a PDF is embedded in the file. But PDF allows image data to be stored in external files by the use of external streams or Alternate Images. Standardized subsets of PDF, including PDF/A and PDF/X, prohibit these features. Text in PDF is represented by text elements in page content streams. A text element specifies that characters should be drawn at certain positions. The characters are specified using the encoding of a selected font resource. A font object in PDF is a description of a digital typeface. It may either describe the characteristics of a typeface, or it may include an embedded font file. The latter case is called an embedded font while the former is called an unembedded font. The font files that may be embedded are based on widely used standard digital font formats: Type 1 (and its compressed variant CFF), TrueType, and (beginning with PDF 1.6) OpenType. Additionally PDF supports the Type 3 variant in which the components of the font are described by PDF graphic operators. Fourteen typefaces, known as the standard 14 fonts, have a special significance in PDF documents: Times (v3) (in regular, italic, bold, and bold italic) Courier (in regular, oblique, bold and bold oblique) Helvetica (v3) (in regular, oblique, bold and bold oblique) Symbol Zapf Dingbats These fonts are sometimes called the base fourteen fonts.[28] These fonts, or suitable substitute fonts with the same metrics, should be available in most PDF readers, but they are not guaranteed to be available in the reader, and may only display correctly if the system has them installed.[29] Fonts may be substituted if they are not embedded in a PDF. Within text strings, characters are shown using character codes (integers) that map to glyphs in the current font using an encoding. There are several predefined encodings, including WinAnsi, MacRoman, and many encodings for East Asian languages and a font can have its own built-in encoding. (Although the WinAnsi and MacRoman encodings are derived from the historical properties of the Windows and Macintosh operating systems, fonts using these encodings work equally well on any platform.) PDF can specify a predefined encoding to use, the font's built-in encoding or provide a lookup table of differences to a predefined or built-in encoding (not recommended with TrueType fonts).[2] The encoding mechanisms in PDF were designed for Type 1 fonts, and the rules for applying them to TrueType fonts are complex. For large fonts or fonts with non-standard glyphs, the special encodings Identity-H (for horizontal writing) and Identity-V (for vertical) are used. With such fonts, it is necessary to provide a ToUnicode table if semantic information about the characters is to be preserved. A text document which is scanned to PDF without the text being recognised by optical character recognition (OCR) is an image, with no fonts or text properties. The original imaging model of PDF was opaque, similar to PostScript, where each object drawn on the page completely replaced anything previously marked in the same location. In PDF 1.4 the imaging model was extended to allow transparency. When transparency is used, new objects interact with previously marked objects to produce blending effects. The addition of transparency to PDF was done by means of new extensions that were designed to be ignored in products written to PDF 1.3 and earlier specifications. As a result, files that use a small amount of transparency might be viewed acceptably by older viewers, but files making extensive use of transparency could be viewed incorrectly by an older viewer. The transparency extensions are based on the key concepts of transparency groups, blending modes, shape, and alpha. The model is closely aligned with the features of Adobe Illustrator version 9. The blend modes were based on those used by Adobe Photoshop at the time. When the PDF 1.4 specification was published, the formulas for calculating blend modes were kept secret by Adobe. They have since been published.[30] The concept of a transparency group in PDF specification is independent of existing notions of "group" or "layer" in applications such as Adobe Illustrator. Those groupings reflect logical relationships among objects that are meaningful when editing those objects, but they are not part of the imaging model. See also: PDF/A-1 and PDF/UA A tagged PDF (see clause 14.8 in ISO 32000) includes document structure and semantics information to enable reliable text extraction and accessibility.[31] Technically speaking, tagged PDF is a stylized use of the format that builds on the logical structure framework introduced in PDF 1.3. Tagged PDF defines a set of standard structure types and attributes that allow page content (text, graphics, and images) to be extracted and reused for other purposes.[32] Tagged PDF is not required in situations where a PDF file is intended only for print. Since the feature is optional, and since the rules for tagged PDF were relatively vague in ISO 32000-1, support for tagged PDF among consuming devices, including assistive technology (AT), is uneven as of 2021.[33] ISO 32000-2, however, includes an improved discussion of tagged PDF which is anticipated to facilitate further adoption. An ISO-standardized subset of PDF specifically targeted at accessibility, PDF/UA, was first published in 2012. With the introduction of PDF version 1.5 (2003) came the concept of Layers. Layers, more formally known as Optional Content Groups (OCGs), refer to sections of content in a PDF document that can be selectively viewed or hidden by document authors or viewers. This capability is useful in CAD drawings, layered artwork, maps, multi-language documents, etc. Basically, it consists of an Optional Content Properties Dictionary added to the document root. This dictionary contains an array of Optional Content Groups (OCGs), each describing a set of information and each of which may be individually displayed or suppressed, plus a set of Optional Content Configuration Dictionaries, which give the status (Displayed or Suppressed) of the given OCGs. A PDF file may be encrypted, for security, in which case a password is needed to view or edit the contents. PDF 2.0 defines 256-bit AES encryption as the standard for PDF 2.0 files. The PDF Reference also defines ways that third parties can define their own encryption systems for PDF. PDF files may be digitally signed, to provide secure authentication; complete details on implementing digital signatures in PDF are provided in ISO 32000-2. PDF files may also contain embedded DRM restrictions that provide further controls that limit copying, editing, or printing. These restrictions depend on the reader software to obey them, so the security they provide is limited. The standard security provided by PDF consists of two different methods and two different passwords: a user password, which encrypts the file and prevents opening, and an owner password, which specifies operations that should be restricted even when the document is decrypted, which can include modifying, printing, or copying text and graphics out of the document, or adding or modifying text notes and AcroForm fields. The user password encrypts the file, while the owner password does not, instead relying on client software to respect these restrictions. An owner password can easily be removed by software, including some free online services.[34] Thus, the use restrictions that a document author places on a PDF document are not secure, and cannot be assured once the file is distributed; this warning is displayed when applying such restrictions using Adobe Acrobat software to create or edit PDF files. Even without removing the password, most freeware or open source PDF readers ignore the permission "protections" and allow the user to print or make copies of excerpts of the text as if the document were not limited by password protection.[35][36][37] Beginning with PDF 1.5, Usage rights (UR) signatures are used to enable additional interactive features that are not available by default in a particular PDF viewer application. The signature is used to validate that the permissions have been granted by a bona fide granting authority. For example, it can be used to allow a user:[38] To save the PDF document along with a modified form or annotation data Import form data files in FDF, XFDF, and text (CSV/TSV) formats Export form data files in FDF and XFDF formats Submit form data Instantiate new pages from named page templates Apply a digital signature to existing digital signature form field Create, delete, modify, copy, import, and export annotations For example, Adobe Systems grants permissions to enable additional features in Adobe Reader, using public-key cryptography. Adobe Reader verifies that the signature uses a certificate from an Adobe-authorized certificate authority. Any PDF application can use this same mechanism for its own purposes.[38] Under specific circumstances including non-patched systems of the receiver, the information the receiver of a digital signed document sees can be manipulated by the sender after the document has been signed by the signer.[39] PAdES (PDF Advanced Electronic Signatures) is a set of restrictions and extensions to PDF and ISO 32000-1[40] making it suitable for advanced electronic signatures. This is published by ETSI as TS 102 778.[41] PDF files can have file attachments which processors may access and open or save to a local filesystem.[42] PDF files can contain two types of metadata.[2] The first is the Document Information Dictionary, a set of key/value fields such as author, title, subject, creation and update dates. This is optional and is referenced from an Info key in the trailer of the file. A small set of fields is defined and can be extended with additional text values if required. This method is deprecated in PDF 2.0. In PDF 1.4, support was added for Metadata Streams, using the Extensible Metadata Platform (XMP) to add XML standards-based extensible metadata as used in other file formats. PDF 2.0 allows metadata to be attached to any object in the document, such as information about embedded illustrations, fonts, and images, as well as the whole document (attaching to the document catalog), using an extensible schema. PDF documents can also contain display settings, including the page display layout and zoom level in a Viewer Preferences object. Adobe Reader uses these settings to override the user's default settings when opening the document.