

Appendix B: Creating simple Agents

Agents are simple programs that let you perform repetitious tasks quickly and simply. You can use agents to automate almost any task that you can perform manually in a database. You can also use search options to select only articles matching your criteria and then create agents to perform tasks with those matching articles.

For example, you might want staff to receive an email each week that lists all active articles that have not been modified in the past year. You might also want a daily update of articles that have been created or modified in the past day.

Agents can be:

- **private** - used only by you; or
- **shared** - able to be used by other people who use your database.

No technical knowledge? No problem!

You do NOT need any programming or technical knowledge to create simple agents and you may create as many agents as you like.

OBJECTIVES

By the end of this chapter you should be able to:

- create simple agents
- create an agent using a worked example
- test your agent
- use your agents
- view at a list of your agents
- edit an agent
- delete agents (that you created) that you no longer need.

WHERE TO GO FOR MORE HELP, OR FOR AGENTS REQUIRING PROGRAMMING SKILLS

Complex agents and agents requiring programming skills are outside the scope of this User Guide. If you need to use complex agents consider the following two options:

- see your system administrator – they may be able to write the agent for you. Remember, you must know what you want the agent to do (you don't need to know how to do it though). Your system administrator may also be able to refer you to useful reference materials.
- refer to the Lotus Notes online help – Context Sensitive Help is represented by a question mark in the right top corner of dialogue boxes. Click on the question mark to see help about the feature you are currently at. If you do not have a dialogue box open press <F1>.

CREATING AGENTS

Important

This section does NOT cover each option available when you create agents. Only very simple agents, requiring no programming knowledge are discussed. If you need to use more complex agents see your system administrator.

1. Open the database in which you want to create the agent.
2. Go to the **Create** menu.
3. Select *Agent...*
4. The **Agent properties** dialogue box and the **Programmer's** pane display.

Note

You must select criteria from BOTH the Agent properties dialogue box and the Programmer's pane to create a working Agent.

The Agent properties dialogue box contains the name, description and details the conditions the agent will run under – *when* and the *how* the agent will do something. The Programmer's pane contains the actions – *what* the agent will do.

