

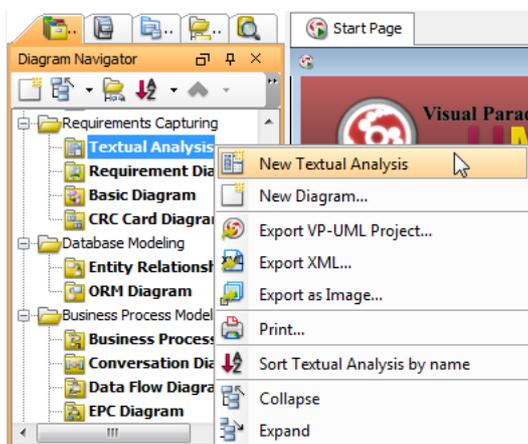


Perform Textual Analysis

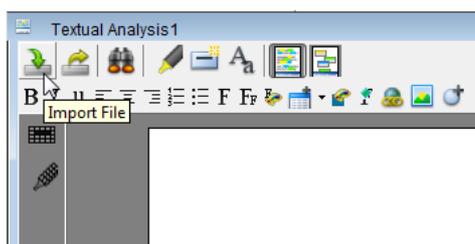
Written Date : December 8, 2010

OTV is a company which delivers online TV broadcasting services. It is going to improve its services by re-developing the online broadcasting system. In this tutorial, we will make use of [textual analysis](#) to identify main use cases of OTV's online broadcasting services, and form a [use case diagram](#) for further studies.

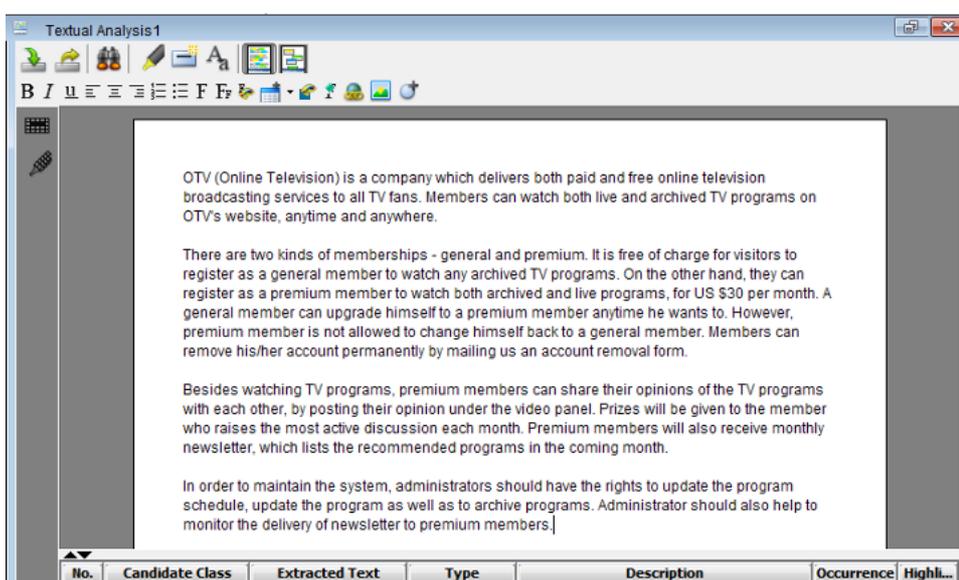
1. Download the attached document file *OTV.txt*, which describes the general business operations of OTV in advance.
2. Start Visual Paradigm.
3. Create a new project by selecting **File > New Project** from the main menu. Name the project as OTV and press **Create Blank Project** button.
4. Right click on **Textual Analysis** in **Diagram Navigator** and select **New Textual Analysis** from the pop-up menu.