[43] The free Adobe Reader cannot remove these settings. PDF files can be created specifically to be accessible to people with disabilities.[44][45][46][47][48] PDF file formats in use as of 2014[update] can include tags, text equivalents, captions, audio descriptions, and more. Some software can automatically produce tagged PDFs, but this feature is not always enabled by default.[49][50] Leading screen readers, including JAWS, Window-Eyes, Hal, and Kurzweil 1000 and 3000 can read tagged PDFs.[51][52] Moreover, tagged PDFs can be re-flowed and magnified for readers with visual impairments. Adding tags to older PDFs and those that are generated from scanned documents can present some challenges. One of the significant challenges with PDF accessibility is that PDF documents have three distinct views, which, depending on the document's creation, can be inconsistent with each other. The three views are (i) the physical view, (ii) the tags view, and (iii) the content view. The physical view is displayed and printed (what most people consider a PDF document). The tags view is what screen readers and other assistive technologies use to deliver high-quality navigation and reading experience to users with disabilities. The content view is based on the physical order of objects within the PDF's content stream and may be displayed by software that does not fully support the tags' view, such as the Reflow feature in Adobe's Reader. PDF/UA, the International Standard for accessible PDF based on ISO 32000-1 was first published as ISO 14289–1 in 2012 and establishes normative language for accessible PDF technology. Rich Media PDF is a PDF file including interactive content that can be embedded or linked within the file. It can contain images, audio, video content, or buttons. For example, if the interactive PDF is a digital catalog for an E-commerce business, products can be listed on the PDF pages and can be added with images and links to the website and buttons to order directly from the document. Interactive Forms is a mechanism to add forms to the PDF file format. PDF currently supports two different methods for integrating data and PDF forms. Both formats today coexist in the PDF specification:[38][53][54][55] AcroForms (also known as Acrobat forms), introduced in the PDF 1.2 format specification and included in all later PDF specifications. XML Forms Architecture (XFA) forms, introduced in the PDF 1.5 format specification. Adobe XFA Forms are not compatible with AcroForms.[56] XFA was deprecated from PDF with PDF 2.0. AcroForms were introduced in the PDF 1.2 format. AcroForms permit the uses of objects (e.g. text boxes, Radio buttons, etc.) and some code (e.g. JavaScript). Alongside the standard PDF action types, interactive forms (AcroForms) support submitting, resetting, and importing data. The "submit" action transmits the names and values of selected interactive form fields to a specified uniform resource locator (URL). Interactive form field names and values may be submitted in any of the following formats, (depending on the settings of the action's ExportFormat, SubmitPDF, and XFDF flags):[38] HTML Form format HTML 4.01 Specification since PDF 1.5; HTML 2.0 since 1.2 Forms Data Format (FDF) based on PDF, uses the same syntax and has essentially the same file structure, but is much simpler than PDF since the body of an FDF document consists of only one required object. Forms Data Format is defined in the PDF specification (since PDF 1.2). The Forms Data Format can be used when submitting form data to a server, receiving the response, and incorporating it into the interactive form. It can also be used to export form data to stand-alone files that can be imported back into the corresponding PDF interactive form. FDF was originally defined in 1996 as part of ISO 32000-2:2017.[citation needed] XML Forms Data Format (XFDF) (external XML Forms Data Format Specification, Version 2.0; supported since PDF 1.5; it replaced the "XML" form submission format defined in PDF 1.4) the XML version of Forms Data Format, but the XFDF implements only a subset of FDF containing forms and annotations. Some entries in the FDF dictionary do not have XFDF equivalents – such as the Status, Encoding, JavaScript, Page's keys, EmbeddedFDFs, Differences, and Target. In addition, XFDF does not allow the spawning, or addition, of new pages based on the given data; as can be done when using an FDF file. The XFDF specification is referenced (but not included) in PDF 1.5 specification (and in later versions). It is described separately in XML Forms Data Format Specification.[57] The PDF 1.4 specification allowed form submissions in XML format, but this was replaced by submissions in XFDF format in the PDF 1.5 specification. XFDF conforms to the XML standard. XFDF can be used in the same way as FDF; e.g., form data is submitted to a server, modifications are made, then sent back and the new form data is imported in an interactive form. It can also be used to export form data to stand-alone files that can be imported back into the corresponding PDF interactive form. As of August 2019, XFDF 3.0 is an ISO/IEC standard under the formal name ISO 19444-1:2019 - Document management — XML Forms Data Format — Part 1: Use of ISO 32000-2 (XFDF 3.0).[58] This standard is a normative reference of ISO 32000-2. PDF The entire document can be submitted rather than individual fields and values, as was defined in PDF 1.4. AcroForms can keep form field values in external stand-alone files containing key-value pairs. The external files may use Forms Data Format (FDF) and XML Forms Data Format (XFDF) files.[59][57][60] The usage rights (UR) signatures define rights for import form data files in FDF, XFDF, and text (CSV/TSV) formats, and export form data files in FDF and XFDF formats.[38] In PDF 1.5, Adobe Systems introduced a proprietary format for forms; Adobe XML Forms Architecture (XFA). Adobe XFA Forms are not compatible with ISO 32000's AcroForms feature, and most PDF processors do not handle XFA content. The XFA specification is referenced from ISO 32000-1/PDF 1.7 as an external proprietary specification and was entirely deprecated from PDF with ISO 32000-2 (PDF 2.0). Anyone may create applications that can read and write PDF files without having to pay royalties to Adobe Systems; Adobe holds patents to PDF, but licenses them for royalty-free use in developing software complying with its PDF specification.[61] See also: Adobe Acrobat § Security In November 2019, researchers from Ruhr University Bochum and Hackmanit GmbH published attacks on digitally signed PDFs.[62] They showed how to change the visible content in a signed PDF without invalidating the signature in 21 of 22 desktop PDF viewers and 6 of 8 online validation services by abusing implementation flaws. At the same conference, they additionally showed how to exfiltrate the plaintext of encrypted content in PDFs.[63] In 2021, they showed new so-called shadow attacks on PDFs that abuse the flexibility of features provided in the specification.[64] An overview of security issues in PDFs regarding denial of service, information disclosure, data manipulation, and arbitrary code execution attacks was presented by Jens Müller.[65][66] PDF files can be infected with viruses, Trojans, and other malware. They can have hidden JavaScript code that might exploit vulnerabilities in a PDF, hidden objects executed when the file that hides them is opened, and, less commonly, a malicious PDF can launch malware.[67] PDF attachments carrying viruses were first discovered in 2001. The virus, named OUTLOOK.PDFWorm or Peachy, uses Microsoft Outlook to send itself as an attached Adobe PDF file. It was activated with Adobe Acrobat, but not with Acrobat Reader.[68] From time to time, new vulnerabilities are discovered in various versions of Adobe Reader,[69] prompting the company to issue security fixes. Other PDF readers are also susceptible. One aggravating factor is that a PDF reader can be configured to start automatically if a web page has an embedded PDF file, providing a vector for attack. If a malicious web page contains an infected PDF file that takes advantage of a vulnerability in the PDF reader, the system may be compromised even if the browser is secure. Some of these vulnerabilities are a result of the PDF standard allowing PDF documents to be scripted with JavaScript. Disabling JavaScript execution in the PDF reader can help mitigate such future exploits, although it does not protect against exploits in other parts of the PDF viewing software. Security experts say that JavaScript is not essential for a PDF reader and that the security benefit that comes from disabling JavaScript outweighs any compatibility issues caused.[70] One way of avoiding PDF file exploits is to have a local or web service convert files to another format before viewing. On March 30, 2010, security researcher Didier Stevens reported an Adobe Reader and Foxit Reader exploit that runs a malicious executable if the user allows it to launch when asked.[71] For a more comprehensive list, see List of PDF software. Many PDF viewers are provided free of charge from a variety of sources. Programs to manipulate and edit PDF files are available, usually for purchase. There are many software options for creating PDFs, including the PDF printing capabilities built into macOS, iOS,[72] and most Linux distributions. Much document processing software including LibreOffice, Microsoft Office 2007 (if updated to SP2) and later,[73] WordPerfect 9, and Scribus can export documents in PDF. There are many PDF print drivers for Microsoft Windows, the pdfTeX typesetting system, the DocBook PDF tools, applications developed around Ghostscript and Adobe Acrobat itself as well as Adobe InDesign, Adobe FrameMaker, Adobe Illustrator, Adobe Photoshop, that allow a "PDF printer" to be set up, which when selected sends output to a PDF file instead of a physical printer. Google's online office suite Google Docs allows uploading and saving to PDF. Some web apps offer free PDF editing and annotation tools. The Free Software Foundation was "developing a free, high-quality and fully functional set of libraries and programs that implement the PDF file format and associated technologies to the ISO 32000 standard", as one of its high priority projects.