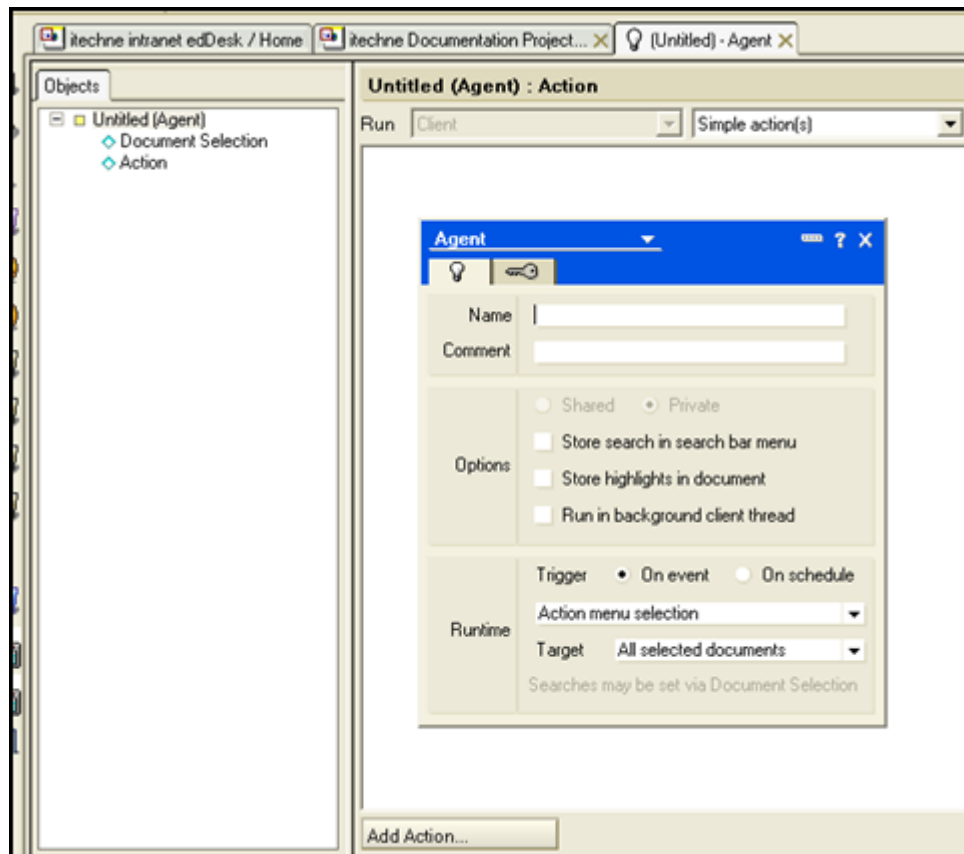


Figure 213: New agent showing Agent properties dialogue box (in foreground) and Programmer's pane (in background).

Agent properties dialogue box

1. **Name:** Enter a name for your agent.
2. **Comment:** Enter a description of the agent. The comment appears in a list of agents.

3. **Options:** You may notice that some of the options are greyed out (unavailable). The availability of options depends on your level of access to the database in which you are creating the agent.
 - *Shared / Private* – If you want to share this agent with other people who use your database click on the *Shared* option. If you are the only person who will run this agent click on *Private*.
 - *Store search in search bar menu* – if your agent is going to search for text in articles you can display your search criteria in the Search bar.
 - *Store highlights in document* – if your agent is going to search for text in articles you can highlight the matching text in the articles.
 - *Run in background client thread* – if you select this option your agents will not be seen by a user. However if you are using agents to email people this is OK! Don't worry too much about this option.
1. **Runtime:** You need to select a “trigger” for your agent. Triggers cause the agent to be run. You can select either:
 - *On event* – select a particular event, from the dropdown list under the trigger field, which will trigger the agent. ⓘ see below, [Runtime trigger: On event](#) for more detail about the *On event* options.
 - *On schedule* – schedule the time, day or frequency that the agent will run. ⓘ see below, [Runtime trigger: On schedule](#) for more detail about the *On schedule* options.

Runtime trigger: On event

1. You now need to select the event that will run your agent. The following options are available:
 - *Action menu selection:* The agent will be listed as an option in the **Action** menu. When you want to run the agent you need to go to the **Action** menu and select the agent. This is useful if you want to run the agent at varying intervals.

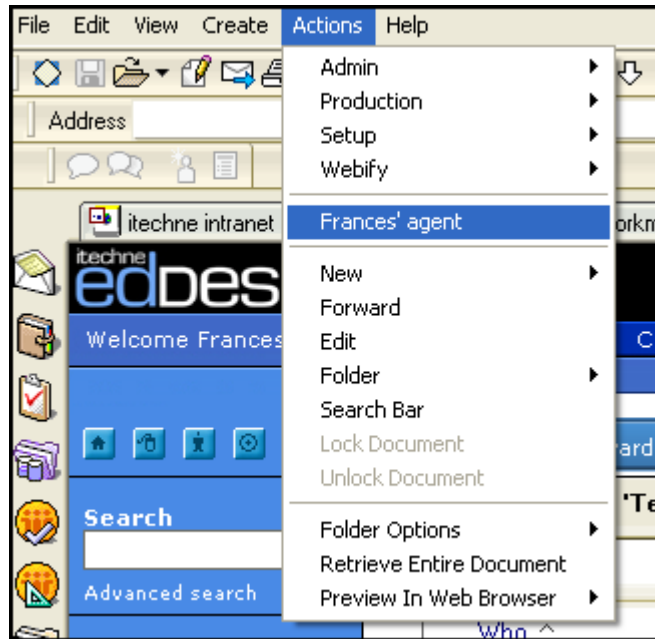



Figure 214: Action menu selection - the agent using this trigger is "Frances' agent".

