

# Encyclopaedia Slavica Sanctorum: Activity, Users, Statistics

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**Abstract.** Encyclopaedia slavica sanctorum (eslavsant.net) is designed as a complex heterogenous multimedia product. It is part of the project Encyclopaedia Slavica Sanctorum: Saints and Holy Places in Bulgaria (in electronic and Gutenberg versions). Until 2013, its web-based platform for online management and presentation of structured digital content has been prepared and numerous materials have been input. The platform is developed using the server technologies PHP, MySQL and HTML, JavaScript, CSS on the client side. The search in the e-ESS can be made by different parameters (12, or combinations of parameters), such as saints' or feasts' names, type of sainthood, types of texts dedicated to the saints, dates of saints' commemorations, and several others. Both guests and registered users can search in the e-ESS but the latter have access to much more information including the publications of original sources. The e-platform allows for making statistics of what have been searched and read. The software used for content and access analysis is BI tool QlikView. As an analysis services provider, it is connected to the e-ESS objects repository and tracking services by a preliminary created data warehouse. The data warehouse is updated automatically, achieving real time analytics solution.

The paper discusses some of the statistics results of the use of the e-ESS: the activities of the editors, users, and guests, the types of searches, the most often viewed object, such as the date of January 1 and the article on St. Basil the Great which is one of the richest encyclopaedia articles and includes both metadata and original sources published, both from medieval Slavonic manuscripts and popular culture records.

**Keywords:** Digital Libraries, Electronic Encyclopedia, Services, Content Analysis, Saints,

## 1 Encyclopaedia Slavica Sanctorum – Main Characteristics

*Encyclopaedia slavica sanctorum* (<http://eslavsant.net>), henceforth e-ESS, is designed as a complex heterogenous multimedia product for a broad public, from the

school pupils to professionals in humanities, ethnology, literature, culture, and theology studies. It is part of the project *Encyclopaedia Slavica Sanctorum: Saints and Holy Places in Bulgaria (in electronic and Gutenberg versions)* carried out by scholars from different institutions, mostly from St. Kliment Okhridski University of Sofia and Institute of Literary Studies at the Bulgarian Academy of Sciences. It is supported by the Bulgarian Science Fund under the project DDVU 02/68 (2010). [2]).

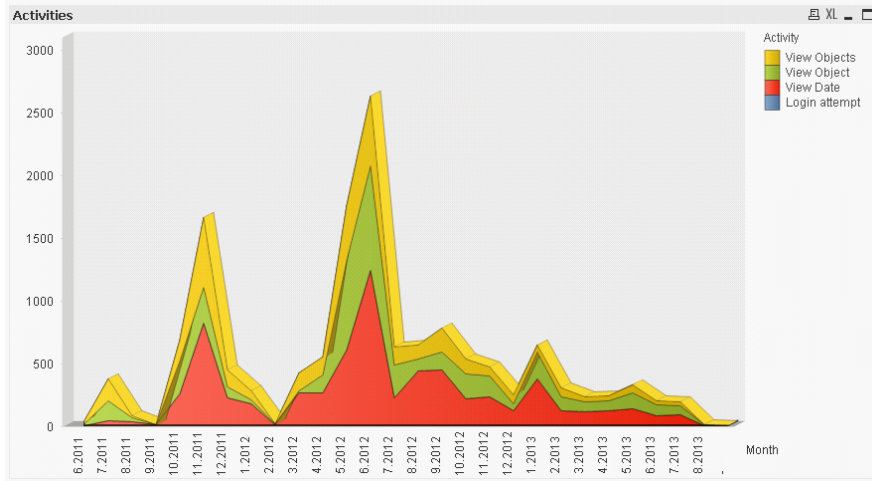
Until 2013, its web-based platform for online management and presentation of structured digital content has been prepared and numerous materials have been input. The platform is developed using the server technologies PHP, MySQL and HTML, JavaScript, CSS on the client side (see [1]).

The search in the e-ESS can be made by different parameters: saints' or feasts' names, type of sainthood, types of texts dedicated to the saints, dates of saints' commemorations, and several others (see below). Users can make collections of objects. Both guests and registered users can search in the e-ESS but the latter have access to much more information including the publications of original sources. The e-platform allows for making statistics of what have been searched and read. This is valuable information for the authors, feedback about what has proved to be interesting for the users and guests. Moreover, it gives feedback to the team about the activities of its members.