[74][75] In 2011, however, the GNU PDF project was removed from the list of "high priority projects" due to the maturation of the Poppler library,[76] which has enjoyed wider use in applications such as Evince with the GNOME desktop environment. Poppler is based on Xpdf[77][78] code base. There are also commercial development libraries available as listed in List of PDF software. The Apache PDFBox project of the Apache Software Foundation is an open source Java library, licensed under the Apache License, for working with PDF documents.[79] Raster image processors (RIPs) are used to convert PDF files into a raster format suitable for imaging onto paper and other media in printers, digital production presses and prepress in a process known as rasterization. RIPs capable of processing PDF directly include the Adobe PDF Print Engine[80] from Adobe Systems and Jaws[81] and the Harlequin RIP from Global Graphics. In 1993, the Jaws raster image processor from Global Graphics became the first shipping prepress RIP that interpreted PDF natively without conversion to another format. The company released an upgrade to its Harlequin RIP with the same capability in 1997.[82] Agfa-Gevaert introduced and shipped Apogee, the first prepress workflow system based on PDF, in 1997. Many commercial offset printers have accepted the submission of press-ready PDF files as a print source, specifically the PDF/X-1a subset and variations of the same.[83] The submission of press-ready PDF files is a replacement for the problematic need for receiving collected native working files. In 2006, PDF was widely accepted as the standard print job format at the Open Source Development Labs Printing Summit. It is supported as a print job format by the Common Unix Printing System and desktop application projects such as GNOME, KDE, Firefox, Thunderbird, LibreOffice and OpenOffice have switched to emit print jobs in PDF.[84] Some desktop printers also support direct PDF printing, which can interpret PDF data without external help. This section does not cite any sources. Please help improve this section by adding citations to reliable sources. Unsourced material may be challenged and removed. (November 2023) (Learn how and when to remove this message) PDF was selected as the "native" metafile format for macOS (originally called Mac OS X), replacing the PICT format of the earlier classic Mac OS. The imaging model of the Quartz graphics layer is based on the model common to Display PostScript and PDF, leading to the nickname Display PDF. The Preview application can display PDF files, as can version 2.0 and later of the Safari web browser. System-level support for PDF allows macOS applications to create PDF documents automatically, provided they support the OS-standard printing architecture. The files are then exported in PDF 1.3 format according to the file header. When taking a screenshot under Mac OS X versions 10.0 through 10.3, the image was also captured as a PDF; later versions save screen captures as a PNG file, though this behavior can be set back to PDF if desired. This section does not cite any sources. Please help improve this section by adding citations to reliable sources. Unsourced material may be challenged and removed. (November 2023) (Learn how and when to remove this message) See also: Comparison of note-taking software Adobe Acrobat is one example of proprietary software that allows the user to annotate, highlight, and add notes to already created PDF files. One UNIX application available as free software (under the GNU General Public License) is PDFedit. The freeware Foxit Reader, available for Microsoft Windows, macOS and Linux, allows annotating documents. Tracker Software's PDF-XChange Viewer allows annotations and markups without restrictions in its freeware alternative. Apple's macOS's integrated PDF viewer, Preview, does also enable annotations as does the open-source software Skim, with the latter supporting interaction with LaTeX, SyncTeX, and PDFSync and integration with BibDesk reference management software. Freeware Qiqqa can create an annotation report that summarizes all the annotations and notes one has made across their library of PDFs. The Text Verification Tool exports differences in documents as annotations and markups. There are also web annotation systems that support annotation in pdf and other document formats. In cases where PDFs are expected to have all of the functionality of paper documents, ink annotation is required. PDF's emphasis on preserving the visual appearance of documents across different software and hardware platforms poses challenges to the conversion of PDF documents to other file formats and the targeted extraction of information, such as text, images, tables, bibliographic information, and document metadata. Numerous tools and source code libraries support these tasks. Several labeled datasets to test PDF conversion and information extraction tools exist and have been used for benchmark evaluations of the tool's performance.[85] Main article: Open XML Paper Specification § Comparison with PDF See also: EPUB The Open XML Paper Specification is a competing format used both as a page description language and as the native print spooler format for Microsoft Windows since Windows Vista. Mixed Object: Document Content Architecture is a competing format. MO:DCA-P is a part of Advanced Function Presentation. ebook Web page XSL Formatting Objects Page margin PDF portfolio ^ a b Hardy, M.; Masinter, L.; Markovic, D.; Johnson, D.; Bailey, M. (March 2017). The application/pdf Media Type. IETF. doi:10.17487/RFC8118. RFC 8118. ^ a b c d Adobe Systems Incorporated (November 2006). "PDF Reference" (PDF). 1.7 (6th ed.). Archived from the original (PDF) on October 1, 2008. Retrieved January 12, 2023. ^ Warnock, J. (October 14, 2004) [Original date 5 May 1995]. 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Adobe open source standards PDF 1.7 (ISO 32000-1:2008) PDF 1.7 and errata to 1.7 at the Wayback Machine (archived March 6, 2022) PDF 1.6 (ISBN 0-321-30474-8) and errata to 1.6 at the Wayback Machine (archived March 6, 2022) PDF 1.5 and errata to 1.5 at the Wayback Machine (archived December 22, 2021) PDF 1.4 (ISBN 0-201-75839-3) and errata to 1.4 at the Wayback Machine (archived March 6, 2022) PDF 1.3 (ISBN 0-201-61588-6) and errata to 1.3 at the Wayback Machine (archived March 6, 2022) PDF 1.2 PDF 1.0 (ISBN 0-201-62628-4) Conference papers Hardy, M. R. B.; Brailsford, D. F. (2002). "Mapping and displaying structural transformations between XML and PDF" (PDF). Proceedings of the 2002 ACM symposium on Document engineering – DocEng '02. pp. 95–102. doi:10.1145/585058.585077. ISBN 1-58113-594-7. S2CID 9371237. Archived from the original (PDF) on March 24, 2017.[relevant?] Wikimedia Commons has media related to Portable Document Format. 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PDF Reference and Adobe Extensions to the PDF Specification at the Wayback Machine (archived 2021-01-16) Articles Portable Document Format: An Introduction for Programmers (1999) from MacTech – Introduction to PDF vs. PostScript and PDF internals (up to v1.3) John Warnock's 'Camelot' signalled birth of PDF (2002) at the Wayback Machine (archived 2019-04-22) from Planet PDF that describes the paper in which John Warnock outlined the project that created PDF Videos Video: Everything you wanted to know about PDF but was afraid to ask — Recording of a talk by Leonard Rosenthol (Adobe Systems) at TUG 2007 Retrieved from " , the free encyclopedia that anyone can edit. 118,328 active editors 6,996,385 articles in English The red-capped parrot (Purpureicephalus spurius) is a species of broad-tailed parrot native to southwest Western Australia. Described by Heinrich Kuhl in 1820, it is classified in its own genus owing to its distinctive elongated beak. Its closest relative is the mulga parrot. It is not easily confused with other parrot species; both adult sexes have a bright crimson crown, green-yellow cheeks, and a distinctive long bill. The wings, back, and long tail are dark green, and the underparts are purple-blue. Found in woodland and open savanna country, the red-capped parrot consumes seeds (particularly of eucalypts), flowers, berries, and occasionally insects. Nesting takes place in tree hollows. Although the red-capped parrot has been shot as a pest, and affected by land clearing, the population is growing and the species is not threatened. In captivity, it has a reputation of being both anxious and difficult to breed. (Full article...) Recently featured: Cher Malcolm X Margaret Sanger Archive By email More featured articles About Holly-Anne Hull of Remember Monday ... that Elizabeth II once asked a future member (pictured) of the "What the Hell Just Happened?" girlband Remember Monday why she was not wearing shoes? ... that John P. Metras held all-night recruitment parties including a bathtub full of ice and beer? ... that Priamurye Governorate-General, a Russian colony in East Asia, issued passports in order to segregate East Asian migrants from the general population? ... that Meng Sufen led a 1993 investigation in Guizhou's Mashan region, sparking a donation campaign raising over 1.6 million yuan for poverty alleviation? ... that Britart and the Turner Prize are both lampooned in the Jilly Cooper romance novel Pandora? ... that the larvae of the elm zigzag sawfly create distinctive zig-zags in the leaves of elm trees? ... that while attempting to "bulk up" for the Olympics, judoka Vlado Paradžik lost 11 pounds (5.0 kg) due to food shortages? ... that the developers of UTM needed to make a "slow edition" of their software to get it approved on the App Store? ... that NFL player Miles Turpin wrestled alligators when young, calling it "a lot of fun"? Archive Start a new article Nominate an article Luís Montenegro In the Portuguese legislative election, the Democratic Alliance (leader Luís Montenegro pictured) wins the most seats in parliament. Austria, represented by JJ with the song "Wasted Love", wins the Eurovision Song Contest. In the Philippines, the Alyansa para sa Bagong Pilipinas wins the most seats in the Senate election, while Lakas–CMD, one of its component parties, wins the most seats in the House elections. Former president of Uruguay José Mujica dies at the age of 89. Ongoing: Gaza war M23 campaign Russian invasion of Ukraine timeline Sudanese civil war timeline Recent deaths: Domingos Maubere Duncan Campbell Luigi Alva Richard Garwin Tommy Vigorito Eddie Marzuki Nalapraya Nominate an article May 21: World Day for Cultural Diversity for Dialogue and Development Busoni c. 1897 1138 – The Crusades: The siege of Shaizar ended, and the Emir of Shaizar became a vassal of the Byzantine Empire. 