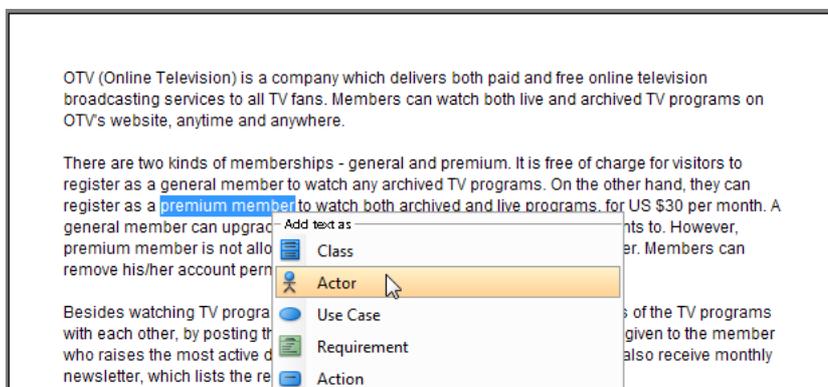
5. You can enter the problem statement in problem statement editor. Choose either type directly there, or import a text file. Let's try to import the downloaded text file. Click on the button **Import File**, select *OTV.txt* and click **Open** button.



6. The text is imported. Study the problem statement.



7. Now, identify all candidate actors that involve in the system. By reading the problem statement, we find the first candidate actor, *premium member* in the second paragraph. Highlight and then right click on it, and select **Add text as Actor** from the pop-up menu.



- Check out the grid at the bottom. It lists the properties of extracted candidate object: **Candidate Class** (candidate object's name), **Extracted Text** (the word/ phrase it extracted from), **Type** (candidate type), **Description**, **Occurrence** (the number of times the word/ phrase appears in the problem statement) and **Highlight** (the highlight color of candidate object).

OTV (Online Television) is a company which delivers both paid and free online television broadcasting services to all TV fans. Members can watch both live and archived TV programs on OTV's website, anytime and anywhere.

There are two kinds of memberships - general and premium. It is free of charge for visitors to register as a general member to watch any archived TV programs. On the other hand, they can register as a premium member to watch both archived and live programs, for US \$30 per month. A general member can upgrade himself to a premium member anytime he wants to. However, premium member is not allowed to change himself back to a general member. Members can remove his/her account permanently by mailing us an account removal form.

Besides watching TV programs, premium members can share their opinions of the TV programs with each other, by posting their opinion under the video panel. Prizes will be given to the member who raises the most active discussion each month. Premium members will also receive monthly newsletter, which lists the recommended programs in the coming month.

In order to maintain the system, administrators should have the rights to update the program schedule, update the program as well as to archive programs. Administrator should also help to monitor the delivery of newsletter to premium members.

No.	Candidate Class	Extracted Text	Type	Description	Occurrence	Highli...
1	premium member	premium member	Actor		3	

- The second candidate actor general member is found. Again, add it as candidate actor.

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In order to maintain the system, administrators should have the rights to update the program schedule, update the program as well as to archive programs. Administrator should also help to monitor the delivery of newsletter to premium members.

Context menu options: Add text as: Actor, Class, Use Case, Requirement, Action.

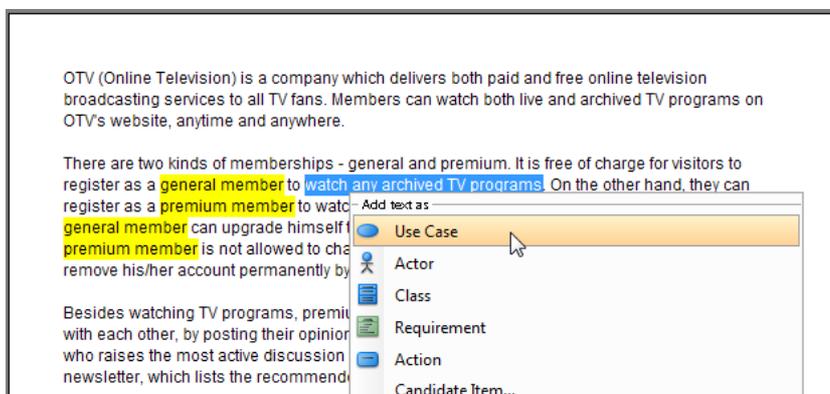
- In the last paragraph, we find the candidate actor *administrators*. Add text *administrators* as actor.

In order to maintain the system, administrators should have the rights to update the program schedule, update the program as well as to archive programs. Administrator should also help to monitor the delivery of newsletter to premium members.