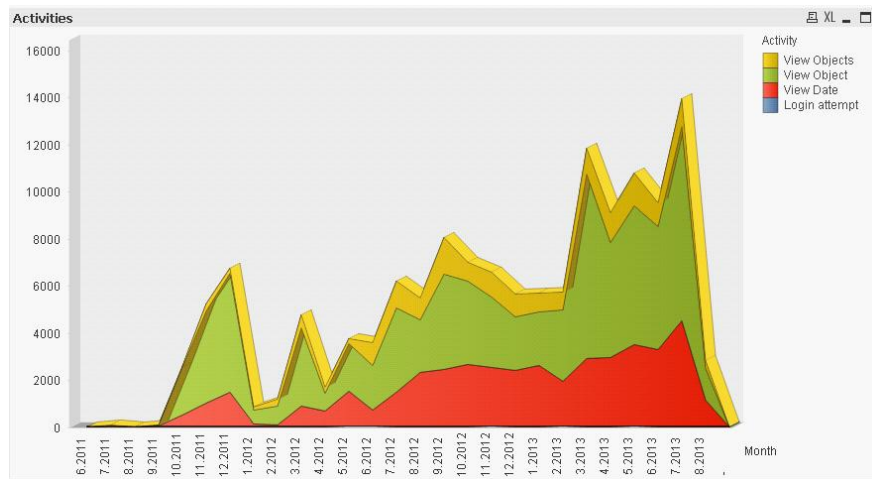
## **2 Content and Access Analysis in e-ESS**

The software used for content and access analysis is BI tool QlikView. QlikView is a highly interactive business intelligence software solution based on in-memory associative search technology which allows users to use data to make important decisions. As an analysis services provider, it is connected to the e-ESS objects repository and tracking services by a preliminary created data warehouse. The data warehouse is updated automatically, achieving real time analytics solution.

The goal of this paper is to discuss some of the statistics results of the use of the e-ESS. First, Diagrams 1 and 2 show the difference in the activities of the registered users and of guests, starting from June 2011 to the very beginning of August 2013. The registered users are members of the project team or, as a rule, specialists in the fields mentioned above and university students. Diagram 1 indicated that the bigger part of the input was made at the end of 2011 (the initial stage of the input after the pilot activities in the summer of 2012) and in the spring and summer of 2012 when several principles of unification of the articles by different authors were elaborated. The high rate of use of the e-ESS in June 2012 amongst the registered users could be due to the big international conference on sainthood organized in the framework of the project in June 12-14, 2012 in Sofia. Diagram 2 indicates the growth of the popularity of the e-ESS in the second half of 2012 and in 2013 amongst the broader public (guests).



**Fig. 1.** Diagram 1 of the activity of the registered users by month (June 2011-August 2013)



**Fig. 2.** Diagram 2 of the activity of guests by month (June 2011-August 2013)

Until 07.2013, there are 243 registered users, 30 of which are project members who input or edit the information on the saints, see Diagram 3. Diagram 4 shows different types of the guests' and users' activities distributed in time (by month), from June 2011 to the very beginning of August 2012.