1864 – American Civil War: The inconclusive Battle of Spotsylvania Court House in Virginia ended with combined Union and Confederate casualties totaling around 31,000. 1894 – The Manchester Ship Canal, linking Manchester in North West England to the Irish Sea, officially opened, becoming the world's largest navigation canal at the time. 1925 – The opera Doktor Faust, unfinished when composer Ferruccio Busoni (pictured) died, was premiered in Dresden. 2014 – A Taiwanese man carried out a stabbing spree on a Taipei Metro train, killing four people and injuring 24 others. Feng Dao (d. 954)Tommaso Campanella (d. 1639)Armand Hammer (b. 1898)Linda Laubenstein (b. 1947) More anniversaries: May 20 May 21 May 22 Archive By email List of days of the year About The black-crowned barwing (Actinodura sodangorum) is a non-migratory bird from Mainland Southeast Asia in the family Leiothrichidae, the laughingthrushes. The species's first sighting was reported in April 1996 at Ngọc Linh, Vietnam, and it was formally described in 1999. The black-crowned barwing is the only bird in the genus Actinodura to have a black crown. It has transverse barring on the wings (wingbars) and a crest, which are characteristic of the genus. Its natural habitats are subtropical or tropical moist montane forest, high-altitude shrubland, high-altitude grassland, and plantations. This black-crowned barwing was photographed in the Ngọc Linh Nature Reserve, Vietnam. 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Many other Wikipedias are available; some of the largest are listed below. 1,000,000+ articles العربية Deutsch Español فارسی Français Italiano Nederlands 日本語 Polski Português Русский Svenska Українська Tiếng Việt 中文 250,000+ articles Bahasa Indonesia Bahasa Melayu Bân-lâm-gú Български Català Čeština Dansk Eesti Esperanto Euskara עברית Հայերեն Magyar Norsk bokmål Română Simple English Slovenčina Srpski Srpskohrvatski Suomi Türkçe Oʻzbekcha 50,000+ articles Asturianu Azərbaycanca □□□□□ Bosanski کوردی Ελληνικά Frysk Gaeilge Galego Hrvatski ქართული Kurdî Latviešu Lietuvių □□□□□□ Македонски □□□□□□□□□□ Norsk nynorsk □□□□□□ Shqip Slovenščina □□□ □□□□□□ اردو Retrieved from " 2 Calendar year Years Millennium 2nd millennium Centuries 11th century 12th century 13th century Decades 1110s 1120s 1130s 1140s Years 1135 1136 1137 1138 1139 1140 1141 vte 1138 by topic Leaders Political entities State leaders Religious leaders Birth and death categories Births – Deaths Establishments and disestablishments categories Establishments – Disestablishments Art and literature 1138 in poetry vte 1138 in various calendarsGregorian calendar1138MCXXXVIIIAb urbe condita1891Armenian calendar587ԹՎ ՇՁԷAssyrian calendar5888Balinese saka calendar1059–1060Bengali calendar544–545Berber calendar2088English Regnal year3 Ste. 1 – 4 Ste. 1Buddhist calendar1682Burmese calendar500Byzantine calendar6646–6647Chinese calendar丁巳年 (Fire Snake)3835 or 3628 — to —戊午年 (Earth Horse)3836 or 3629Coptic calendar854–855Discordian calendar2304Ethiopian calendar1130–1131Hebrew calendar4898–4899Hindu calendars - Vikram Samvat1194–1195 - Shaka Samvat1059–1060 - Kali Yuga4238–4239Holocene calendar11138Igbo calendar138–139Iranian calendar516–517Islamic calendar532–533Japanese calendarHōen 4(保延４年)Javanese calendar1044–1045Julian calendar1138MCXXXVIIIKorean calendar3471Minguo calendar774 before ROC民前774年Nanakshahi calendar−330Seleucid era1449/1450 AGThai solar calendar1680–1681Tibetan calendar阴火蛇年(female Fire-Snake)1264 or 883 or 111 — to —阳土马年(male Earth-Horse)1265 or 884 or 112 King Conrad III (r. 1138–1152) Year 1138 (MCXXXVIII) was a common year starting on Saturday of the Julian calendar. March 7 – Conrad III is elected as King of Germany, in the presence of the papal legate Theodwin at Koblenz. He is crowned at Aachen six days later (on March 13), and acknowledged in Bamberg by several German princes of southern Germany.[1] Henry X (the Proud), son-in-law and heir of the late King Lothair III, refuses his allegiance to Conrad. He is deprived of all his Saxon territories, which are given to Leopold IV (the Generous). Summer – A civil war breaks out in the Holy Roman Empire, a struggle begins between the Guelphs and Ghibellines, while the family name Welf of Henry X will be corrupted into Guelph. October 20 – Bolesław III (Wrymouth) dies after a 31-year reign. He divides Poland among his sons: Władysław II (the Exile) receives Silesia and the Senioral territories – which includes the Kraków and Łęczyca regions, as well as parts of Kujawy and Wielkopolska ("Greater Poland"). Bolesław IV (the Curly) receives Masovia and Mieszko III receives the newly established Duchy of Greater Poland. The 7-year-old Henry becomes duke of Sandomierz. Bolesław's last son, Casimir II receives nothing, as he is born after his father's death.[2] May – Earl Robert FitzRoy rebels against King Stephen, supporting Matilda (his step-sister) in her claim for the English throne. Matilda is given refuge by Earl William de Albini at Arundel Castle. Stephen builds siege works around the castle, but is unable to break the castle's defences. In France, Matilda's husband Duke Geoffrey V (the Fair) takes advantage of the situation by re-invading Normandy. August 22 – Battle of the Standard: King David I of Scotland gives his full support to Matilda (daughter of the late King Henry I), and invades the north of England – travelling as far south as Lincolnshire. The Scottish army (some 15,000 men) is defeated by English forces under Earl William le Gros in Yorkshire. David retreats to Carlisle and reassembles an army. The Earldom of Pembroke, created for Gilbert de Clare, becomes the first earldom created by Stephen within the borders in Wales. Gilbert receives the rape and Pevensey Castle. Spring – Emperor John II (Komnenos) leads a Byzantine expeditionary force into Syria and arrives before the walls of Aleppo on April 20. The city proves too strong to attack, but the fortresses of Biza'a, Athareb, Ma'arrat Nu'man and Kafartab are taken by assault. While the Byzantines besiege the city of Shaizar, the Crusader allies Prince Raymond of Poitiers of Antioch and Count Joscelin II of Edessa remain in their camp playing dice.[3] Siege of Shaizar: The Byzantines under John II besiege the capital of the Munqidhite Emirate. They capture the lower city on May 20, but fail to take the citadel. John negotiates with Emir Abu'l Asakir Sultan – who sends him an offer to pay a large indemnity and becoming a vassal of the Byzantine Empire. John, disgusted by his Crusader allies, accepts the terms and raises the siege on May 21.[4] October 11 – An earthquake in Aleppo, Syria, kills about 230,000 people. Al-Rashid Billah (Deposed caliph of Baghdad) fled to Isfahan where he was assassinated by a team of four Nizari Ismailis (Assassins) in June 1138. This was celebrated in Alamut for a week by Shias.[5] November 5 – Lý Anh Tông is enthroned as emperor of Đại Việt at the age of two, starting a 37-year reign. April 10 – Robert Warelwast is nominated as bishop of Exeter at a royal council in Northampton, England. Casimir II (the Just), duke of Poland (d. 1194) Conan IV (the Young), duke of Brittany (d. 1171) Fujiwara no Narichika, Japanese nobleman (d. 1178) Hōjō Tokimasa, Japanese nobleman and regent (d. 1215) Saladin (the Lion),[6] sultan of Egypt and Syria (d. 1193) Taira no Shigemori, Japanese nobleman (d. 1179) Tancred ("the Monkey King"), king of Sicily (d. 1194) January 13 or January 14 – Simon I, duke of Lorraine (b. 1076) February 19 – Irene Doukaina, Byzantine empress May 11 – William de Warenne, 2nd Earl of Surrey May 27 – Hadmar I of Kuenring, German nobleman June 6 – Al-Rashid, caliph of the Abbasid Caliphate (b. 1109) August 12 – Suero Vermúdez, Asturian nobleman October 28 – Bolesław III (Wrymouth), duke of Poland (b. 1086) Amhlaoibh Mór mac Fir Bhisigh, Irish poet and cleric Arwa al-Sulayhi, queen and co-ruler of Yemen (b. 1048) Avempace, Andalusian polymath and philosopher (b. 1085) Chen Yuyi, Chinese politician of the Song dynasty (b. 1090) David the Scot, bishop of Bangor (approximate date) Kiya Buzurg Ummid, ruler of the Nizari Isma'ili State Rodrigo Martínez, Leonese nobleman and diplomat Rudolf of St. Trond, French Benedictine chronicler Someshvara III, ruler of the Western Chalukya Empire Vakhtang (or Tsuata), Georgian nobleman (b. 1118) ^ Daniel Quitz (May 19, 2014). Die Königswahl Konrad III. 1138 und seine Politik gegenüber den Welfen. GRIN Cerlag. pp. 1–. ISBN 978-3-656-65725-5. ^ Richard Brzezinski (1998). History of Poland – Old Poland and the Piast Dynasty, pp. 20–21. ISBN 83-7212-019-6. ^ Steven Runciman (1952). A History of The Crusades. Vol II: The Kingdom of Jerusalem, pp. 173–174. ISBN 978-0-241-29876-3. ^ Steven Runciman (1952). A History of The Crusades. Vol II: The Kingdom of Jerusalem, pp. 173–175. ISBN 978-0-241-29876-3. ^ Daftary, Farhad (1992). The Isma'ilis: Their History and Doctrines. Cambridge University Press. p. 384. ISBN 978-0-521-42974-0. ^ Lyons, Malcolm; Jackson, D. E. P. (2008). Saladin: The Politics of the Holy War. Cambridge University Press. p. 2. ISBN 978-0521317399. Retrieved from " 3One hundred years, from 1001 to 1100 Millennia 2nd millennium Centuries 10th century 11th century 12th century Timelines 10th century 11th century 12th century State leaders 10th century 11th century 12th century Decades 1000s 1010s 1020s 1030s 1040s 1050s 1060s 1070s 1080s 1090s Categories: Births – Deaths Establishments – Disestablishments vte Political boundaries in Eastern Hemisphere in early half of 11th century Political boundaries in Eastern Hemisphere at the end of the 11th century The 11th century is the period from 1001 (represented by the Roman numerals MI) through 1100 (MC) in accordance with the Julian calendar, and the 1st century of the 2nd millennium. In the history of Europe, this period is considered the early part of the High Middle Ages. There was, after a brief ascendancy, a sudden decline of Byzantine power and a rise of Norman domination over much of Europe, along with the prominent role in Europe of notably influential popes. Christendom experienced a formal schism in this century which had been developing over previous centuries