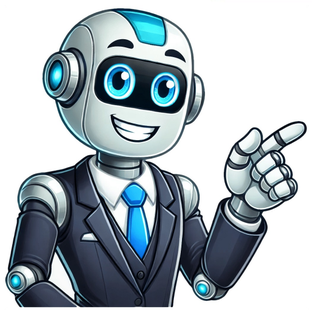
Continue



Comment ouvrir des pdf

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. Télécharger l'article Télécharger l'article Les fichiers PDF (Portable Document Format) sont très largement utilisés pour créer et partager des documents, car le PDF garde le formatage intact indépendamment du système d'exploitation de celui qui le visualise et de son logiciel. Ce fichier document étant d'une sorte différente, il nécessite un logiciel particulier en vue d'être ouvert. Avec le bon logiciel, à peu près tous les appareils sont capables d'ouvrir et de visualiser un fichier PDF. 1 Téléchargez Adobe Reader. Il s'agit d'un programme gratuit qui peut ouvrir des fichiers PDF pour que vous puissiez les lire. Adobe Reader peut être téléchargé sur get.adobe.com/reader/. Vous ne pouvez cependant pas l'utiliser pour éditer ou créer des fichiers PDF. Pour apprendre à éditer des fichiers PDF, cliquez ici. Il existe d'autres programmes gratuits qui permettent de lire les PDF si vous ne voulez pas installer Adobe Reader. Si vous ne voulez pas utiliser Adobe Reader, sachez que Windows 8 possède un lecteur PDF intégré. 2 Déclinez l'offre concernant McAfee. Lorsque vous installez Adobe Reader, une case est cochée automatiquement pour ajouter McAfee sur votre ordinateur. La plupart des utilisateurs ne le veulent probablement pas, donc pensez bien à décocher cette case. 3 Doublecliquez sur un fichier PDF une fois que vous avez installé Adobe Reader. Chez la plupart des utilisateurs, Reader devrait s'ouvrir automatiquement et afficher votre fichier PDF. 4 Entrez le mot de passe si celui-ci est requis. Les fichiers PDF peuvent être protégés par mot de passe par leur créateur, donc vous avez besoin de connaitre le bon mot de passe si celui-ci est requis. Publicité 1 Windows demande à un programme d'ouvrir le fichier. Si Adobe Reader est installé, mais que les fichiers PDF ne s'ouvrent pas, vous aurez peut-être besoin du lecteur associé aux fichiers PDF. Faites un clic droit sur le fichier PDF et cliquez sur « Ouvrir avec ». Sélectionnez « Adobe Reader » dans la liste des programmes. Si Adobe Reader n'apparait pas dans la liste, vous devez parcourir votre ordinateur à sa recherche. Il est généralement installé dans C:\Program Files (x86)\Adobe\Reader. 2 Le fichier PDF nécessite un mot de passe. Si le fichier PDF nécessite un mot de passe et que vous ne l'avez pas, la seule façon de l'ouvrir est de demander le mot de passe à son créateur ou d'utiliser un programme qui pirate les mots de passe. Si le mot de passe est complexe, un tel programme pourrait prendre des heures ou même des jours pour le trouver. L'un des programmes de piratage de mots de passe les plus puissants est Advanced PDF Password Recovery de Elcomsoft. Vous aurez besoin de l'édition Pro pour accéder à tous les outils de récupération de mot de passe et cela vous coutera environ 90 €. 3 Le PDF ne s'ouvre pas à cause d'un problème de conformité. Adobe pourrait refuser d'ouvrir un PDF, car celui-ci n'est pas conforme aux standards de PDF. C'est souvent le cas pour des PDF créés par des logiciels autres qu'Adobe ou si vous ouvrez un PDF très vieux avec une nouvelle version de Reader [1] . Essayez d'installer un lecteur PDF tiers. Il existe beaucoup de lecteurs PDF. Foxit Reader est l'une des options les plus populaires. Importez le PDF dans Google Drive. Vous perdrez peut-être le formatage, mais vous aurez plus de chance d'arriver à l'ouvrir. Publicité 1 Doublecliquez sur le PDF. Le système d'exploitation Mac intègre la « prévisualisation », un outil qui peut ouvrir un grand nombre de fichiers, dont les fichiers PDF. La prévisualisation vous permet de lire les fichiers PDF, mais pas de les éditer. Pour apprendre à éditer les fichiers PDF, cliquez ici. 2 Changez le programme utilisé par Mac pour ouvrir les PDF. Si vous avez un programme PDF différent et que vous ne voulez plus utiliser l'outil de prévisualisation, vous pouvez choisir que tous les fichiers PDF s'ouvrent avec le nouveau programme. Sélectionnez un fichier PDF dans le Finder, mais ne l'ouvrez pas. Cliquez sur le menu « Fichier » et sélectionnez « Obtenir les informations ». Déroulez la section « Ouvrir avec ». Sélectionnez l'application que vous voulez utiliser dans le menu déroulant. Cliquez sur Modifier tout... 3 Entrez le mot de passe si celui-ci est requis. Les fichiers PDF pourraient être protégés par mot de passe pour empêcher les lecteurs non autorisés d'ouvrir le fichier. Si vous n'avez pas le mot de passe, la seule façon d'ouvrir le fichier est de le craquer. Si vous avez besoin de craquer le mot de passe, iStonsoft PDF Password Remover pour Mac est l'une des options les mieux notées. Si le mot de passe est complexe, l'obtention du crac peut prendre des heures ou même des jours. Publicité 1 Les PDF ne s'ouvrent pas sur Safari. C'est typiquement dû à une erreur avec l'extension Adobe après la mise à jour de Safari. Vous pouvez la résoudre en supprimant manuellement l'extension et en redémarrant Safari [2] . Ouvrez /Librairie/Modules complémentaires/ et supprimez AdobePDF.plugin Ouvrez /Utilisateur/Nom d'utilisateur/Librairie/Modules complémentaires Internet/ et supprimez AdobePDF.plugin Redémarrez Safari et essayez d'ouvrir à nouveau le PDF. 2 « Adobe ne peut pas ouvrir, nom du PDF car ». Cette erreur survient typiquement si vous enregistrez un fichier PDF en utilisant l'option « Enregistrer sous » ou « Exporter le PDF » sur Safari [3] . Ouvrez à nouveau le PDF sur Safari. Cliquez sur le bouton du disque (Enregistrer) en haut de la fenêtre ou dans le menu qui apparait lorsque vous déplacez votre souris en bas de la page au centre. Sauvegardez le fichier PDF dans votre ordinateur. Ouvrez le fichier fraichement enregistré. 