Context menu options: Add text as: Actor, Class, Use Case.

Candidate Class	Extracted Text	Type	Occurrence
		Use Case	

- Now, identify candidate use cases. Candidate use cases usually name as a verb or verb+noun phrase. For instance, "watch any archived TV programs" in the second paragraph. Highlight and right click on "watch any archived TV programs", and select **Add text as Use Case** from the pop-up menu.



- Search the text below and identify them as candidate use cases:

Register as a general member
Register as a premium member
Watch both archived and live programs
Upgrade himself to a premium member
Remove his/her account
Posting their opinion
Receive monthly newsletter
Update the program schedule
Update the program
Archive programs
Monitor the delivery of newsletter

13. In order to distinguish the candidate objects in problem statement, we can change their highlight color. Let's select orange as the highlight color for candidate actors. Click **Highlight** cell of premium member and press the inverted triangle. Select orange from the combo box.

No.	Candidate Class	Extracted Text	Type	Description	Occurrence	Highli...
1	premium member	premium member	Actor		1	Yellow
2	general member	general member	Actor		2	Orange
3	administrators	administrators	Actor		1	Yellow
4	watch any archived	watch any archived	Use Case		1	Green
5	register as a premi	register as a premium	Use Case		1	Green
6	register as a gener	register as a general	Use Case		1	Green
7	upgrade himself to	upgrade himself to a	Use Case		1	Blue
8	remove his/her acc	remove his/her acco	Use Case		1	Blue
9	posting their opini	posting their opinion	Use Case		1	Purple
10	receive monthly ne	receive monthly new	Use Case		1	Pink
11	update the progr	update the program	Use Case		1	Yellow
12	update the progr	update the program	Use Case		1	Yellow
13	archive programs	archive programs	Use Case		1	Yellow
14	monitor the deliv	monitor the delivery	Use Case		1	Yellow

14. You may notice that some of the candidate actors and use cases can be renamed to make them shorter and more informative. Take candidate actor *premium member* as example, to rename a candidate actor, in the grid at the bottom, double click on *premium member* cell under **Candidate Class** and change it to *Premium Member*.

No.	Candidate Class	Extracted Text	Type
1	premium member	premium member	Actor
2	general member	general member	Actor

↓

No.	Candidate Class	Extracted Text	Type
1	Premium Member	premium member	Actor
2	general member	general member	Actor

15. On the other hand, you can enter description for *Premium Member*. The text you typed in **Description** cell will become the documentation of *Premium Member* actor. For example, enter "A premium member can watch both archived and live TV programs for US \$30 per month."

No.	Candidate Class	Extracted Text	Type	Description	Occurrence	Highli...
1	Premium Member	premium member	Actor	A premium member can watch both	1	Orange
2	general member	general member	Actor		2	Orange

16. Rename the other candidates and their description as shown below:

Candidate Class	Extracted Text	Description
General Member	general member	A general member can only watch archived TV programs. In order to watch live programs, s/he should upgrade his/her membership to be premium member.

Administrator	administrators	Administrator has the rights to update the TV program schedule, update and archive TV programs. S/He is responsible for mentoring the deliver of newsletter to premium members.
Watch Archived Program	watch any archived TV programs	Members can watch the scheduled archived TV programs anytime.
Register as General Member	register as a general member	It is free of charge to register as a general member.
Register as Premium Member	register as a premium member	No application fee is applied for registering as premium member.
Watch Live Program	watch both archived and live programs	Only premium members are allowed to watch live TV programs.
Upgrade Membership	upgrade himself to a premium member	A general member can upgrade his/her membership to a premium member.
Remove Account	remove his/her account	US\$50 of administrative fee is applied when premium members remove their account.
Post Opinion	posting their opinion	Premium members can post their opinion regarding TV programs on OTV's official website.
Receive Newsletter	receive monthly newsletter	Premium members can subscribe monthly newsletter for US\$300 per annum.
Update Program Schedule	update the program schedule	Administrator keeps updating TV program schedule fortnightly.
Update Program	update the program	Administrator keeps updating TV programs weekly.
Archive Program	archive programs	Administrator keeps archiving TV programs weekly.
Monitor Delivery of Newsletter	monitor the delivery of newsletter	Administrator is responsible for monitoring the delivery of newsletter.