between the Latin West and Byzantine East, causing a split in its two largest denominations to this day: Roman Catholicism and Eastern Orthodoxy. In Song dynasty China and the classical Islamic world, this century marked the high point for both classical Chinese civilization, science and technology, and classical Islamic science, philosophy, technology and literature. Rival political factions at the Song dynasty court created strife amongst the leading statesmen and ministers of the empire. In Korea, the Goryeo Kingdom flourished and faced external threats from the Liao dynasty (Manchuria). In this century the Turkic Seljuk dynasty comes to power in Western Asia over the now fragmented Abbasid realm, while the first of the Crusades were waged towards the close of the century. The Fatimid Caliphate in Egypt, the Ghaznavids, and the Chola dynasty in India had reached their zenith in military might and international influence. The Western Chalukya Empire (the Chola's rival) also rose to power by the end of the century. In Japan, the Fujiwara clan continued to dominate the affairs of state. In the Americas, the Toltec and Mixtec civilizations flourished in Central America, along with the Huari Culture of South America and the Mississippian culture of North America. The Tiwanaku Empire centered around Lake Titicaca collapsed in the first half of the century. The Brihadeeswarar Temple of Chola era southern India, completed in 1010, during the reign of Rajaraja I In European history, the 11th century is regarded as the beginning of the High Middle Ages, an age subsequent to the Early Middle Ages. The century began while the translatio imperii of 962 was still somewhat novel and ended in the midst of the Investiture Controversy. It saw the final Christianisation of Scandinavia and the emergence of the Peace and Truce of God movements, the Gregorian Reforms, and the Crusades which revitalised a church and a papacy that had survived tarnished by the tumultuous 10th century. In 1054, the Great Schism saw the political and religious culmination and a formal split between the Western and Eastern church. In Germany, the century was marked by the ascendancy of the Holy Roman Emperors, who hit their high-water mark under the Salians. In Britain, it saw the transformation of Scotland into a single, more unified and centralised kingdom and the Norman conquest of England in 1066. The social transformations wrought in these lands brought them into the fuller orbit of European feudal politics. In France, it saw the nadir of the monarchy and the zenith of the great magnates, especially the dukes of Aquitaine and Normandy, who could thus foster such distinctive contributions of their lands as the pious warrior who conquered Britain, Italy, and the East and the impious peacelover, the troubadour, who crafted out of the European vernacular its first great literary themes. There were also the first figures of the intellectual movement known as Scholasticism, which emphasized dialectic arguments in disputes of Christian theology as well as classical philosophy. In Italy, the century began with the integration of the kingdom into the Holy Roman Empire and the royal palace at Pavia was summoned in 1024. By the end of the century, Lombard and Byzantine rule in the Mezzogiorno had been usurped by the Normans and the power of the territorial magnates was being replaced by that of the citizens of the northern cities. In Northern Italy, a growth of population in urban centers gave rise to an early organized capitalism and more sophisticated, commercialized culture by the late 11th century, most notably in Venice. In Spain, the century opened with the successes of the last caliphs of Córdoba and ended in the successes of the Almoravids. In between was a period of Christian unification under Navarrese hegemony and success in the Reconquista against the taifa kingdoms that replaced the fallen caliphate. In Eastern Europe, there was a golden age for the principality of Kievan Rus.A Scholar in a Meadow, Chinese Song dynasty, 11th century In China, there was a triangular affair of continued war and peace settlements between the Song dynasty, the Tanguts-led Western Xia in the northwest, and the Khitans of the Liao dynasty in the northeast. Meanwhile, opposing political factions evolved at the Song imperial court of Kaifeng. The political reformers at court, called the New Policies Group (新法, Xin Fa), were led by Emperor Shenzong of Song and the Chancellors Fan Zhongyan and Wang Anshi, while the political conservatives were led by Chancellor Sima Guang and Empress Dowager Gao, regent of the young Emperor Zhezong of Song. Heated political debate and sectarian intrigue followed, while political enemies were often dismissed from the capital to govern frontier regions in the deep south where malaria was known to be very fatal to northern Chinese people (see History of the Song dynasty). This period also represents a high point in classical Chinese science and technology, with figures such as Su Song and Shen Kuo, as well as the age where the matured form of the Chinese pagoda was accomplished in Chinese architecture. In Japan, the Fujiwara clan dominated central politics by acting as imperial regents, controlling the actions of the Emperor of Japan, who acted merely as a 'puppet monarch' during the Heian period. In Korea, the rulers of the Goryeo Kingdom were able to concentrate more central authority into their own hands than in that of the nobles, and were able to fend off two Khitan invasions with their armies. In the Middle East, the Fatimid Empire of Egypt reached its zenith only to face steep decline, much like the Byzantine Empire in the first half of the century. The Seljuks came to prominence while the Abbasid caliphs held traditional titles without real, tangible authority in state affairs. In India, the Chola dynasty reached its height of naval power under leaders such as Rajaraja Chola I and Rajendra Chola I, dominating southern India (Tamil Nadu), Sri Lanka, and regions of Southeast Asia. The Ghaznavid Empire would invade northwest India, an event that would pave the way to a series of later Muslim expansions into India. In Southeast Asia, the Pagan Kingdom reached its height of political and military power. The Khmer Empire would dominate in Mainland Southeast Asia while Srivijaya would dominate Maritime Southeast Asia. Further east, the Kingdom of Butuan, centered on the northern portion of Mindanao island flourished as the dominant trading polity in the archipelago. In Vietnam, the Lý dynasty began, which would reach its golden era during the 11th century. In Nigeria, formation of city states, kingdoms and empires, including Hausa kingdoms and Borno dynasty in the north, and the Oyo Empire and Kingdom of Benin in the south. An 11th-century rock crystal ewer of Fatimid Egypt 1001: Mahmud of Ghazni, Muslim leader of Ghazni, begins a series of raids into Northern India; he finishes in 1027 with the destruction of Somnath. c. 1001: Norsemen, led by Leif Eriksson, establish short-lived settlements in and around Vinland in North America. 1001–1008: Japanese Lady Murasaki Shikibu writes The Tale of Genji. 1001 ± 40 years: Baitoushan volcano on what would be the Chinese-Korean border, erupts with a force of 6.5, the fourth largest Holocene blast. 1001: The ancient kingdom of Butuan, through its King, Rajah Kiling, made contact with the Chinese, Song dynasty recorded the first appearance of Butuan tributary mission through Lijehan and Jiaminan at the Chinese Imperial Court on March 17, 1001 AD. 1003: Robert II of France invades the Duchy of Burgundy, then ruled by Otto-William, Duke of Burgundy; the initial invasion is unsuccessful, but Robert II eventually gains the acceptance of the Roman Catholic Church in 1016 and annexes Burgundy into his realm. 1004: Song dynasty court prohibited Butuan from exporting several items with their predilection due to issues on rules and regulation. 1004: The library and university Dar Al-Hekma is founded in Egypt under the Fatimids. 1005: The Treaty of Shanyuan is signed between the Chinese Song dynasty and the Khitan Liao dynasty. 1006: King Dharmawangsa's Mataram kingdom falls under the invasion of King Wurawari from Lwaram (highly possible Srivijayan ally in Java).[1] 1007: Butuan king, Rajah Kiling through the ambassador I-hsu-han sent a formal memorial on Song dynasty Imperial court requesting equal status with Champa but the request was denied on the grounds that "Butuan is beneath Champa." due to Champa being an older tributary state since the 4th century. 1008: The Fatimid Egyptian sea captain Domiyat travels to the Buddhist pilgrimage site in Shandong, China, to seek out the Chinese Emperor Zhenzong of Song with gifts from his ruling Imam Al-Hakim bi-Amr Allah, successfully reopening diplomatic relations between Egypt and China that had been lost since the collapse of the Tang dynasty. 1009: Lý Thái Tổ overthrows the Anterior Lê dynasty of Vietnam, establishing the Lý dynasty. 1009–1010: The Lombard known as Melus of Bari leads an insurrection against the Byzantine Catepan of Italy, John Curcuas, as the latter was killed in battle and replaced by Basil Mesardonites, who brought Byzantine reinforcements. Defeat of the Bulgarians by the Byzantines depicted in the Madrid Skylitzes 1010–1011: The Second Goryeo-Khitan War; the Korean king is forced to flee the capital temporarily, but is unable to establish a foothold and fearing a counterattack, the Khitan forces withdrew. 1011–1021: Ibn al-Haytham (Alhacen), a famous Iraqi scientist working in Egypt, feigns madness in fear of angering the Egyptian caliph Al-Hakim bi-Amr Allah, and is kept under house arrest from 1011 to 1021. During this time, he writes his influential Book of Optics. 1011: Under a new Rajah named Sri Bata Shaja, Butuan finally succeeded in attaining diplomatic equality with Champa after being denied in an older request made 4 years earlier to the Song dynasty court by sending the flamboyant ambassador Likanhsieh. 1013: Danish king Sweyn Forkbeard conquers England. 1014: The Byzantine armies of Basil II are victorious over Samuil of Bulgaria in the Battle of Kleidion. 1014: The Gaelic forces of Munster and most other Irish kingdoms under High King Brian Boru defeat a combined Leinster-Viking force in the Battle of Clontarf but Brian Boru is killed at the end of the battle. 