3 Les fichiers PDF ne se téléchargent pas sur Firefox. Si vous essayez de télécharger des fichiers PDF dans Firefox et que rien ne se passe, vous avez peut-être un problème avec l'extension Adobe Reader [4] . Cliquez sur le menu Firefox et sélectionnez « Outils ». Sélectionnez « Modules complémentaires », puis « Extensions ». Trouvez « Adobe Acrobat NPAPi Plugin » et désactivez-le. Publicité Téléchargez une application qui prend en charge les fichiers PDF. Android ne possède pas de fonctionnalité intégrée permettant de lire les fichiers PDF, mais il existe de nombreuses applications gratuites qui les ouvriront facilement. Vous en avez d'ailleurs peut-être déjà une d'installée. Google Drive Quickoffice Adobe Reader Foxit MobilePDF Trouvez le fichier PDF que vous voulez ouvrir. Typiquement, lorsque vous téléchargez un fichier PDF, vous pouvez l'ouvrir depuis la barre des notifications en appuyant sur le téléchargement terminé. Si vous voulez ouvrir le fichier plus tard, vous pourrez le faire depuis le dossier « Téléchargements ». Ouvrez l'application « Mes fichiers » ou « Gestionnaire de fichiers » sur votre appareil. Si vous n'avez pas de gestionnaire de fichiers, vous pouvez en télécharger un gratuitement sur la boutique Google Play. Ouvrez le dossier « Téléchargements ». Il s'agit de l'emplacement par défaut dans lequel s'enregistrent les fichiers téléchargés. Appuyez sur le fichier PDF pour l'ouvrir. Si vous avez choisi une application par défaut, il s'ouvrira automatiquement. Si vous venez juste d'installer une application pour ouvrir les fichiers PDF ou que vous avez plus d'une application pouvant lire les PDF, il vous sera demandé de choisir l'application que vous voulez utiliser. Résolution des problèmes Le message « Impossible d'ouvrir le fichier » apparait à l'ouverture d'un fichier PDF téléchargé. Le problème peut avoir plusieurs origines. Essayez d'utiliser une application gestionnaire de fichiers pour ouvrir votre fichier téléchargé. Vous pouvez le trouver dans votre dossier « Téléchargements ». Si vous pouvez ouvrir le fichier en utilisant un gestionnaire de fichiers, vous devriez réinitialiser votre navigateur. Réinitialisez votre navigateur en ouvrant votre application « Paramètres » et en sélectionnant « Apps » ou « Applications ». Ensuite, trouvez votre navigateur dans la liste des applications, puis appuyez sur le bouton « Nettoyer les données ». Le PDF tente de s'ouvrir avec la mauvaise application. Si votre PDF essaie de s'ouvrir avec une application qui ne prend pas en charge les PDF, l'application réglée par défaut n'est peut-être pas la bonne. Ouvrez l'application « Paramètres ». Sélectionnez « Apps » ou « Applications ». Sélectionnez l'application qui essaie d'ouvrir vos fichiers PDF. Dans la section « Lancer par défaut », appuyez sur « Effacer les paramètres par défaut ». Essayez à nouveau d'ouvrir le fichier PDF. Il devrait vous être demandé de sélectionner l'application que vous voulez utiliser. 1 Appuyez sur le fichier PDF que vous voulez ouvrir. iOS possède un lecteur PDF intégré qui peut être utilisé pour ouvrir les pièces jointes PDF dans les messages électroniques ou les PDF que vous trouvez sur le web. 2 Appuyez sur le PDF ouvert pour ouvrir le menu. Vous pourrez ainsi sélectionner une autre application pour gérer les PDF. 3 Appuyez sur le bouton « Ouvrir dans » ou sur le bouton « Partager ». Si vous visualisez votre PDF dans votre application de messagerie, vous devez utiliser le bouton « Partager ». Si vous visualisez le PDF dans Safari, utilisez le bouton « Ouvrir dans ». La liste des applications qui prennent en charge le PDF va alors s'afficher. 4 Sélectionnez l'application que vous voulez utiliser. Vous pouvez ajouter vos fichiers PDF à vos iBook ou les ouvrir dans Adobe Reader ou dans une autre application PDF installée sur votre appareil iOS. Le PDF s'ouvrira immédiatement dans l'application que vous avez sélectionnée [5] . Publicité 1 Transférez le fichier PDF dans votre Kindle. Il y a plusieurs manières de procéder. Vous pouvez connecter votre Kindle à votre ordinateur et ajouter le fichier dans votre stockage Kindle. Cliquez ici pour avoir des instructions détaillées. Vous pouvez transférer votre fichier PDF via une connexion sans fil en utilisant votre messagerie de transfert Kindle qui est gratuite. Cliquez ici pour avoir des instructions détaillées. 2 Ouvrez le fichier dans votre Kindle. Une fois que le fichier PDF a été transféré, vous pouvez le sélectionner dans votre bibliothèque Kindle. Il n'y a pas beaucoup d'options pour interagir avec le PDF sur un Kindle, car vous ne pouvez pas ajouter des fonctionnalités supplémentaires via d'autres applications. Publicité Cet article a été rédigé avec la collaboration de nos éditeurs(trices) et chercheurs(euses) qualifiés(es) pour garantir l'exactitude et l'exhaustivité du contenu. L'équipe de gestion du contenu de wikiHow examine soigneusement le travail de l'équipe éditoriale afin de s'assurer que chaque article est en conformité avec nos standards de haute qualité. Cet article a été consulté 47 719 fois. Catégories: Logiciels Cette page a été consultée 47 719 fois. The 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 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 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 Proprietary software whose full use is limited in time Shareware is a type of proprietary software that is initially shared by the owner for trial use at little or no cost.