

# **The Pupitre System: A desk news system for the Parliamentary Meeting rooms**

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## ***Abstract***

*The Pupitre System is a news system designed to be used by the parliamentarians at the meeting room in the Congress. The problem addressed is to provide parliamentarian with a tool useful for access the news from different sources in real time and keep the parliamentarian informed of their interest topics. The system automatically authenticates the parliamentarian participating at the meeting room and gives his/her recent references in the news, the last news of his political party, outstanding news, and a search of news. The news are constantly updating as they are being publishing. He/She can review, print, share or sent the news articles from the Pupitre System local server, and it is not necessary to visit each different news site. The results obtained, after the diffusion and training will show a parliamentary community more informed and with a new tool useful for their legislative work.*

*Keywords: news system, parliamentarian tools*

## **Introduction**

The purpose of this article is to present the Pupitre System; a tool whose main objective is to delivers news of interest of the parliamentarian when they are working in the meeting room of the parliament. News are important for parliamentarians and they will remain that way, because parliamentarians must be informed about political and economic facts and how he/she and his/her political party is referenced. The "Pupitre" system is part of a News System of the Chilean Library of Congress but customized for each parliamentarian. This news system, called "Noticias" is an information service that offers national and regional news to the parliamentarian, news of newspaper, some magazines, radio and TV from 2000 until today. The aims of Noticias system are:

- Provide to the library of Congress an information system to manage both a news data base and a news images repository
- Provide to the members of parliament a search tool to access the news published in the several news media: newspapers, newsmagazines, broadcast news and online journalism.

We have incorporated several types of news media: print media (79 newsmagazines and 137 newspapers), broadcast news (14 radio, 15 television), and Internet news (95 online journalism). Every day we are updating our news records. All these news articles are copyright for the news providers; they can be stored in Congress, but not offered at public access outside the BCN network. For that reason in this system the user has to authenticate with user/pass and then can access to do searches or to navigate in our local digital newspaper images.

On the other side, Pupitre System is a customized display of the news service focused on each parliamentarian. Its main characteristics are:

- Automatic authentication in the computer of the meeting room assigned to each parliamentarian
- On-the-fly query over our data of the last news in which the parliamentarian is mentioned
- On-the-fly query over our data of the last news in which the political party of the parliamentarian is mentioned
- Outstanding news of the last weeks
- Topics, a set of searches saved for the parliamentarian that can be retrieved with updated news.
- News search, by date, by news media.
- Access to local digital newspaper images (to leaf through newspapers)

The access for Pupitre system was installed on the screen of each computer of the parliamentarian in both meeting rooms, Senate (38 senators) [1] and Chamber of Deputies (120 deputies) [2]. Figure 1 is the dashboard of Pupitre, and it shows the scheme of parliamentarian distribution in each meeting room.