1014–1020: The Book of Healing, a vast philosophical and scientific encyclopaedia, is written by Avicenna, Persian scholar.[2] 1015: In the Battle of Nesjar in Oslofjord, Norway, the forces of Olav Haraldsson fought the forces of Sveinn Hákonarson, with a victory for Olav. 1018: The First Bulgarian Empire is conquered by the Byzantine Empire 1018: The Byzantine armies of Basil Boioannes are victorious at the Battle of Cannae against the Lombards under Melus of Bari. 1018: The Third Goryeo-Khitan War; the Korean General Kang Kam-ch'an inflicted heavy losses to Khitan forces at the Battle of Kwiju. The Khitans withdrew and both sides signed a peace treaty. 1019: Airlangga establishes the Kingdom of Kahuripan.[3] Celadon statue of an imperial guardian lion of the Chinese Song dynasty, 11th or 12th century 1021: the ruling Fatimid Caliph Al-Hakim bi-Amr Allah disappears suddenly, possibly assassinated by his own sister Sitt al-Mulk, which leads to the open persecution of the Druze by Ismaili Shia; the Druze proclaim that Al-Hakim went into hiding (ghayba), whereupon he would return as the Mahdi savior. 1025: the Chola dynasty of India uses its naval powers to conquer the South East Asian kingdom of Srivijaya, turning it into a vassal. 1025: ruler Rajendra Chola I moves the capital city of the empire from Thanjavur to Gangaikonda Cholapuram 1025: Rajendra Chola, the Chola king from Cholamandala in South India, conquers Pannai and Kadaram from Srivijaya and occupies it for some time. The Cholas continue a series of raids and conquests of parts Srivijayan empire in Sumatra and the Malay Peninsula.[4] 1028: the King of Srivijaya appeals to the Song dynasty Chinese, sending a diplomatic mission to their capital at Kaifeng. 1030: Stephen I of the Kingdom of Hungary defeats Conrad II of the Holy Roman Empire; after the war, Conrad had ceded the lands between the rivers Leitha and Fischa to Hungary in the summer of 1031. 1030: the Battle of Stiklestad (Norway): Olav Haraldsson loses to his pagan vassals and is killed in the battle. He is later canonized and becomes the patron saint of Norway and Rex perpetuum Norvegiae ('the eternal king of Norway'). 1030: Sanghyang Tapak inscription in the Cicatih River bank in Cibadak, Sukabumi, West Java, mentioned about the establishment of sacred forest and Kingdom of Sunda. (to 1579) 1033: An earthquake strikes the Jordan Valley, followed by a tsunami along the Mediterranean coast, killing tens of thousands.[5] 1035: Raoul Glaber chronicles a devastating three-year famine induced by climatic changes in southern France 1035: Canute the Great dies, and his kingdom of present-day Norway, England, and Denmark was split amongst three rivals to his throne. 1035: William Iron Arm ventures to the Mezzogiorno 1037: Ferdinand I of León conquers the Kingdom of Galicia. Territories of Zirids and Hammadids after the invasions of Banu Hilal, of Norman incursions and the weakening of the Almoravids 1040: Duncan I of Scotland slain in battle. Macbeth succeeds him. 1041: Samuel Aba became King of Hungary. 1041: Airlangga divides Kahuripan into two kingdoms Janggala and Kadiri and abdicates in favour of his successors.[6] 1042: the Normans establish Melfi as the capital of southern Italy. 1041–1048: Chinese artisan Bi Sheng invents ceramic movable type printing 1043: the Byzantine Empire and Kievan Rus engage in a naval confrontation, although a later treaty is signed between two parties that includes the marriage alliance of Vsevolod I of Kiev to a princess daughter of Constantine IX Monomachos. 1043: the Byzantine General George Maniaces, who had served in Sicily back in 1038, is proclaimed emperor by his troops while he is catepan of Italy; he leads an unsuccessful rebellion against Constantine IX Monomachos and is killed in battle in Macedonia during his march towards Constantinople. 1043: the Song dynasty Chancellor of China, Fan Zhongyan, and prominent official and historian Ouyang Xiu introduce the Qingli Reforms, which would be rescinded by the court in 1045 due to partisan resistance to reforms. 1043: the Kingdom of Nri of West Africa is said to have started in this year with Eze Nri Ìfikuánim 1044: the Chinese Wujing Zongyao, written by Zeng Gongliang and Yang Weide, is the first book to describe gunpowder formulas;[7] it also described their use in warfare, such as blackpowder-impregnated fuses for flamethrowers.[8] It also described an early form of the compass, a thermoremanence compass.[9] 1044: Henry III of the Holy Roman Empire defeats the Kingdom of Hungary in the Battle of Ménfő; Peter Urseolo captured Samuel Aba after the battle, executing him, and restoring his claim to the throne; the Kingdom of Hungary then briefly becomes a vassal to the Holy Roman Empire. 1045: The Zirids, a Berber dynasty of North Africa, break their allegiance with the Fatimid court of Egypt and recognize the Abbasids of Baghdad as the true caliphs. A flat casket carved out of ivory from Al-Andalus (Islamic Spain), c. 1050 1052: Fujiwara no Yorimichi converts the rural villa at Byōdō-in into a famous Japanese Buddhist temple. 1053: the Norman commander Humphrey of Hauteville is victorious in the Battle of Civitate against the Lombards and the papal coalition led by Rudolf of Benevento; Pope Leo IX himself is captured by the Normans. 1054: the Great Schism, in which the Western (Roman Catholic) and Eastern Orthodox churches separated from each other. Similar schisms in the past had been later repaired, but this one continues after nearly 1000 years. 1054: a large supernova is observed by astronomers, the remnants of which would form the Crab Nebula. 1054: the Battle of Atapuerca is fought between García V of Navarre and Ferdinand I of León. 1055: the Seljuk Turks capture Baghdad, taking the Buyid Emir Al-Malik al-Rahim prisoner. 1056: Ferdinand I of León, King of Castile and King of León, is crowned Imperator totius Hispaniae (Emperor of All Hispania). 1056: William II of England the son of William the Conqueror, was born. 1057: Anawrahta, ruler of the Pagan Kingdom, defeated the Mon city of Thaton, thus unifying all of Myanmar. 1057: Macbeth, king of Scotland, dies in battle against the future king Malcolm III. 1057: Invasion of the Banu Hilal, Kairouan destroyed, Zirids reduced to a tiny coastal strip, remainder fragments into petty Bedouin emirates.[10] The Bayeux Tapestry depicting events leading to the Battle of Hastings in 1066 1061–1091: Norman conquest of Sicily in the Mediterranean Sea 1064-1065: The Great German Pilgrimage, consisting of around unarmed 7,000 pilgrims, travels to Jerusalem under the leadership of Gunther of Bamberg.[11] 1065: Seljuks first invasion to Georgia under leadership of Alp Arslan 1065: Independence of the Kingdom of Galicia and Portugal under the rule of Garcia 1066: in the Battle of Stamford Bridge, the last Anglo-Saxon King Harold Godwinson defeated his brother Tostig Godwinson and Harold III of Norway. 1066: Edward the Confessor dies; Harold Godwinson is killed in the Battle of Hastings, while the Norman William the Conqueror is crowned king of England. This is what most experts think of as the end of the Viking age. 1066: the Jewish vizier Joseph ibn Naghrela and many others are killed in the 1066 Granada massacre. 1068–1073: the reign of Japanese Emperor Go-Sanjō brings about a brief period where central power is taken out of the hands of the Fujiwara clan. 1068: Virarajendra Chola begins sending military raids into Malaysia and Indonesia. 1068: Seljuks destroyed Georgia for the second time 1069–1076: with the support of Emperor Shenzong of Song, Chancellor Wang Anshi of the Chinese Song dynasty introduces the 'New Policies', including the Baojia system of societal organization and militias, low-cost loans for farmers, taxes instead of corvée labor, government monopolies on tea, salt, and wine, reforming the land survey system, and eliminating the poetry requirement in the imperial examination system to gain bureaucrats of a more practical bent. An 11th-century Chola dynasty bronze figurine of Arthanariswara 1070: the death of Athirajendra Chola and the ascension of Kulothunga Chola I marks the transition between the Medieval Cholas and the Chalukya Cholas. 1071: Defeat of the Byzantine Empire at the Battle of Manzikert by the Seljuk army of Alp Arslan, ending three centuries of a Byzantine military and economic Golden Age. 1072: the Battle of Golpejera is fought between Sancho II of Castile and Alfonso VI of Castile 1073: the Seljuk Turks capture Ankara from the Byzantines. 1074: the Seljuk Turks capture Jerusalem from the Fatimids, and cut pilgrim transit. 1075: Henry IV suppresses the rebellion of Saxony in the First Battle of Langensalza. 1075: the Investiture Controversy is sparked when Pope Gregory VII asserted in the Dictatus papae extended rights granted to the pope (disturbing the balance of power) and a new interpretation of God's role in founding the Church itself. 1075: Chinese official and diplomat Shen Kuo asserts the Song dynasty's rightful border lines by using court archives against the bold bluff of Emperor Daozong of Liao, who had asserted that Liao dynasty territory exceeded its earlier-accepted bounds. 1075–1076: a civil war in the Western Chalukya Empire of India; the Western Chalukya monarch Someshvara II plans to defeat his own ambitious brother Vikramaditya VI by allying with a traditional enemy, Kulothunga Chola I of the Chola Empire; Someshvara's forces suffer a heavy defeat, and he is eventually captured and imprisoned by Vikramaditya, who proclaimed himself king. 1075–1077: the Song dynasty of China and the Lý dynasty of Vietnam fight a border war, with Vietnamese forces striking first on land and with their navy, and afterwards Song armies advancing as far as modern-day Hanoi, the capital, but withdraw after Lý makes peace overtures; in 1082, both sides exchange the territories that they had captured during the war, and later a border agreement is reached. 1076: the Ghana Empire is attacked by the Almoravids, who sack the capital of Koumbi Saleh, ending the rule of king Tunka Manin 1076: the Chinese Song dynasty places strict government monopolies over the production and distribution of sulfur and saltpetre, in order to curb the possibility of merchants selling gunpowder formula components to enemies such as the Tanguts and Khitans. 1076: the Song Chinese allies with southern Vietnamese Champa and Cambodian Chenla to conquer the Lý dynasty, which is an unsuccessful campaign. 