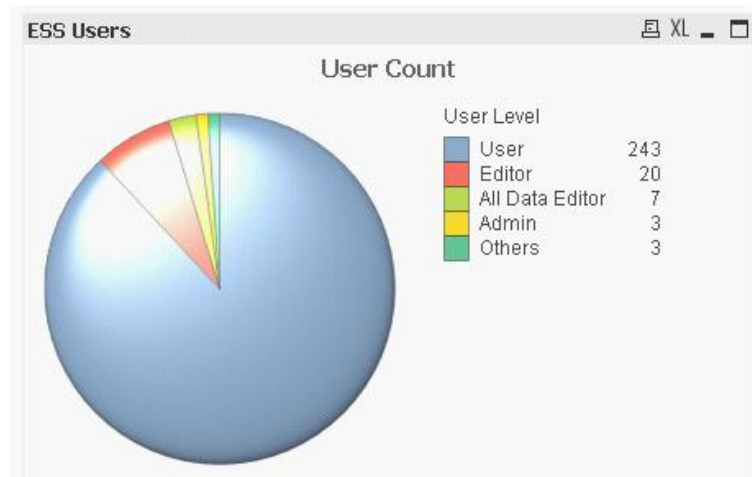


Fig. 3. Diagram 3 of users registered until July 2013

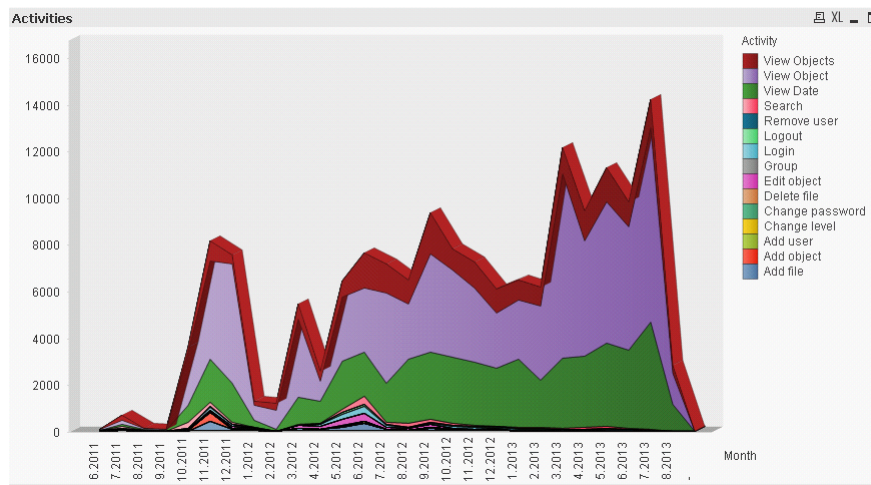


Fig. 4. Diagram 4 of types of activities of users and guests

### 3 Types of Searches according to the Architecture of the e-ESS

The encyclopaedia is organized on a basis of a calendar. There is a list of saints and feasts for every day of the year. More than 1000 commemorations were input after they were culled from medieval Slavonic manuscripts attesting the evolution of the Bulgarian Church calendar from the dawn of the Christianity in Bulgarian after the official conversion in the 9th century until the present day. For every saint, there is information of his time (of death), place (of living and death), type: apostle, martyr, hermit, prophet, confessor, father of the Church, holy fool. For some saints, more than one type is indicated (for instance, most apostles are martyrs as well).

For every calendar date, there are published original (source) materials culled from the calendar of medieval Slavonic manuscripts dating from the 10<sup>th</sup> to the 17<sup>th</sup> century: 31 manuscripts of *Apostolus* (Acts and Epistles), 36 Gospels, 2 full Bibles, and also some *Synaxaria* (Prologues, the so-called Verse Prologue)<sup>1</sup>. Most of the manuscripts chosen are of Bulgarian origin but also the data are culled from East Slavonic and Serbian sources that had Bulgarian photographs and could shed light on the Bulgarian Church calendar. The publication of these original calendar instructions and notes makes it possible for a scholar to trace the variations and evolution not only in the calendar repertoire, but also in the methods by which the commemorations were formed: over the turn of the centuries, some saints and events were denoted by different terms, some commemorations were omitted, others were added, the information for some commemorations sometimes is shorter, sometimes longer depending on different factors.

Some of the commemorations attested in medieval sources are included in the modern Bulgarian Christian Orthodox calendar, while others are not. In the past, several calendars were used in the Bulgarian liturgical practice and every one had its own specific commemorations [3]. A Byzantine calendar was adopted in the very beginning of the Slavonic liturgy and later it was completed with specific Bulgarian commemorations. The first Slavonic calendar was introduced by the holy brothers Cyrill and Methodius reflecting the Typicon of the Great Church: this was the typicon for the cathedral (not monastic) liturgy. This calendar was very rich and it also included a number of commemorations connected with Constantinople, such as consecration of churches, transitions of relics, victories over invaders, and several others. This first Slavonic calendar compiled by SS Cyrill and Methodius is likely to have been brought by the disciples of the holy brothers to Bulgaria and there is strong evidence that it was in use in the early period after their arrival. Traces of it are preserved in many Bulgarian manuscripts from the 10<sup>th</sup> to the 13<sup>th</sup>-14<sup>th</sup> centuries. About the half of the commemorations in the e-ESS are extracted from these manuscripts and they are specific only for this Typicon.