Up to now, the textual analysis should look like this:

OTV (Online Television) is a company which delivers both paid and free online television broadcasting services to all TV fans. Members can watch both live and archived TV programs on OTV's website, anytime and anywhere.

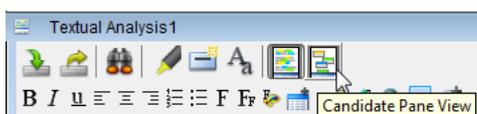
There are two kinds of memberships - general and premium. It is free of charge for visitors to register as a general member to watch any archived TV programs. On the other hand, they can register as a premium member to watch both archived and live programs, for US \$30 per month. A general member can upgrade himself to a premium member anytime he wants to. However, premium member is not allowed to change himself back to a general member. Members can remove his/her account permanently by mailing us an account removal form.

Besides watching TV programs, premium members can share their opinions of the TV programs with each other, by posting their opinion under the video panel. Prizes will be given to the member who raises the most active discussion each month. Premium members will also receive monthly newsletter, which lists the recommended programs in the coming month.

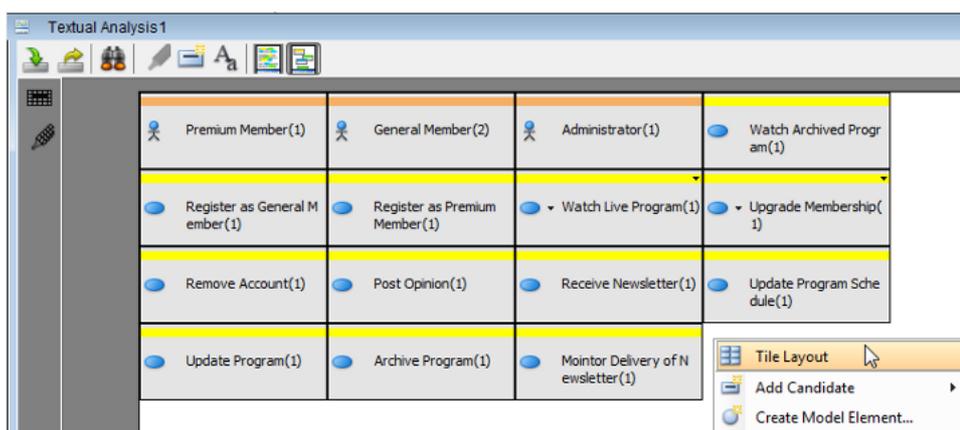
In order to maintain the system, administrators should have the rights to update the program schedule, update the program as well as to archive programs. Administrators should also be able to monitor the delivery of newsletter to premium members.

No.	Candidate Class	Extracted Text	Type	Description	Occurrence	Highlight
1	Premium Member	premium member	Actor	A premium member can watch both archived and live TV programs f	1	
2	General Member	general member	Actor	A general member can only watch archived TV programs. In order to	2	
3	Administrator	administrators	Actor	Administrator has the rights to update the TV program schedule, upd	1	
4	Watch Archived Pr	watch any archived T	Use Case	Members can watch the scheduled archived TV programs anytime.	1	
5	Register as General	register as a general	Use Case	It is free of charge to register as a general member.	1	
6	Register as Premium	register as a premium	Use Case	No application fee is applied for registering as premium member.	1	
7	Watch Live Program	watch both live and z	Use Case	Only premium members are allowed to watch live TV programs.	1	
8	Upgrade Membersh	upgrade himself to a	Use Case	A general member can upgrade his/her membership to a premium m	1	
9	Remove Account	remove his/her accou	Use Case	US\$50 of administrative fee is applied when premium members remo	1	
10	Post Opinion	posting their opinion	Use Case	Premium members can post their opinion regarding TV programs on	1	
11	Receive Newsletter	receive monthly new	Use Case	Premium members can subscribe monthly newsletter for US\$300 per	1	
12	Update Program Sc	update the program	Use Case	Administrator keeps updating TV program schedule fortnightly.	1	
13	Update Program	update the program	Use Case	Administrator keeps updating TV programs weekly.	1	
14	Archive Program	archive programs	Use Case	Administrator keeps archiving TV programs weekly.	1	
15	Monitor Delivery of	monitor the delivery	Use Case	Administrator is responsible for monitoring the delivery of newsletter.	1	