1077: the Walk to Canossa by Henry IV of the Holy Roman Empire. 1077: Chinese official Su Song is sent on a diplomatic mission to the Liao dynasty and discovers that the Khitan calendar is more mathematically accurate than the Song calendar; Emperor Zhezong later sponsors Su Song's astronomical clock tower in order to compete with Liao astronomers. 1078: Oleg I of Chernigov is defeated in battle by his brother Vsevolod I of Kiev; Oleg escapes to Tmutarakan, but is imprisoned by the Khazars, sent to Constantinople as a prisoner, and then exiled to Rhodes. 1078: the revolt of Nikephoros III against Byzantine ruler Michael VII 1079: Malik Shah I reforms the Iranian Calendar. 1079: Franks start to settle around the Way of Saint James (Today, modern North Spain) A page of the Domesday Book of England 1080–1081: The Chinese statesman and scientist Shen Kuo is put in command of the campaign against the Western Xia, and although he successfully halts their invasion route to Yanzhou (modern Yan'an), another officer disobeys imperial orders and the campaign is ultimately a failure because of it. 1081: birth of Urraca of León and Castile future Queen of Castille and León. 1084: the enormous Chinese historical work of the Zizhi Tongjian is compiled by scholars under Chancellor Sima Guang, completed in 294 volumes and included 3 million written Chinese characters 1085: Alfonso VI of Castile captures the Moorish Muslim city of Toledo, Spain. 1085: the Katedralskolan, Lund school of Sweden is established by Canute IV of Denmark 1086: compilation of the Domesday Book by order of William I of England; it was similar to a modern-day government census, as it was used by William to thoroughly document all the landholdings within the kingdom that could be properly taxed. 1086: the Battle of az-Zallaqah between the Almoravids and Castilians 1087: a new office at the Chinese international seaport of Quanzhou is established to handle and regulate taxes and tariffs on all mercantile transactions of foreign goods coming from Africa, Arabia, India, Sri Lanka, Persia, and South East Asia. 1087: the Italian cities of Genoa and Pisa engage in the African Mahdia campaign 1087: William II of England, son of William the Conqueror, is crowned king of England. 1088: the renowned polymath Chinese scientist and official Shen Kuo made the world's first reference to the magnetic compass in his book Dream Pool Essays,[12][13] along with encyclopedic documentation and inquiry into scientific discoveries. 1088: The University of Bologna is established. 1088: Rebellion of 1088 against William II of England led by Odo of Bayeux. Siege of Jerusalem (1099) 1091: Normans from the Duchy of Normandy take control of Malta and surrounding islands. 1091: the Byzantine Empire under Alexios I Komnenos and his Cuman allies defeat Pechenegs at the Battle of Levounion 1093: Vikramaditya VI, ruler of the Western Chalukya Empire, defeats the army of Kulothunga Chola I in the Battle of Vengi. 1093: when the Chinese Empress Dowager Gao dies, the conservative faction that had followed Sima Guang is ousted from court, the liberal reforms of Wang Anshi reinstated, and Emperor Zhezong of Song halted all negotiations with the Tanguts of the Western Xia, resuming in armed conflict with them. 1093: the Kypchaks defeat princes of Kievan Rus at the Battle of the Stugna River 1093: Battle of Alnwick: Malcolm III of Scotland is killed by the forces of William II of England. 1094: the astronomical clock tower of Kaifeng, China—engineered by the official Su Song—is completed. 1094: El Cid, the great Spanish hero, conquers the Muslim city of Valencia 1094: a succession crisis following the reign of the Fatimid Caliph Ma'ad al-Mustansir Billah sparks a rebellion which leads to the split of Ismaili Shia into the new Nizari religious branch. 1095: Pope Urban II calls upon Western Europeans to take up the cross and reclaim the Holy Lands, officially commencing the First Crusade. c. 1095–1099: earliest extant manuscript of the Song of Roland 1096: University of Oxford in England holds its first lectures 1097: the Siege of Nicaea during the First Crusade 1097: Diego Rodriguez, a son of El Cid, dies in the Battle of Consuegra, an Almoravid victory 1098: the Siege of Antioch during the First Crusade 1098: Pope Urban II makes an appearance at the Siege of Capua 1098: the Dongpo Academy of Hainan, China is built in honor of the Song dynasty Chinese official and poet Su Shi, who was exiled there for criticizing reforms of the New Policies Group. 1098: the birth of Hildegard of Bingen, Doctor of the Church, abbess, monastic leader, mystic, prophetess, medical, German composer and writer, polymath. 1099: the Siege of Jerusalem by European Crusaders. 1099: after the Kingdom of Jerusalem is established, the Al-Aqsa Mosque is made into the residential palace for the kings of Jerusalem. 1099: death of the great Spanish hero Rodrigo Díaz "El Cid Campeador". 1099: after building considerable strength, David IV of Georgia discontinues tribute payments to the Seljuk Turks. 1100: On August 5, Henry I is crowned King of England. 1100: On December 25, Baldwin of Boulogne is crowned as the first King of Jerusalem in the Church of the Nativity in Bethlehem. King Anawrahta of Myanmar made a pilgrimage to Ceylon, returning to convert his country to Theravada Buddhism. The Tuareg migrate to the Aïr region. Kanem-Bornu expands southward into modern Nigeria. The first of seven Hausa city-states are founded in Nigeria. The Hodh region of Mauritania becomes desert. Fortified Chinese trade bases were established in the Philippines, to gather forest products and distribute imports.[14] Alfonso VI of Castile Empress Agnes, German Queen who became regent of the Holy Roman Empire Basil II of the Byzantine Empire. Angels crowning Canute the Great as he and his wife Ælfgifu of Northampton present the Winchester Cross to the church, dated 1031 The Atlantes – columns in the form of Toltec warriors in Tula. Statue of Lady Li Qingzhao in the Grand Hall of Poets in Du Fu Cao Tang, China Matilda of Tuscany military leader from Italy Emperor Shenzong of Song China Chinese Empress Cao, wife of Emperor Renzong of Song. Lady Sei Shōnagon, wrote her Pillow Book about life in the Japanese court Pope Urban II of Rome Statue of William the Conqueror, holding Domesday Book on the West Front of Lichfield Cathedral. 11th century mosaic of Constantine IX Monomachos, Empress Zoe, and Jesus Christ in the Hagia Sophia. An 11th-century reliquary of gold and cloisonné over wood, from the Duchy of Brabant, Maastricht Cathedral, now housed in the Louvre. Main article: 11th century in architecture Ani Cathedral in Turkey, completed 1001 or 1010 Svetitskhoveli Cathedral, Georgia, is entirely renewed in 1029 The St Albans Cathedral of Norman-era England is completed in 1089 The Gonbad-e Qabus Tower, built in 1006 during the Ziyarid dynasty of Iran Pagoda of Fogong Temple, built in 1056 in Shanxi, China by the Khitan Liao dynasty in 1056 Ani Cathedral, Kingdom of Armenia, built 1001 or 1010 Svetitskhoveli Cathedral, Georgia, is entirely renewed in 1029 The St Albans Cathedral of Norman-era England is completed in 1089. The Al-Hakim Mosque of Fatimid Egypt is completed in 1013. The Iron Pagoda of Kaifeng, China is built in 1049. The Phoenix Hall of Byōdō-in, Japan, is completed in 1053. The Brihadeeswarar Temple of India is completed in 1010 during the reign of Rajaraja Chola I. The Kedareshwara Temple of Balligavi, India, is built in 1060 by the Western Chalukyas. Construction work begins in 1059 on the Parma Cathedral of Italy. The Saint Sophia Cathedral in Novgorod is completed in 1052, the oldest extant church in Russia. Construction begins on the Saint Sophia Cathedral in Kiev, Kievan Rus, in 1037. The Byzantine Greek Hosios Loukas monastery sees the completion of its Katholikon (main church), the earliest extant domed-octagon church from 1011 to 1012. The Lingxiao Pagoda of Zhengding, Hebei province, China, is built in 1045. The Pagoda of Fogong Temple of Shanxi province, China, is completed under the Liao dynasty in 1056. The Nikortsminda Cathedral of Georgia is completed in 1014. The Speyer Cathedral in Speyer, Germany is completed in 1061. The Chinese official Cai Xiang oversaw the construction of the Wanan Bridge in Fujian. The Imam Ali Mosque in Iraq is rebuilt by Malik Shah I in 1086 after it was destroyed by fire. The Pizhi Pagoda of Lingyan Temple, Shandong, China is completed in 1063. Reconstruction of the San Liberatore a Maiella in Italy begins in 1080. Westminster Abbey, London, England, is completed in 1065. The Ananda Temple of the Myanmar ruler King Kyanzittha is completed in 1105. The Temple of Literature, in Vietnam is established in 1070. Construction of Richmond Castle in England begins in 1071. The tallest pagoda tower in China's pre-modern history, the Liaodi Pagoda, is completed in 1055, standing at a height of 84 m (275 ft). The Tower of Gonbad-e Qabus in Iran is built in 1006. Construction begins on the Sassovivo Abbey of Foligno, Italy, in 1070. The Palace of Aljafería is built in Zaragoza, Spain, during the Al-Andalus period. The Rotonda di San Lorenzo is built in Mantua, Lombardy, Italy, during the late 11th century. Construction of the Ponte della Maddalena bridge in the Province of Lucca, Italy begins in 1080. The domes of the Jamé Mosque of Isfahan, Iran are built in 1086 to 1087. 