Further, a liturgy reform was carried out in Byzantium in the 9<sup>th</sup>-10<sup>th</sup> centuries. In result, the practice of the Studios Monastery in Constantinople was adopted and the Studios Typicon was followed both in monasteries and parish churches. In 10<sup>th</sup>-century Bulgaria also the Studios Typicon became the official one. Its calendar contained a considerably less number of commemorations, just one or two for every day, but there were some new saints and events, specific for it. They were included in medieval Bulgarian calendars and are represented in e-ESS. Further, a new typicon, called Jerusalem Typicon, was adopted in the 13<sup>th</sup>-14<sup>th</sup> centuries in Byzantium. Its calendar was very close to the calendar of the Studios Typicon, but also some other commemorations were added. This calendar is in use in the Orthodox churches, including the Bulgarian one, until the present day.

Thus, the bigger part of the commemorations in Bulgarian Church calendars were inherited from the Byzantine ones. Still, there are also commemorations of Bulgarian

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<sup>1</sup> A list of the sources consulted with information on their time and place of origin was published in the e-ESS.

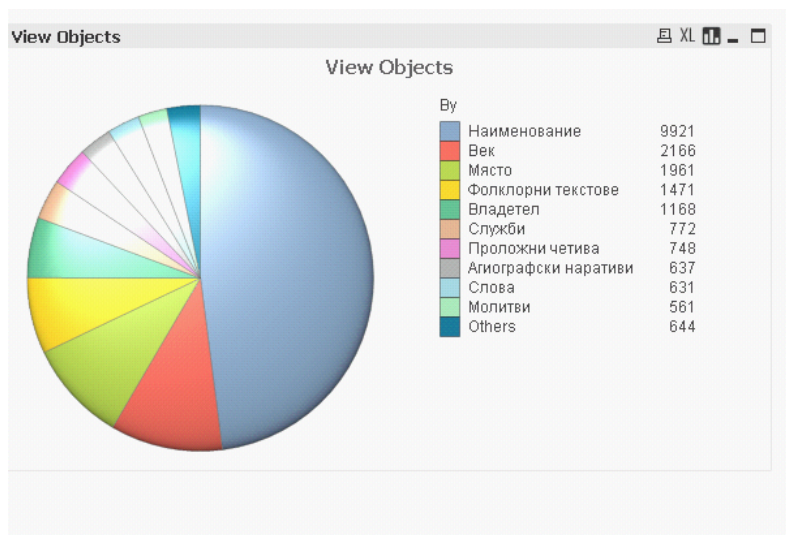
and other Slavic saints. The first Slavic commemorations are those of St Cyril (14 February) and St Methodius (6 April). Later in Bulgaria were added the commemorations of Bulgarian saints, such as St. Clement of Okhrid (27 July), St. Naum of Ochrid (10 December), St. King Peter of Bulgaria (30 January), St. John of Rila (19 October, 18 July), as well as of saints whose relics were translated to cities in Bulgaria, such as Holy saints of Strumitsa (28 November, 29 August), St. Achilles of Prespa (15 May). Some other Slavic commemorations were adopted in the Bulgarian calendar, such as St. Sava of Serbia (14 January), St. Simeon of Serbia (13 February), St. Vladimir of Russia (15 July), SS Boris and Gleb, the first martyrs of Russia (24 July). Further, during the centuries new commemorations were added to the calendar (till the present day), such as St. George of Sofia (11 February, died in 1515), St. Nicolas of Sofia (17 May, died in 1555), St. Simeon of Samokov (21 August, died in 1737), St. Zlata of Mă glen (18 October, died in 1795), SS martyrs of Batak (17 May, died in 1876), mostly martyrs from the period of the Ottoman rule. From the 20<sup>th</sup> century there are the martyrs of the totalitarian regimes, such as St. Gorazd of Prague (22 August) and St. John Kochurov (31 October).