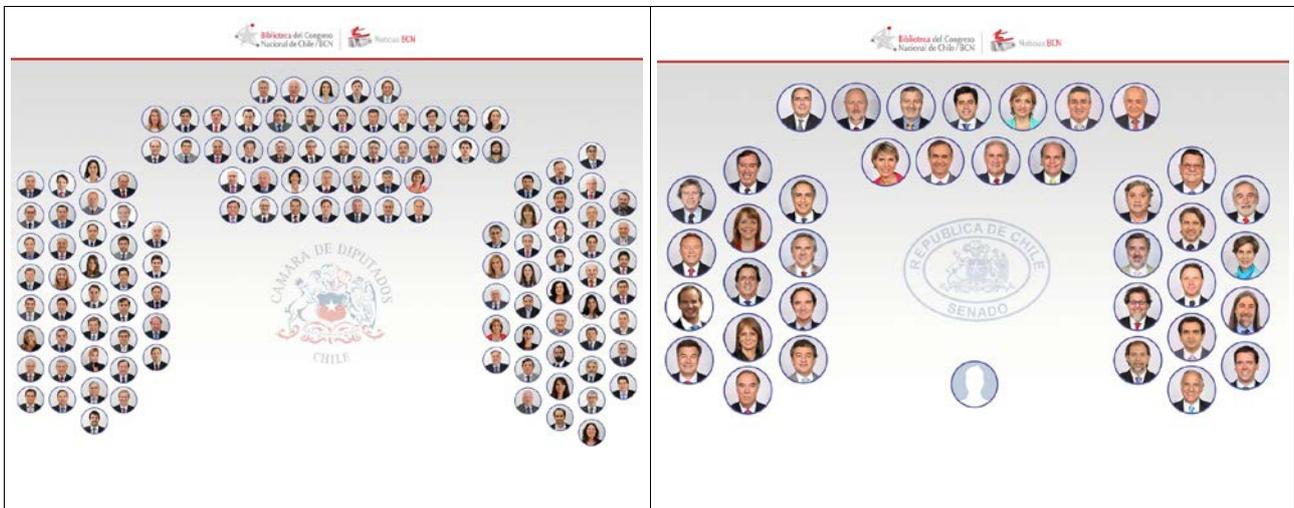


Fig. 1 Chamber of Deputies and Senate.

## My News and My Political Party

When a parliamentarian uses the access, it occurs an automatic authentication because the computer sends a unique private key. By default the system shows “Mi prensa” (My News), a hit list of the most recent news where the name of the parliamentarian appears mentioned in the title or in the detail of the article. This can be appreciated in figure 2-A, the button “Mi prensa” is active and it shows 15 hits, and in the figure 2-B the button “Mi partido” is active and it shows the hits list. A hit is one of the results of the list of results, it corresponds to a reference that contains basic information of the article: title, news media, publishing date, number of the page, section, duration.

Nacional de Chile / BCN
Noticias DCN

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Diputada  
**NAME**

Distrito 10  
Partido Unión Demócrata Independiente

Mi prensa
Mi partido
Noticias destacadas
🔍 Buscador

1 - 15 de 39 , noticias de: **NAME** en los último treinta dias.

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Las Últimas Noticias , p. 13 , 10 Enero 2016

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La Tercera , p. 22 , 9 Enero 2016

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El Mercurio\_Valparaiso , p. 10 , 9 Enero 2016

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**Vamos Mujer** critica foco ideológico de programa de Presidenta Bachelet [🔗](#)  
El Mercurio , Cuerpo C , p. 6 , 9 Enero 2016

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La Segunda , p. 8 , 8 Enero 2016

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**Vinculan a Natalia Compagnon** con trazado eléctrico Cardones-Polpaico [🔗](#)  
El Mercurio\_Valparaiso , p. 4 , 8 Enero 2016

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**Diputados** volverán a solicitar comisión que investigue el proyecto Cardones - Polpaico [🔗](#)  
El Mercurio\_Valparaiso , p. 5 , 7 Enero 2016

Kiosco de diarios y revistas

Mapa de noticias

Comentarios / Sugerencias

**FILTRO DE MEDIOS**

Limpia selección Filtrar

<input type="checkbox"/> Camara.cl	5
<input type="checkbox"/> El Mercurio de Valparaiso	5
<input type="checkbox"/> El Dinamo	4
<input type="checkbox"/> La Tercera	2
<input type="checkbox"/> Radio Cooperativa.cl	2
<input type="checkbox"/> La Nación.cl	2
<input type="checkbox"/> The Clinic Online	2
<input type="checkbox"/> Crónica - Chillán	2
<input type="checkbox"/> La Segunda	1
<input type="checkbox"/> Las Últimas Noticias	1

Biblioteca del Congreso Nacional de Chile / BCN
Noticias BCN
🔔 Sobre Noticias BCN

Senador  
**NAME**

Circunscripción 5  
Partido Demócrata Cristiano

Mi prensa
Mi partido
Noticias destacadas
Mis temas
🔍 Buscador

1 - 15 de 29 , noticias de: **Political Party** en los último treinta dias.