[1] Often the software has limited functionality or incomplete documentation until the user sends payment to the software developer.[2] Shareware is often offered as a download from a website. Shareware differs from freeware, which is fully-featured software distributed at no cost to the user but without source code being made available; and free and open-source software, in which the source code is freely available for anyone to inspect and alter. There are many types of shareware and, while they may not require an initial up-front payment, many are intended to generate revenue in one way or another. Some limit use to personal non-commercial purposes only, with purchase of a license required for use in a business enterprise. The software itself may be time-limited, or it may remind the user that payment would be appreciated. Trialware or demoware is a program that limits the time that it can be effectively used, commonly via a built-in time limit, number of uses, or only allowing progression up to a certain point (e.g. in video games, see Game demo).[3] The user can try out the fully featured program until the trial period is up, and then most trialware reverts to either a reduced-functionality (freemium, nagware, or crippleware) or non-functional mode, unless the user purchases a full version.[4] Trialware has become normalized for online Software as a Service (SaaS).[citation needed] WinRAR is a notable example of an unlimited trialware, i.e. a program that retains its full functionality even after the trial period has ended. The rationale behind trialware is to give potential users the opportunity to try out the program to judge its usefulness before purchasing a license. According to industry research firm Softletter, 66% of online companies surveyed had free-trial-to-paying-customer conversion rates of 25% or less. SaaS providers employ a wide range of strategies to nurture leads, and convert them into paying customers. Main article: Freemium Freemium works by offering a product or service free of charge (typically digital offerings such as software, content, games, web services or other) while charging a premium for advanced features, functionality, or related products and services. For example, a fully functional feature-limited version may be given away for free, with advanced features disabled until a license fee is paid. The word freemium combines the two aspects of the business model: "free" and "premium".[5] It has become a popular model especially in the antivirus industry. Main article: Adware Adware, short for "advertising-supported software", is any software package which automatically renders advertisements in order to generate revenue for its author. Shareware is often packaged with adware to lower the shareware fees or eliminate the need to charge users a fee. The advertisements may take the form of a banner on an application window. The functions may be designed to analyze which websites the user visits and to present advertising pertinent to the types of goods or services featured there. The term is sometimes used to refer to software that displays unwanted advertisements, which typically are more intrusive and may appear as pop-ups, as is the case in most ad-oriented spyware.[6] During the installation of the intended software, the user is presented with a requirement to agree to the terms of click through an end-user license agreement or similar licensing which governs the installation of the software.[7] Main article: Crippleware Crippleware has vital features of the program, such as printing or the ability to save files, disabled or unwanted features like watermarks on screencasting and video editing software[8] until the user buys the software. This allows users to take a close look at the features of a program without being able to use it to generate output. The distinction between freemium and crippleware is that an unlicensed freemium program has useful functionality, while crippleware demonstrates its potential but is not useful on its own. Main article: Donationware Donationware is a licensing model that supplies fully operational unrestricted software to the user and requests an optional donation be paid to the programmer or a third-party beneficiary (usually a non-profit).[9] The amount of the donation may also be stipulated by the author, or it may be left to the discretion of the user, based on individual perceptions of the software's value. Since donationware comes fully operational (i.e. not crippleware) with payment optional, it is a type of freeware. In some cases, there is a delay to start the program or "nag screen" reminding the user that they haven't donated to the project. This nag feature and/or delayed start is often removed in an update once the user has donated to (paid for) the software. Nagware (also known as begware, annoyware or a nagscreen) is a pejorative term for shareware that persistently reminds the user to purchase a license.