Further, there are articles on particular saints: short information on their lives and deeds and on the texts dedicated to them in Byzantine and medieval Slavonic traditions. An advantage of the electronic encyclopedia is the publication of original texts culled from medieval sources: synaxarion readings, vitae, sermons, offices. Important characteristics of the encyclopedia are the publications of folk texts dedicated to saints and feasts. Both medieval and folk sources are published according to the scholarly standards for edition of original sources with minimal intervention of the researchers. Thus various attitudes towards sainthood, feasts, sacred practices, beliefs, and rituals are displayed. In some cases, the feasts and practices are of local importance, in other cases they are representative of Bulgarian or even broader Balkan cultures. All the folklore records included in e-ESS are published here for the first time. They are taken from the Archives of Ongal Association for Anthropology, Ethnology, and Foklore Studies. They were recorded in the last 20 years.

There are two options for searching in e-ESS: A. *By saints' names, time of living (century and ruler), place of living, and types (genres) of texts dedicated to the saints/ church feasts that are published in e-ESS: offices, vitae, synaxarion readings (short vitae), homilies, prayers, and folklore (popular culture) materials*; B. *By keywords chosen.*

There is a special option for viewing lists of objects according to twelve criteria. Diagram 5 (see below) shows the frequency of searches by: 1) name of saint/ feast (9921 searches/ views): the list includes 888 units (saint(s) and feasts) arranged in the alphabetical order; 2) century (2166 searches/ views) in which certain saint lived; 3) place (1961 searches/ views) where certain saint lived or died; 4) folklore records (1471 searches/ views): the list includes 160 records published – the fact that this criterion is on the fourth place of popularity confirms that the decision to include folklore records in e-ESS is correct; 5) ruler (emperor, king) during the time of whom a certain saint lived (1168 searches/ views); 6) offices (772 searches/ views): the list includes 44 hymnographical texts published – both original medieval texts and translations into standard Bulgarian (the latter made by Iskra Hristova); 7) synaxarion

readings (748 searches/ views): the list includes 44 original texts culled both from the so-called Simple Prolog and Verse Prolog;



**Fig. 5.** Diagram 5 of view objects in ESS

8) hagiographical materials (vitae, martyrdoms, translations of relics, and miracles) (637 searches/views): the list has 19 hagiographical texts, including the Vita of St. Basil the Great (copy of the 15<sup>th</sup> century), a vernacular Bulgarian 18<sup>th</sup>-century translation of Damaskinos Studites' Vita of St. Demetrios of Thessaloniki, Vita of St. Thaisia in the Bđinski Sbornik of the 14<sup>th</sup>-century, Vita of St. Gorazd of Prague, and several others; 9) homilies (631): the list includes 19 original medieval Bulgarian homilies most of which were written by St. Clement of Okhrid; 10) prayers (561); and 11) others (644).

*Search by keywords.* Diagram 6 shows that most often the searches were by saints' and feasts' names (572), but also by authors of the materials included in e-ESS (203); by place (99), by type of sanctity (90), by month (72), by century (68), and several others.

An advantage is the option of searching by more than one keyword. For instance, if we search by "martyr (man)" and "1 century AD" we receive a list of 12 names of saints and the dates of their commemorations; if we search by "martyr (woman)", "1<sup>st</sup> century", and "Rome" we receive three names of women martyrs who died in the 1<sup>st</sup> century in Rome: St. Petronilla (May 31), St. Photiana (March 20), and St. Anastasia (April 13).