**Democracia Cristiana** realizó proclamación de Candidatos al Concejo Municipal puertovarino [🔗](#)  
El Heraldo Austral\_Puerto Varas , p. 5 , 6 Enero 2016

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**Alcaldes** se enfocan en las obras previo a la elecciones municipales [🔗](#)  
El Diario Austral\_Osorno , p. 2-3 , 6 Enero 2016

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**Dura respuesta DC** a grupo falangista que se desmarcó y criticó al Gobierno [🔗](#)  
El Mercurio\_Valparaiso , p. 7 , 5 Enero 2016

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**Cautela** en partidos de la Nueva Mayoría ante candidatura de Rodrigo Sepúlveda [🔗](#)  
El Centro\_Talca , p. 4 , 5 Enero 2016

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**Militantes DC** responden a facción crítica y dan apoyo "fuerte y claro" a las reformas [🔗](#)  
Radio Cooperativa.cl , 4 Enero 2016

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**Ex ministros, subsecretarios y militantes históricos de la DC** piden una profunda corrección al rumbo del Gobierno [🔗](#)  
El Mercurio , Cuerpo C , p. 2 , 3 Enero 2016

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**Ex autoridades de la DC** lanzan dura crítica y piden "una profunda corrección" al Gobierno [🔗](#)  
El Mercurio , 9 Enero 2016

Kiosco de diarios y revistas

Mapa de noticias

Comentarios / Sugerencias

**FILTRO DE MEDIOS**

Limpia selección Filtrar

<input type="checkbox"/> El Centro - Talca	2
<input type="checkbox"/> Las Noticias de Malleco	2
<input type="checkbox"/> Radio Cooperativa.cl	2
<input type="checkbox"/> El Mostrador	2
<input type="checkbox"/> El Sur - Concepción	2
<input type="checkbox"/> El Mercurio de Valparaiso	2
<input type="checkbox"/> Tribuna de Los Ángeles	1
<input type="checkbox"/> Radio Bio-Bio	1
<input type="checkbox"/> El Heraldo Austral	1
<input type="checkbox"/> El Observador	1

Fig. 2-A On top shows a hit list of the parliamentarian, 2-B the bellow image shows a hit list of the political party

In both image, figure 2-A and 2-B, we can see the first area on top with the image of the parliamentarian and the information about her/his zone and her/his political party and other link contacts. After that is the hit list of the parliamentarian or political party instant search and in the right column, it appears a summary amount of the results group by news media. Doing click over the hit, it can access details. In the detail of the news article the user has available the full text article with its corresponding image for magazine or newspaper news, sound for radio news, video for TV news.

## Outstanding News and News Map

When the articles are indexed in our search engine [3, 4], they are categorized and some subjects are extracted automatically applying cluster similarity and graph theoretic matching algorithm. According to the subjects frequency and similarity [3, 5], we can obtain some groups of subjects we call “Noticias destacadas” (Outstanding News), they represent a set of news that are being widely dealt by the press in the last days.