11th-18th century – The courtyard of Jamé Mosque of Isfahan, Isfahan, Persia (Iran), is built. The Chester Castle in England was built in 1069. Construction begins on the Bagrati Cathedral in Georgia in 1003. The St. Michael's Church, Hildesheim in Germany is completed in 1031. The Basilica of Sant'Abbondio of Lombardy, Italy is completed in 1095. Construction begins on the Great Zimbabwe National Monument, sometime in the century. Construction begins on the San Pietro in Vinculis in Pisa, Italy, in 1072. The Tower of London in England is founded in 1078. The St. Grigor's Church of Kecharis Monastery in Armenia is built in 1033. The Martin-du-Canigou monastery on Mont Canigou in southern France is built in 1009. The St. Mary's Cathedral, Hildesheim in Germany is completed in 1020. The One Pillar Pagoda in Hanoi, Vietnam, is constructed in 1049. The St Michael at the Northgate, Oxford's oldest building, is built in Saxon England in 1040. Oxford Castle in England is built in 1071. The Florence Baptistry in Florence, Italy is built in 1059. The Kandariya Mahadeva temple in India is built in 1050. St Mark's Basilica in Venice, Italy is rebuilt in 1063. Canterbury Cathedral in Canterbury, England is completed by 1077. Construction begins on the Cathedral of Santiago de Compostela in Spain in 1075. Latin translation of the Book of Optics (1021), written by the Iraqi physicist, Ibn al-Haytham (Alhazen) Constantine the African examines patients' urine; he taught ancient Greek medicine and Islamic medicine at the Schola Medica Salernitana. The original diagram of Su Song's book Xin Yi Xiang Fa Yao (published 1092) showing the clepsydra tank, waterwheel, escapement mechanism, chain drive, striking clock jacks, and armillary sphere of his clock tower Diagram from al-Bīrūnī's works Kitab al-tafhim showing lunar phases and lunar eclipse The spherical astrolabe, long employed in medieval Islamic astronomy, was introduced to Europe by Gerbert d'Aurillac, later Pope Sylvester II. Main article: Timeline of historic inventions 11th century Early 11th century – Fan Kuan paints Travelers among Mountains and Streams. Painting now is kept at National Palace Museum, Taipei, Taiwan (Republic of China). c. 1000 – Abu al-Qasim al-Zahrawi (Abulcasis) of al-Andalus publishes his influential 30-volume Arabic medical encyclopedia, the Al-Tasrif c. 1000 – Ibn Yunus of Egypt publishes his astronomical treatise Al-Zij al-Hakimi al-Kabir. c. 1000 – Abu Sahl al-Quhi (Kuhi) c. 1000 – Abu-Mahmud al-Khujandi c. 1000 – Law of sines is discovered by Muslim mathematicians, but it is uncertain who discovers it first between Abu-Mahmud al-Khujandi, Abu Nasr Mansur, and Abu al-Wafa. c. 1000 – Ammar ibn Ali al-Mawsili 1000–1048 – Abū Rayḥān al-Bīrūnī of Persia writes more than a hundred books on many different topics.[15] 1001–1100 – the demands of the Chinese iron industry for charcoal led to a huge amount of deforestation, which was curbed when the Chinese discovered how to use bituminous coal in smelting cast iron and steel, thus sparing thousands of acres of prime timberland.[16] 1003 – Pope Sylvester II, born Gerbert d'Aurillac, dies; however, his teaching continued to influence those of the 11th century;[17] his works included a book on arithmetic, a study of the Hindu–Arabic numeral system,[18] a hydraulic-powered organ,[19] the reintroduction of the abacus to Europe,[20] and a possible treatise on the astrolabe, edited by Hermann of Reichenau five decades later. The contemporary monk Richer from Reims described Gerbert's contributions in reintroducing the armillary sphere that was lost to European science after the Greco-Roman era; from Richer's description, Gerbert's placement of the tropics was nearly exact and his placement of the equator was exact.[21][22] He reintroduced the liberal arts education system of trivium and quadrivium, which he had borrowed from the Islamic Córdoba. [23] Gerbert also studied and taught Islamic medicine.[24][25] 1013 – One of the Four Great Books of Song, the Prime Tortoise of the Record Bureau compiled by 1013 was the largest of the Song Chinese encyclopedias. Divided into 1000 volumes, it consisted of 9.4 million written Chinese characters. 1020 – Ibn Samh of Al-Andalus builds a geared mechanical astrolabe. 1021 – Ibn al-Haytham (Alhacen) of Basra, Iraq writes his influential Book of Optics from 1011 to 1021 (while he was under house arrest in Egypt), 1024 – The world's first paper-printed money can be traced back to the year 1024, in Sichuan province of Song dynasty China. The Chinese government would step in and overtake this trend, issuing the central government's official banknote in the 1120s. 1025 – Avicenna of Persia publishes his influential treatise, The Canon of Medicine, which is the most influential medical text in both Islamic and Christian lands for over six centuries, and The Book of Healing, a scientific encyclopedia. 1027 – The Chinese engineer Yan Su recreates the mechanical compass-vehicle of the south-pointing chariot, first invented by Ma Jun in the 3rd century.[26] 1028–1087 – Abū Isḥāq Ibrāhīm al-Zarqālī (Arzachel) builds the equatorium and universal latitude-independent astrolabe. 1031 – Abū Rayḥān al-Bīrūnī writes Kitab al-qanun al-Mas'udi 1031–1095 – Chinese scientist Shen Kuo creates a theory for land formation, or geomorphology, theorized that climate change occurred over time, discovers the concept of true north, improves the design of the astronomical sighting tube to view the pole star indefinitely, hypothesizes the retrograde motion of planetary motion, and by observing lunar eclipse and solar eclipse he hypothesized that the sun and moon were spherical.[27][28][29][30][31] Shen Kuo also experimented with camera obscura just decades after Ibn al-Haitham, although Shen was the first to treat it with quantitative attributes.[32][33] He also took an interdisciplinary approach to studies in archaeology.[34] 1041–1048 – Artisan Bi Sheng of Song dynasty China invents movable type printing using individual ceramic characters.[35] Mid-11th century – Harbaville Triptych, is made. It is now kept at Musée du Louvre, Paris. Mid-11th century – Xu Daoning paints Fishing in a Mountain Stream. Northern Song dynasty. 1068 – First known use of the drydock in China.[36] 1070 – With a team of scholars, the Chinese official Su Song also published the Ben Cao Tu Jing in 1070, a treatise on pharmacology, botany, zoology, metallurgy, and mineralogy.[37][38] Some of the drug concoctions in Su's book included ephedrine, mica minerals, and linaceae.[39][40][41] 1075 – The Song Chinese innovate a partial decarbonization method of repeated forging of cast iron under a cold blast that Hartwell and Needham consider to be a predecessor to the 18th century Bessemer process.[42] 1077 – Constantine the African introduces ancient Greek medicine to the Schola Medica Salernitana in Salerno, Italy. c. 1080 – the Liber pantegni, a compendium of Hellenistic and Islamic medicine, is written in Italy by the Carthaginian Christian Constantine the African, paraphrasing translated passages from the Kitab al-maliki of Ali ibn Abbas al-Majusi as well as other Arabic texts.[43] 1088 – As written by Shen Kuo in his Dream Pool Essays, the earlier 10th-century invention of the pound lock in China allows large ships to travel along canals without laborious hauling, thus allowing smooth travel of government ships holding cargo of up to 700 tan (49 1/2 tons) and large privately owned ships holding cargo of up to 1600 tan (113 tons).[44] 1094 – The Chinese engineer and astronomer Su Song incorporates an escapement mechanism and the world's first known chain drive to operate the armillary sphere, the astronomical clock, and the striking clock jacks of his clock tower in Kaifeng.[45] The Ostromir Gospels of Novgorod, 1057 1000 – The Remaining Signs of Past Centuries is written by Abū Rayḥān al-Bīrūnī. c. 1000 – The Al-Tasrif is written by the Andalusian physician and scientist Abu al-Qasim al-Zahrawi (Abulcasis). c. 1000 – The Zij al-Kabir al-Hakimi is written by the Egyptian astronomer Ibn Yunus. 1002–1003 – Book of Lamentations is written by Gregory of Narek, one of the Doctors of the Church. 1000–1037 – Hayy ibn Yaqdhan is written by Ibn Tufail. 1008 – The Leningrad Codex, one of the oldest full manuscripts of the Hebrew Bible, is completed. c. 1010 – The oldest known copy of the epic poem Beowulf was written around this year. 1013 – The Prime Tortoise of the Record Bureau, a Chinese encyclopedia, is completed by a team of scholars including Wang Qinruo. 1020 – The Bamberg Apocalypse commissioned by Otto III is completed. 1021 – Lady Murasaki Shikibu writes her Japanese novel, The Tale of Genji. 1021 – The Book of Optics by Ibn al-Haytham (Alhazen or Alhacen) is completed. 1037 – The Jiyun, a Chinese rime dictionary, is published by Ding Du and expanded by later scholars. 1037 – Birth of the Chinese poet Su Shi, one of the renowned poets of the Song dynasty, who also penned the essay Record of Stone Bell Mountain. 1044 – The Wujing Zongyao military manuscript is completed by Chinese scholars Zeng Gongliang, Ding Du, and Yang Weide. 1048–1100 – The Rubaiyat of Omar Khayyam is written by Omar Khayyam sometime after 1048. 1049 – The Record of Tea is written by the Chinese official Cai Xiang 1052 – The Uji Dainagon Monogatari, a collection of stories allegedly penned by Minamoto-no-Takakuni, is written sometime between now and 1077. 1053 – The New History of the Five Dynasties by Chinese official Ouyang Xiu is completed. 1054 – Russian legal code of the Russkaya Pravda is created during the reign of Yaroslav I the Wise. 1057 – The Ostromir Gospels of Novgorod are written. 1060 – compilation of the New Book of Tang, edited by Chinese official Ouyang Xiu, is completed. 1060 – the Mugni Gospels of Armenia are written in illuminated manuscript form. 1068 – The Book of Roads and Kingdoms is written by Abū 'Ubayd 'Abd Allāh al-Bakrī. 1070 – William I of England commissioned the Norman monk William of Jumièges to extend the Gesta Normannorum Ducum chronicle. 1078 – The Proslogion is written by Anselm of Canterbury. 1080 – The Chinese poet Su Shi is exiled from court for writing poems criticizing the various reforms of the New Policies Group. 1084 – The Zizhi Tongjian history is completed by Chinese official Sima Guang. 1086 – The Domesday Book is initiated by William I of England. 1088 – The Dream Pool Essays is completed by Shen Kuo of Song China. The roots of European Scholasticism are found in this period, as the renewed spark of interest in literature and Classicism in Europe would bring about the Renaissance. In the 11th century, there were early Scholastic figures such as Anselm of Canterbury, Peter Abelard, Solomon ibn Gabirol, Peter Lombard, and Gilbert de la Porrée. ^ Soekmono, R, Drs., Pengantar Sejarah Kebudayaan Indonesia 2, 2nd ed. Penerbit Kanisius, Yogyakarta, 1973, 5th reprint edition in 1988 p.52 ^ "index". www.muslimphilosophy.com. ^ Soekmono, R, Drs., Pengantar Sejarah Kebudayaan Indonesia 2, 2nd ed. Penerbit Kanisius, Yogyakarta, 1973, 5th reprint edition in 1988 p.56 ^ Epigraphia Carnatica, Volume 10, Part 1, page 41 ^ Kallner-Amiran, D. H. (1950). "A Revised Earthquake-Catalogue of Palestine" (PDF). Israel Exploration Journal. 1 (4). Israel Exploration Society: 223–246. JSTOR 27924451. ^ Soekmono, R, Drs., Pengantar Sejarah Kebudayaan Indonesia 2, 2nd ed. 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