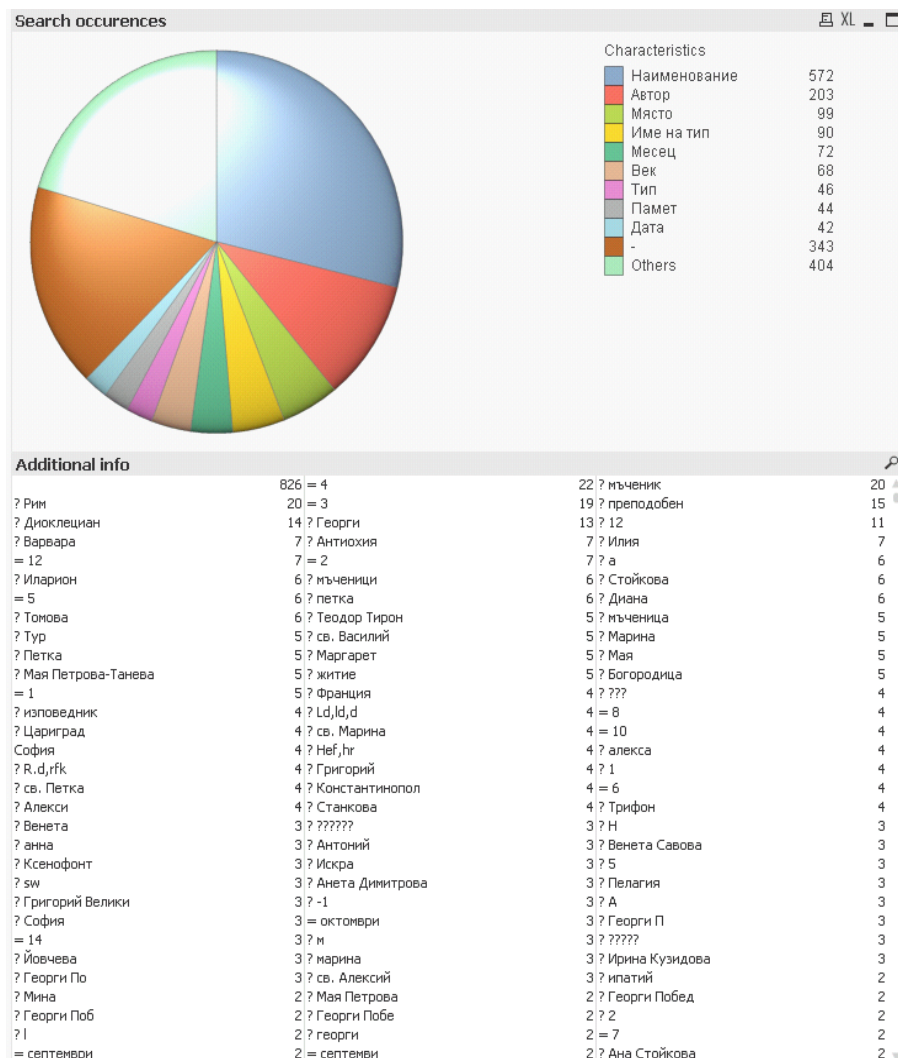
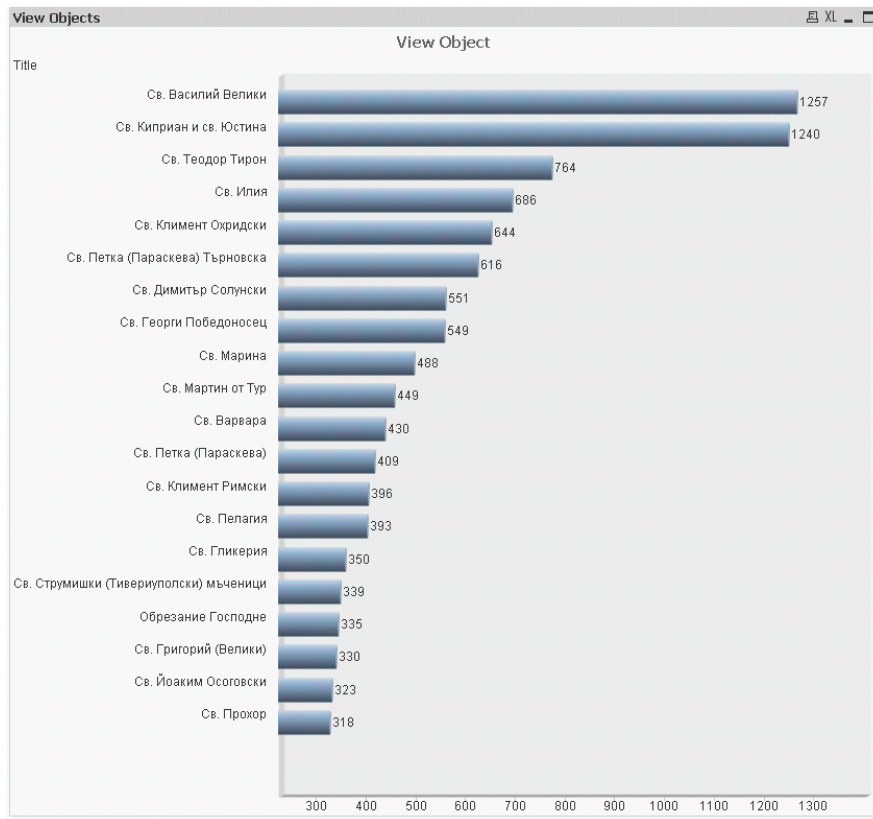