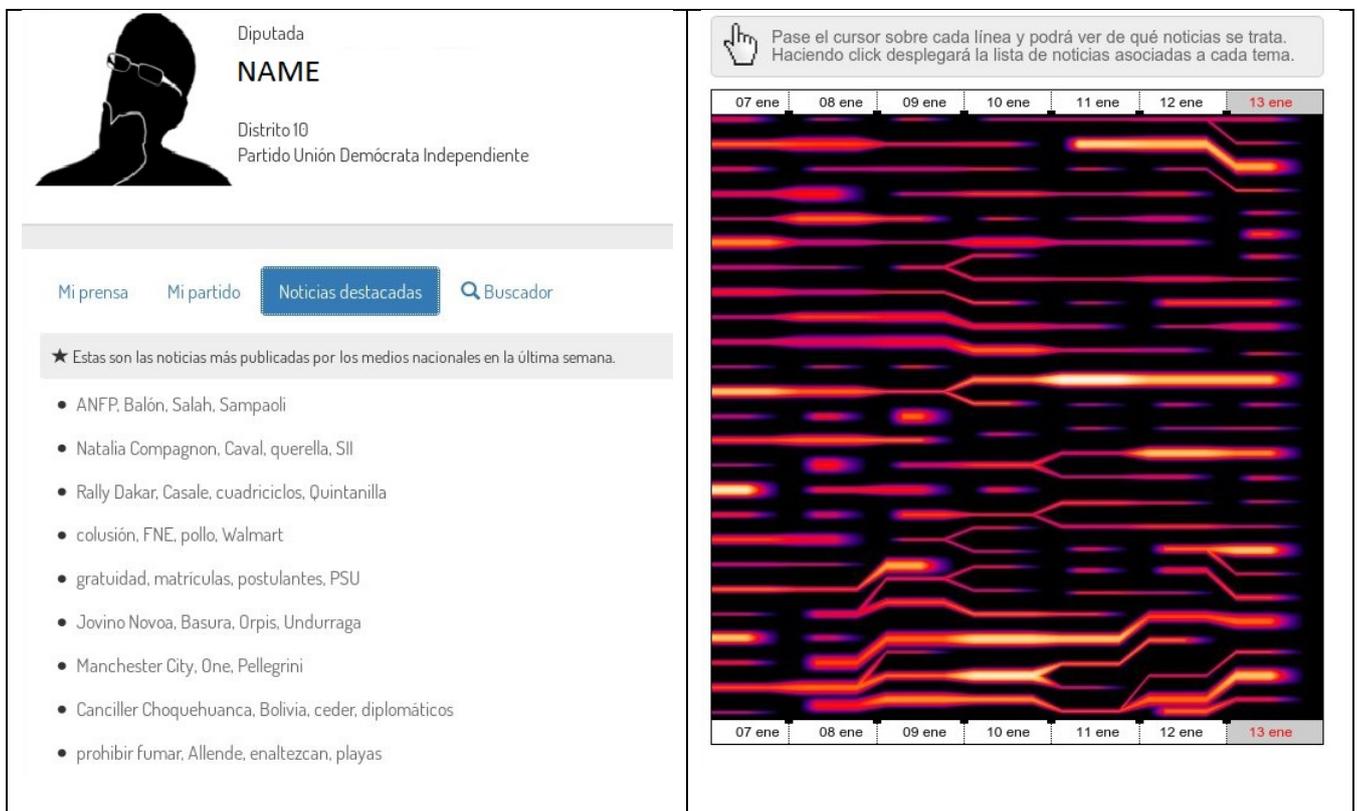


Fig. 3. In the left, it is shown outstanding news with 10 subjects, and in the right, it is shown the evolution of the subjects through time.

That can be appreciated in figure 3. In the left it is presented a list of the 10 more mentioned subjects in the news for the last day. If the user clicks over the subject, a hits list is displayed. On the other hand, at the right side we can see a graph: the x axis is the day, the y axis represents the subjects without order. This graph shows the evolution of the subjects in the last 7 days. The line represents the continuity a subject (cluster), the brighter represents the amount of news, and the thicker the line, the higher quality of similarity. A subject can evolve in two or more subjects.



## My Topics and Searches

The parliamentarian can search using several keywords, and he/she can filter the results by range date or group of news media, until finding what he/she is looking for. The keywords represent a topic of interest, they have a group of media and a range date (1 week, 2 months) associated, and they can be saved in the system as a personal topics list “Mis temas”. This way, each time the parliamentarian enters the system reviews his/her custom searches and the pupitre system automatically retrieves fresh published news respect to each topic.