[10] It usually does this by popping up a message when the user starts the program, or intermittently while the user is using the application. These messages can appear as windows obscuring part of the screen, or as message boxes that can quickly be closed. Some nagware keeps the message up for a certain time period, forcing the user to wait to continue to use the program. Unlicensed programs that support printing may superimpose a watermark on the printed output, typically stating that the output was produced by an unlicensed copy. Some titles display a dialog box with payment information and a message that paying will remove the notice, which is usually displayed either upon startup or after an interval while the application is running. These notices are designed to annoy the user into paying. Postcardware, also called just cardware, is a style of software distribution similar to shareware, distributed by the author on the condition that users send the author a postcard. A variation of cardware, emailware, uses the same approach but requires the user to send the author an email. Postcardware, like other novelty software distribution terms, is often not strictly enforced. Cardware is similar to beerware. The concept was first used by Aaron Giles, author of JPEGView.[11] Another well-known piece of postcardware is the roguelike game Ancient Domains of Mystery, whose author collects postcards from around the world. Orbitron is distributed as postcardware. Exifer is a popular application among digital photographers that has been postcardware.[12] Caledos Automatic Wallpaper Changer is a "still alive" project cardware. "Empathy" is a postcardware for password-protected executables. Dual Module Player and Linux were also postcardware for a long time.[13] An example for emailware is the video game Jump 'n Bump.[14] Another popular postcardware company is the Laravel package developers from Spatie, which has released over 200 open-source packages to the Laravel framework, which are postcardware licensed, and all shown at their website.[15] In 1982, Andrew Fluegelman created a program for the IBM PC called PC-Talk, a telecommunications program, and used the term freeware; he described it "as an experiment in economics more than altruism".[16] About the same time, Jim "Button" Knopf released PC-File, a database program, calling it user-supported software.[17] Not much later, Bob Wallace produced PC-Write, a word processor, and called it shareware. Appearing in an episode of Horizon titled Psychedelic Science originally broadcast 5 April 1998, Bob Wallace said the idea for shareware came to him "to some extent as a result of my psychedelic experience".[18] Fluegelman said that his experience as a book publisher and author discouraged him from finding a traditional software publisher. KQED pledge drives inspired his distribution method, as well as his not knowing how to implement copy protection.[19] In 1983 Jerry Pournelle wrote of "an increasingly popular variant" of free software "that has no name, but works thus: 'If you like this, send me (the author) some money. I prefer cash.'"[20] In 1984, Softalk-PC magazine had a column, The Public Library, about such software. Public domain is a misnomer for shareware, and Freeware was trademarked by Fluegelman and could not be used legally by others, and User-Supported Software was too cumbersome. So columnist Nelson Ford had a contest to come up with a better name. The most popular name submitted was Shareware, which was being used by Wallace. However, Wallace acknowledged that he got the term from an InfoWorld magazine column by that name in the 1970s[failed verification][citation needed], and that he considered the name to be generic,[21] so its use became established over freeware and user-supported software.[22] By 1984 Knopf reported receiving about $1,000 a day for PC-File,[23] and by 1985 Fluegelman was receiving "dozens of $35 checks" daily. He had two employees to fulfill orders and answer questions for PC-Talk.[19] He, Knopf, and Wallace clearly established shareware as a viable software distribution model by becoming wealthy.[24][25] Prior to the popularity of the World Wide Web and widespread Internet access, shareware was often the only economical way for independent software authors to get their product onto users' desktops. Those with Internet or BBS access could download software and distribute it amongst their friends or user groups, who would then be encouraged to send the registration fee to the author, usually via postal mail. During the late 1980s and early 1990s, shareware software was widely distributed over online services, bulletin board systems and on diskettes. Contrary to commercial developers who spent millions of dollars urging users "Don't Copy That Floppy", shareware developers encouraged users to upload the software and share it on disks. Commercial shareware distributors such as Educorp and Public Domain Inc printed catalogs describing thousands of public domain and shareware programs that were available for a small charge on floppy disk. These companies later made their entire catalog available on CD-ROM. One such distributor, Public Software Library (PSL), began an order-taking service for programmers who otherwise had no means of accepting credit card orders. Meanwhile major online service provider CompuServe enabled people to pay (register) for software using their CompuServe accounts. When AOL bought out CompuServe, that part of CompuServe called SWREG (Shareware Registration) was sold to UK businessman Stephen Lee of Atlantic Coast PLC who placed the service on to the internet and enabled over 3,000 independent software developers to use SWREG as a back office to accept various payment methods including credit, debit and charge cards, Paypal and other services in multiple currencies. This worked in realtime so that a client could pay for software and instantly download it which was novel at the time. SWREG was eventually bought by Digital River, Inc. Also, services like Kagi started offering applications that authors could distribute along with their products that would present the user with an onscreen form to fill out, print, and mail along with their payment. Once telecommunications became more widespread, this service also expanded online. Toward the beginning of the Internet era, books compiling reviews of available shareware were published, sometimes targeting specific niches such as small business. These books would typically come with one or more floppy disks or CD-ROMs containing software from the book.