Fig. 6. Diagram 6 of most often searches

Diagram 7 shows the most often articles on saints viewed and revised: Basil the Great (1257 views): this article is very rich and includes publications of several texts dedicated to the saint in medieval Slavonic manuscripts, such as his long vita, synaxarion reading, epitaph for him by Gregory the Theologian, office for him, folklore records for St. Basil's day, images of the saint and of folklore practices, prayers attributed to St. Basil against demons; SS Cyprian and Justin (1240 views); St. Theodore Tyron (764 views); Prophet Elias (686 views); St. Clement of Okrid (644 views); St. Parasceve of Epibatai/ St. Petka of Tarnovo (616 views) to whom original medieval Bulgarian texts were dedicated; St. Demetrios of Thessaloniki (551 views); St. George (549); St. Marina (488), and several others.





**Fig. 7.** Diagram 7 of the most often viewed and revised articles on saints

Diagram 8 shows the most often viewed dates. It is typical for the Christian Church calendar that there are usually several saints commemorated on the same date. Sometimes they even have the same name. The diagram differentiates the activities of the users, guests, and editors also in regard to these 25 most often viewed days. More or less they coincide with the most frequently viewed saints by name, cf. St. Basil the Great = January 1; Prophet Elias = July 20, St. Demetrios of Thessaloniki = October 26. Apparently, the most often revised texts by editors are the articles dedicated to St. Basil the Great, Prophet Elias, St. Demetrios of Thessaloniki, and St. Petka of Tarnovo (St. Parasceve of Epibatai).

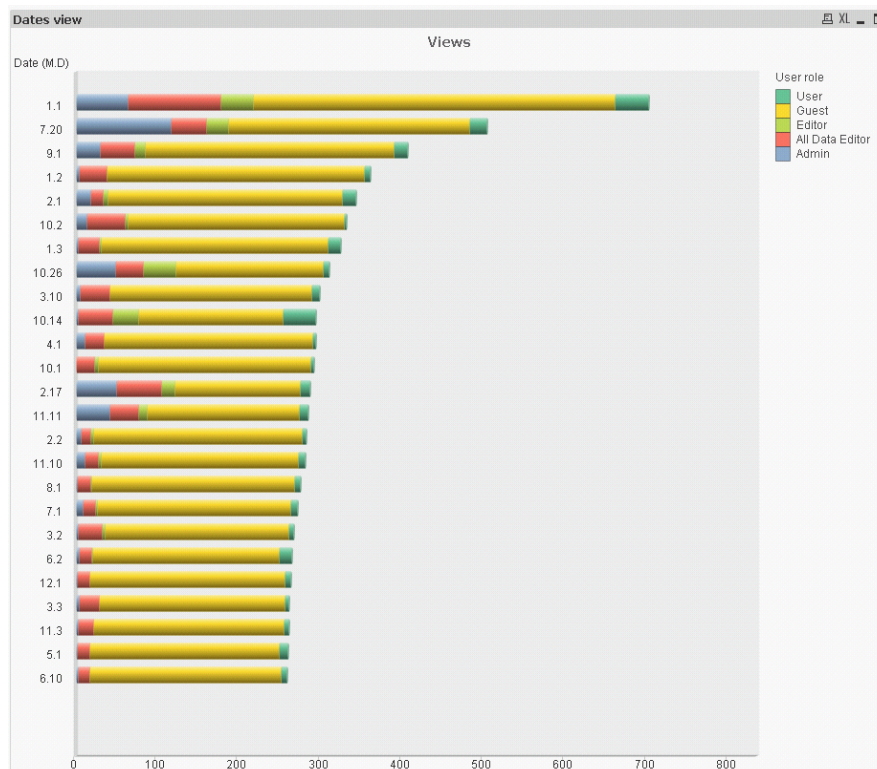


Fig. 8. Diagram 8 of the most often viewed dates

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