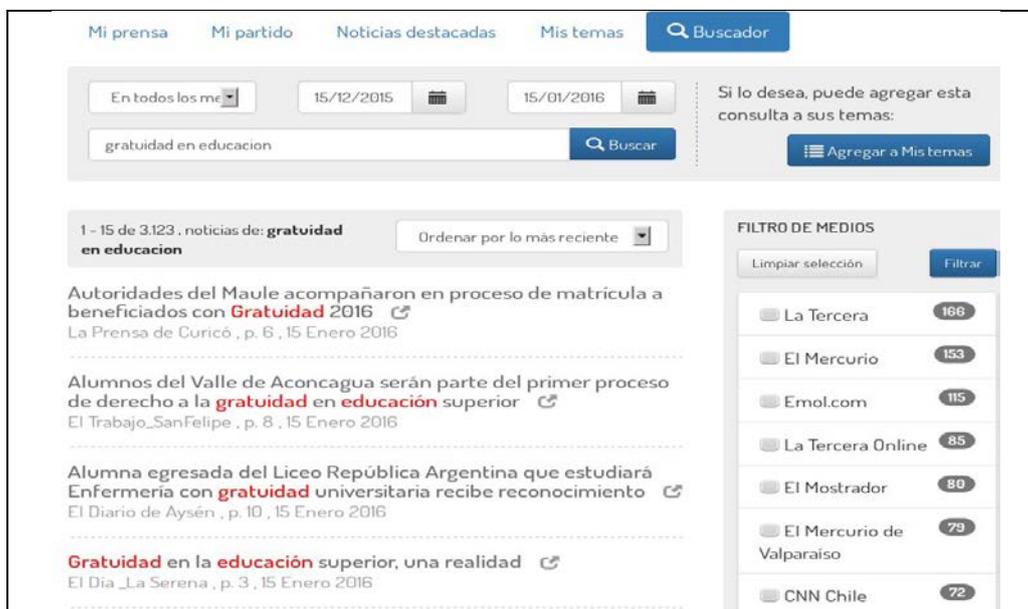


Fig. 4 Searching “gratuidad en educación” and the button “Agregar a Mis temas” is active.

For example, if the parliamentarian had a topic saved with the keywords “free education” in the last week in all media, he/she can access to this topic next day, or next week and the system delivers current news relative updated. In other words, each time that he/she access to the topic the hits are the latest. In figure 4 we can appreciate the results of a query and the button “Agregar a mis Temas” (Save the topic) is active (button in the right top). If we click in the button, the topic is saved and to retrieve the topic we need to go to the “Mis Temas”. The figure 5 shows the custom topic that had been saved and each topic shows some hits of latest news.

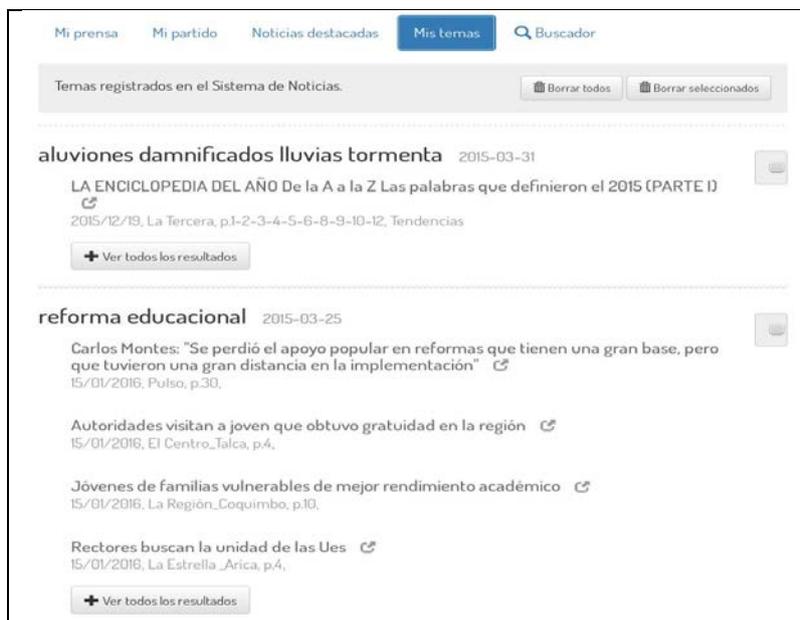


Fig.5 Two personal topics saved in the Pupitre “Mis temas”

## Technology Architecture

All days and during the day, a provider of news is responsible of the digitalization process or capture of news, and sends the data to our database. The news arrive at the system as they are published and the digitalization process has finished.