[26] As Internet use grew, users turned to downloading shareware programs from FTP or web sites. This spelled the end of bulletin board systems and shareware disk distributors. At first, disk space on a server was hard to come by, so networks like Info-Mac were developed, consisting of non-profit mirror sites hosting large shareware libraries accessible via the web or ftp. With the advent of the commercial web hosting industry, the authors of shareware programs started their own sites where the public could learn about their programs and download the latest versions, and even pay for the software online. This erased one of the chief distinctions of shareware, as it was now most often downloaded from a central "official" location instead of being shared samizdat-style by its users. To ensure users would get the latest bug-fixes as well as an install untainted by viruses or other malware, some authors discouraged users from giving the software to their friends, encouraging them to send a link instead. Major download sites such as VersionTracker and CNet's Download.com began to rank titles based on quality, feedback, and downloads. Popular software was sorted to the top of the list, along with products whose authors paid for preferred placement. If features are disabled in the freely accessible version, paying may provide the user with a license key or code they can enter into the software to disable the notices and enable full functionality. Some pirate web sites publish license codes for popular shareware, leading to a kind of arms race between the developer and the pirates where the developer disables pirated codes and the pirates attempt to find or generate new ones. Some software publishers have started accepting known pirated codes, using the opportunity to educate users on the economics of the shareware model.[27] Some shareware relies entirely on the user's honesty and requires no password. Simply checking an "I have paid" checkbox in the application is all that is required to disable the registration notices.[28][29] Main article: Game demo This article needs additional citations for verification. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed.Find sources: "Shareware" – news · newspapers · books · scholar · JSTOR (December 2016) (Learn how and when to remove this message) In the early 1990s, shareware distribution was a popular method of publishing games for smaller developers, including then-fledgling companies Apogee Software (also known as 3D Realms), Epic MegaGames (now Epic Games), Ambrosia Software and id Software. It gave consumers the chance to play the game before investing money in it, and it gave them exposure that some products would be unable to get in the retail space. With the Kroz series, Apogee introduced the "episodic" shareware model that became the most popular incentive for buying a game.[30] While the shareware game would be a truly complete game, there would be additional "episodes" of the game that were not shareware and could only be legally obtained by paying for the shareware episode. In some cases these episodes were neatly integrated and would feel like a longer version of the game, and in other cases the later episodes would be stand-alone games. Sometimes the additional content was completely integrated with the unregistered game, such as in Ambrosia's Escape Velocity series, in which a character representing the developer's pet parrot, equipped with an undefeatable ship, would periodically harass and destroy the player after they reached a certain level representing the end of the trial period. Racks of games on single 5 1/4-inch and later 3.5-inch floppy disks were common in retail stores. However, computer shows[citation needed] and bulletin board systems (BBS) such as Software Creations BBS were the primary distributors of low-cost software. Free software from a BBS was the motivating force for consumers to purchase a computer equipped with a modem, so as to acquire software at no cost. The success of shareware games, including id Software hits Commander Keen and Doom, depended in part on the BBS community's willingness to redistribute them from one BBS to another across North America. The reasons for redistribution included allowing modem users who could not afford long-distance calls the opportunity to view the games.