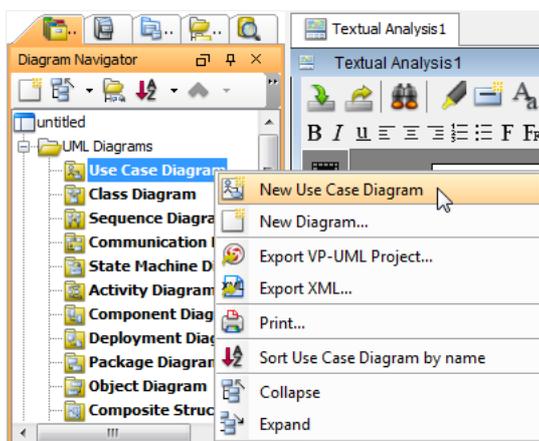
17. Let's switch to candidate pane by clicking **Candidate Pane View** button. Candidate pane view is where you can visualize candidate objects for easy arrangement.



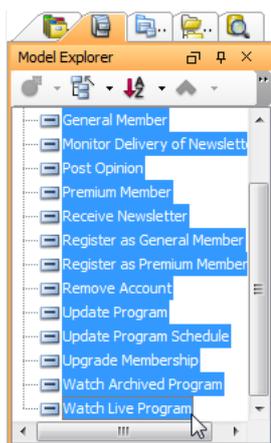
18. Right click on the background of candidate pane and select **Tile Layout** from the pop-up menu.



19. We are going to form a use case diagram with those candidate objects. Create a use case diagram through **Diagram Navigator**. Right click on **Use Case Diagram** and select **New Use Case Diagram** from the pop-up menu.



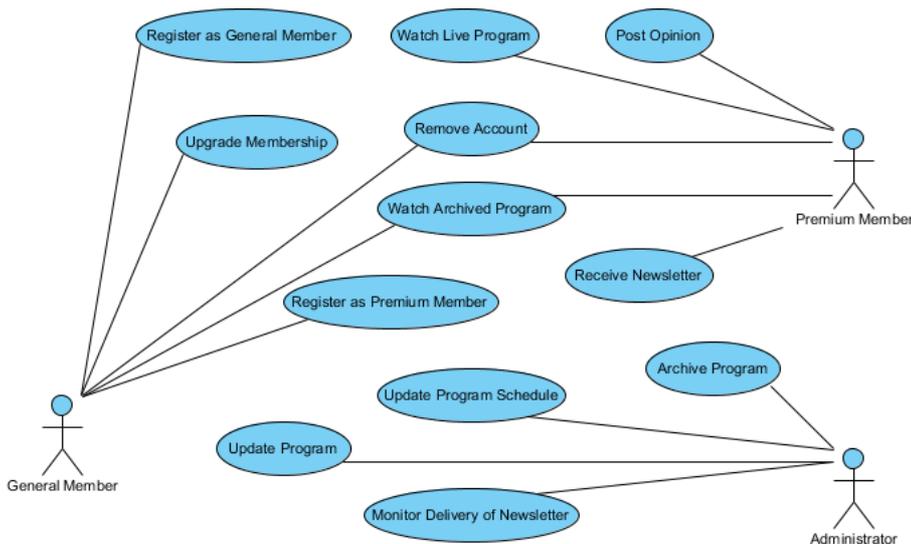
20. Open the **Model Explorer** (next to **Diagram Navigator**). Select all the candidate actors and use cases.



21. Drag them from **Model Explorer** and drop them all on the use case diagram. Rearrange the shapes to make the diagram alike the below image:



22. Associate actors with use cases. Finally, the diagram should look like the following:



23. Save the project. This is the end of the tutorial.



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