From the technological side, Pupitre System was wrote in python language using the plone framework and JavaScript for the presentation layer, Postgres as database engine, Autonomy as search engine, Readspeaker for speak the texts, Apache/Ldap for authentication and Debian as operating system.

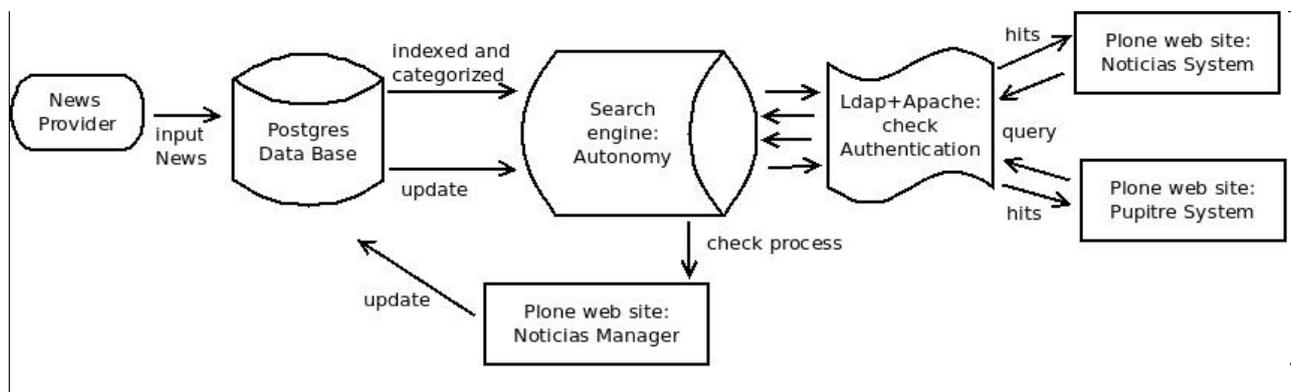


Fig. 6: Technology architecture of the news system.

As soon as the news are received in the data base, they are indexed for our full text search engine Autonomy [3], which is responsible for resolving the query of Noticias and Pupitre systems. All the access to the systems are checked by the LDAP [6] system that contains the information of all users of the system: Senate, Chamber of Deputies and Library of Congress. The quality process and technical support are developed by the group of work of the Library of Congress, they use the Noticias Manager system to correct news and also they it coordinates with the provider to solve data problems. This process can be seen in figure 6.

## Conclusions and Future Work

The library of Congress of Chile developed a powerful tool of news with customized information for each parliamentarian that delivers: news, topics and contingency in a one system, and it is not necessary to be visiting multiple web sites of the news media. An automatic authenticate procedure was implemented in the meeting rooms of the Congress in order to facilitate the access to the system, and this way keeping our parliamentarians well informed.

Today system is working without training or promotion. We are developing the strategy to make the product known in the parliamentarian community. The results to obtain will show a parliamentary community more informed and with a new tool useful for their legislative work.

In the future, we want to give access to Pupitre through the parliamentarian's cellphone and tablets, for that reason we are testing authentication of the MAC address (in Android system) or ID of

application (in Apple system). The first automatic authentication tests, in mobile devices, have been successful.

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## References

- [1] Senate of Chile: <http://www.senado.cl>
- [2] Chamber of Deputies of Chile: <http://www.camara.cl>
- [3] Autonomy Search engine: <http://www.autonomy.com>
- [4] “Expert Internet searching”, Phil Bradley, 4th edition.
- [5] “Survey of Text Mining, Clustering, Classification, and Retrieval”, Michael W. Berry.
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## About the authors:



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