[31] The important distinguishing feature between a shareware game and a game demo is that the shareware game is (at least in theory) a complete working software program albeit with reduced content compared to the full game, while a game demo omits significant functionality as well as content. Shareware games commonly offered both single player and multiplayer modes plus a significant fraction of the full game content such as the first of three episodes, while some even offered the entire product as shareware while unlocking additional content for registered users. By contrast a game demo may offer as little as one single-player level or consist solely of a multiplayer map, this makes them easier to prepare than a shareware game. There are several widely accepted standards and technologies that are used in the development and promotion of shareware. FILE_ID.DIZ is a descriptive text file often included in downloadable shareware distribution packages. Portable Application Description (PAD) is used to standardize shareware application descriptions. PAD file is an XML document that describes a shareware or freeware product according to the PAD specification.[32] DynamicPAD extends the Portable Application Description (PAD) standard by allowing shareware vendors to provide customized PAD XML files to each download site or any other PAD-enabled resource. DynamicPAD is a set of server-side PHP scripts distributed under a GPL license and a freeware DynamicPAD builder for 32-bit Windows. The primary way to consume or submit a DynamicPAD file is through the RoboSoft application by Rudenko Software, the DynamicPAD author. DynamicPAD is available at the DynamicPAD web site. Code signing is a technology that is used by developers to digitally sign their products. Versions of Microsoft Windows since Windows XP Service Pack 2 show a warning when the user installs unsigned software. This is typically offered as a security measure to prevent untrusted software from potentially infecting the machine with malware. However, critics see this technology as part of a tactic to delegitimize independent software development by requiring hefty upfront fees and a review process before software can be distributed.[33] Association of Software Professionals Careware Keygen ^ Bink, Thomas (April 4, 1996). "Shareware Profitable and Popular". The Kingston Whig-Standard (Kingston, Ontario, Canada). p. 17. ^ Gnoffo Jr., Anthony (July 4, 1993). "The Shareware Computer Industry, A Growing World Of Innovation, Trust". Night-Ridder Newspapers. Rutland Daily Herald (Rutland, Vermont). p. 8D. ^ Alvarez, Julian; Michaud, Laurent (July 2008). Serious Games: Advergaming, edugaming, training and more (PDF). IDATE. p. 45. ISBN 978-2-84822-169-4. Retrieved June 4, 2022. ^ Flynn, Laurie (November 14, 1993). "Cheap, Easy Shareware Big Business". Knight-Ridder Newspapers. Sun Herald (Biloxi, Mississippi). p. C7. ^ Jepson, Anna; Lundin, Elin (April 3, 2009). Freemium for large enterprises (Thesis). KTH Royal Institute of Technology. p. 14. urn:nbn:se:kth:diva-99781. ^ Wang, Wallace (2006). "Adware and Spyware". Steal This Computer Book 4.0: What They Won't Tell You About the Internet. No Starch Press. p. 285. ISBN 1-59327-105-0. Retrieved June 4, 2022. ^ Sipior, Janice C.; Ward, Burke T.; Roselli, Georgina R. (Spring 2005). "The Ethical and Legal Concerns of Spyware". Information Systems Management. 22 (2): 43. doi:10.1201/1078/45099.22.2.20050301/87276.5. S2CID 26291227. ^ Franceschetti, Donald R. (2016). Principles of Computer Science. Salem Press. pp. 112–114. ISBN 978-1-68217-139-4. ^ Milian, Mark (June 13, 2011). "Reading apps sell subscriptions to fuzzy feelings". CNN. Archived from the original on May 22, 2014. Retrieved May 22, 2014. ^ Parberry, Ian (June 1995). "The Internet and the Aspiring Games Programmer" (PDF). Proceedings of DAGS 95, "Electronic Publishing and the Information Superhighway". Boston: Birkhauser. p. 2. Archived (PDF) from the original on March 4, 2016. ^ Giles, Aaron. "Aaron's Computing History". Archived from the original on March 16, 2012. Retrieved August 7, 2006. ^ "Exifer for Windows". www.friedemann-schmidt.com. Archived from the original on November 12, 2006. Retrieved January 18, 2016. ^ Torvalds, Linus (May 2001). Just for Fun. New York: HarperCollins Publishers. ISBN 0-06-662072-4. ^ Jump 'n Bump (Archived 2015-12-22 at the Wayback Machine). readme.txt: "JUMP 'N BUMP by Brainchild Design in 1998 Jump 'n Bump is e-mailware. That means you're supposed to send us an e-mail. Write for example where you're from and what you thought about this game. If you do that, you will greatly encourage us to make more games for you!" ^ "Postcards". ^ Magid, Lawrence J. (August 1982). "PC-Talk". PC Magazine. p. 143. Archived from the original on May 26, 2021. Retrieved October 21, 2013. ^ Callahan, Michael E. "The History of Shareware". Paul's Picks. Archived from the original on February 2, 2008. Retrieved May 13, 2008. ^ Horizon: Psychedelic science by Bill Eagles, (about 41 mins into programme) ^ a b Erokan, Dennis (May 1985). "Andrew Fluegelman - PC-Talk and Beyond". MicroTimes. pp. 19–26. Retrieved March 12, 2025. ^ Pournelle, Jerry (July 1983). "Interstellar Drives, Osborne Accessories, DEDICATE/32, and Death Valley". BYTE. p. 323. Retrieved August 28, 2016. ^ Markoff, John (September 26, 2002). "Bob Wallace, 53, Software Pioneer, Dies". The New York Times. Archived from the original on June 25, 2016. Retrieved May 26, 2016. ^ "Association of Software Professionals - A community of real people using real names running real software businesses". www.asp-shareware.org. Archived from the original on April 2, 2010. Retrieved April 28, 2018. ^ Watt, Peggy (June 11, 1984). "Software for a Donation". InfoWorld. Vol. 6, no. 24. p. 36. ISSN 0199-6649. ^ "Bob Wallace Timeline". Erowid. January 12, 2004. Archived from the original on March 2, 2013. Retrieved March 7, 2013. ^ Article about Jim "Button" Knopf Archived 2007-02-10 at the Wayback Machine, from Dr. Dobb's Journal ^ "PC Mag Nov 24, 1992". November 24, 1992. Archived from the original on August 17, 2021. Retrieved April 1, 2015. ^ "Software That is both Shareware and Guiltyware". Archived from the original on May 24, 2014. ^ "FTP". Archived from the original on February 21, 2016. ^ "Anarchie v1.1.3 © 1993-94 Peter N Lewis". Archived from the original on October 28, 2015. If you purchase a site license, contact me for information on how to make Anarchie automatically set the ÒI PaidÓ flag in the Preferences dialog (for those who are interested, I leave the ÒI PaidÓ checkbox off on my machine to ensure that the About box is not too annoying and it doesnÕt trouble me, so live with it :-) ^ Hague, James (February 8, 1999). "Gimme Your Money: A Half-Baked History of Shareware". Loonygames. Archived from the original on February 23, 2020. Retrieved February 23, 2020. ^ Driscoll 2022, pp. 117–120. ^ "PAD specification". Archived from the original on June 12, 2007. Retrieved May 12, 2006.{{cite web}}: CS1 maint: bot: original URL status unknown (link) ^ "Code Signing and You". rogueamoeba.com. Archived from the original on October 18, 2016. Retrieved April 28, 2018. Driscoll, Kevin (2022). The Modem World: A Prehistory of Social Media. Yale University Press. ISBN 978-0-300-24814-2. Retrieved June 4, 2022. Look up shareware in Wiktionary, the free dictionary. Independent Software Developers Forum (ISDEF) Retrieved from " 2Video game publisher "Apogee Software" redirects here. For the company founded in 2008, see Apogee Entertainment. 3D Realms Entertainment ApSFormerlyApogee Software ProductionsApogee Software, Ltd.Company typeSubsidiaryIndustryVideo gamesFounded1987; 38 years ago (1987) in Garland, Texas, USFounderScott MillerHeadquartersAalborg, DenmarkKey peopleFrederik Schreiber (CEO)ProductsList of 3D Realms gamesParentSaber Interactive (2021–present)Website3drealms.com 3D Realms Entertainment ApS is a video game publisher based in Aalborg, Denmark. Scott Miller founded the company in his parents' home in Garland, Texas, in 1987 as Apogee Software Productions to release his game Kingdom of Kroz. In the late 1980s and early 1990s, the company popularized a distribution model where each game consists of three episodes, with the first given away free as shareware and the other two available for purchase. Duke Nukem was a major franchise created by Apogee to use this model, and Apogee published Commander Keen and Wolfenstein 3D the same way. Apogee began using the brand name 3D Realms for its 3D games in 1994, and in 1996 rebranded the company itself to 3D Realms to focus on traditionally-published 3D titles. Duke Nukem 3D (1996) was released under this name to great success. 3D Realms largely ceased its publishing and development operations afterwards to focus on two extensively delayed games: Prey (2006), which was under development until being taken over by another studio in 2001, and Duke Nukem Forever (2011), which remained under development until 2009. The "Apogee Software" name, library, and logo were licensed to Terry Nagy in 2008, who established Apogee Software LLC to develop and publish ports and spinoffs of Apogee titles. In 2009, 3D Realms, citing financial issues, laid off its development team and the majority of its staff, effectively ceasing operations. In March 2014, the company was acquired by SDN Invest, a Danish holding company and part-owner of Interceptor Entertainment, and relaunched later that year as 3D Realms Entertainment ApS, headquartered in Denmark. 3D Realms Entertainment has since served as a games publisher. Miller remained an advisor for the company until 2021, when he and Nagy acquired the Apogee brand and relaunched Apogee Software LLC as Apogee Entertainment, an independent games publisher. In August 2021, 3D Realms Entertainment was acquired by Embracer Group subsidiary Saber Interactive, which was spun off from Embracer in March 2024. In the early 1980s, Scott Miller often spent time in the computer lab of the high school he was attending, programming text adventures on the facility's Apple II and getting to know fellow student George Broussard.[1] Following graduation, both of them took jobs at local amusement arcade The Twilight Zone, allowing Miller to attend college and increase his interest in video games at the same time.[1] Following his sophomore year, Miller dropped out of the University of Dallas to focus entirely on video games, including participating in tournaments as well as programming his own games.[1] At that time, he found a special interest in the Turbo Pascal programming language and its easy integration on IBM Personal Computers.[2] Miller subsequently figured that his knowledge on video games should earn him more money than he made at The Twilight Zone, wherefore he, with assistance by Broussard, wrote a manual-style book on "how to beat video games".[1] The book fell into obscurity due to an oversaturated market but landed Miller a job as a video game critic for The Dallas Morning News and minor game-centric papers.[1] After four years of writing for the newspaper, he decided that he was capable of creating games that were better than those that he had to review and quit his job. Miller acquired a 16.5k modem, which he installed in his parents' house in Garland, Texas, and started operating as a full-time independent game developer.[1] The Apogee Software logo Most games developed by Miller at the time used extended ASCII characters as graphics.[1][3] The format appeared popular to him but ultimately proved unsuccessful when pitching them to publishers, adding to him not having a college degree or any professional experience in game development.[1] As such, he considered self-printing copies of his games, or distributing them freely through bulletin board systems (BBS), where the boards' users make voluntary donations, a model known as shareware distribution.[1] As the prior option seemed too expensive to Miller, he had to choose the latter, despite being urged not to by friends and colleagues.[1] Miller released Beyond the Titanic and Supernova as shareware games in 1986 and 1987, respectively, but income was low, at roughly US$10,000 donated in a year for both games combined.[1] Miller's next game, Kingdom of Kroz, was developed to include 60 levels, more than what he wanted to release to the public for no cost.[1] As such, he developed a new distribution model, dubbed the "Apogee model", in which only a fraction of the game would be made available to play for free on BBS, which, upon completion, would display Miller's mailing address to the player and ask them to contact him to buy the rest of the game.[1] He applied this model to Kingdom of Kroz by breaking it up into three parts, named episodes, and sharing the first one over BBS while retaining the other two for sale.[1][2] Released on November 26, 1987, Kingdom of Kroz was the first game to bear the name of Miller's one-man company, Apogee Software Productions.[2] The game proved successful, with checks sent to Miller amounting to roughly US$80,000–US$100,000 and him receiving between US$100 and US$500 every single day.[2] Broussard later joined Apogee, merging his own, lesser-known game company Micro-FX into it.[4] In 1994, Apogee decided to launch different brand names for each genre of games they published; it created 3D Realms for 3D games, publishing Terminal Velocity in 1995 and developing the 1996 Duke Nukem 3D under the name, with the other titles released in those years still under Apogee.[5] In late 1996, however, Apogee renamed the company itself to 3D Realms to associate their brand with newer, 3D titles, and stopped using the Apogee brand name.[6] The last game to be published under the Apogee name was Stargunner in 1996. Most of the proposed brands were never used, as 3D games like Duke Nukem became the company's focus. 3D Realms launched a brand for pinball games, Pinball Wizards, in February 1997, but only published Balls of Steel (1997) under the name.[5] Beginning in 1997 3D Realms shifted from episodic MS-DOS titles to non-episodic console and personal computer games. In the process it abandoned the shareware model in favor of a traditional publishing model; it also largely ceased its activities as a developer that same year, releasing only Shadow Warrior (1997).[7] The sole exceptions were Prey (2006), which stayed in development until 2001 when it was transferred to Human Head Studios, and Duke Nukem Forever (2011), which famously stayed in development at 3D Realms as vaporware until 2009.[7][8] The "Apogee Software" name, library, and logo were licensed to Terry Nagy in 2008, who formed Apogee Software, LLC as a separate company that would handle distribution, remakes, and other developments related to older Apogee games. 3D Realms retained the corporate name of Apogee Software, Ltd. Apogee Software, LLC was renamed Apogee Entertainment in 2021.[6] After Prey was transferred away from 3D Realms in 2001, the only project under development at the company was Duke Nukem Forever, originally announced in 1997. The release date of the game was "when it's done."[9] 3D Realms continued some operations as a publisher as part of the Gathering of Developers publishing group, but otherwise served only as the publisher and licensee of Duke Nukem-related spinoffs and mobile games for the next few years. On May 6, 2009, the development of Duke Nukem Forever was halted, and major staff cuts were initiated with the entire development team and most other employees laid off.[10][11] According to Miller, the development was using up much of the company's funds as they struggled to bring in new 3D rendering technology for the game, leading to the decision to cut their staff and sell the company.[12] On May 14, 2009, Take-Two, holders of the publishing

calendar500Byzantine calendar6646–6647Chinese calendar丁巳年 (Fire Snake)3835 or 3628 — to 一戊午年 (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 一阳土马年(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: Władyslaw 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 Īfikuánim 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 St Albans Cathedral of England, 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 Fruttuaria of San Benigno Canavese, Italy is completed in 1007. 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 existent 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 1091. The Văn Miếu, or 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 1003. The Martin-du-Canigou monastery on Mount 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 founded 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 book 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. Northern Song dynasty. It is now 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 S