- *Agent list selection:* For agents that are “called” by other agents – that is, other agents use this agent. **DON'T WORRY ABOUT THIS ONE.**
 - *Before new mail arrives:* Works on every item of mail before it is received in your mailbox. Can be used to move incoming mail to a folder. Use this option with care.
 - *After new mail has arrived:* Works on newly received mail. Particularly useful if you have just sent out many emails and people are responding to them – for example a client survey. You can use this option to send automated replies.
 - *After documents are created or modified:* **DON'T WORRY ABOUT THIS ONE.** May be used for workflow tasks, but the edDesk article workflow tab replaces the need for this option.
 - *When documents are pasted:* **DON'T WORRY ABOUT THIS ONE.** Used for articles that must be modified when they are pasted into a database.
2. **Target:** select the articles on which the agent will be run. Your options in the Target field vary depending on the Runtime trigger you selected. For example, the event runtime triggers “Before new mail arrives” and “After new mail has arrived” only act on mail items – not on articles. All available options are listed below.
- *All documents in database*
 - *All new and modified documents*
 - *All unread documents in view:* You select article search criteria and your agent only acts on articles matching those criteria.

- *All documents in view:* You select article search criteria and your agent only acts on articles matching those criteria.
 - *All selected documents.*
 - *None.*
3. Click on the *close* icon  (top right of the dialogue box) when you have entered your agent properties.
 4. The **Programmer's pane** is displayed.

Runtime trigger: On schedule

1. If you have selected *On schedule* as your runtime trigger you must select the frequency of the agent's running.
 - *More than once a day:* Only used for very high priority items. If you schedule very frequent runs you could slow your server!
 - *Daily:* For important items that you only need to know about once a day. itechne uses this for sending out a list of articles that have been modified or added in the day.
 - *Weekly:* For routine tasks, particularly useful for summary reports so you can see what has happened during the week.
 - *Monthly:* For low priority tasks. For example, archiving articles, distributing monthly newsletters.
 - *Never:* DON'T WORRY ABOUT THIS ONE.
2. Click on <Schedule...>. The **Agent Schedule** dialogue box displays.

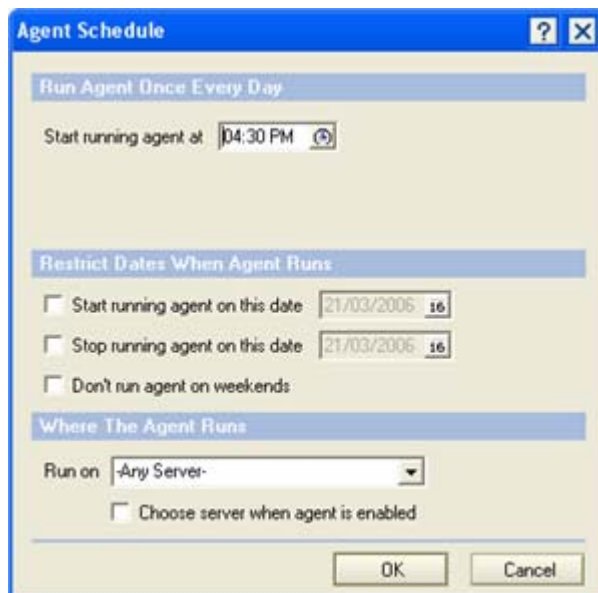


Figure 215: Agent Schedule dialogue box, where you enter the schedule by which to to run your Agent.

3. Use the **Agent schedule** dialogue box to specify the schedule by which your agent is run. Remember that agents do take up system memory, and complex agents, or agents running on many articles, will slow your

database down when they run. Specify a sensible schedule that has minimum impact on other users.

- **Run Agent Once Every Day:** Select the time your agent is to run. It will run at the same time each day (until you change the time). *Start running agent at:* If your agent is system intensive (takes a lot of memory, or will have to search through a lot of articles) select a time when you know that there are fewer people using your database.


- **Restrict Dates When Agent Runs:** These options are used to restrict the dates the agent runs. If you only want to use an agent for a particular period or not on the weekends you need to select your criteria here.

Start running agent on this date. If you want to start running your agent on a particular date click on the checkbox then enter the first date you want the agent to run. If you are not sure of the date format click on the calendar icon next to the date. A calendar is displayed. Select the required date.

Stop running agent on this date. If you want to stop running your agent on a particular date click on the checkbox then enter the last date you want the agent to run. If you are not sure of the date format click on the calendar icon next to the date. A calendar is displayed. Select the required date.

Don't run agent on weekends. If you don't want your agent to run on weekends, check this option.

- **Where the Agent Runs:** Only change this option if you know which servers your database uses. Most people will leave this option at *-Any Server-*.

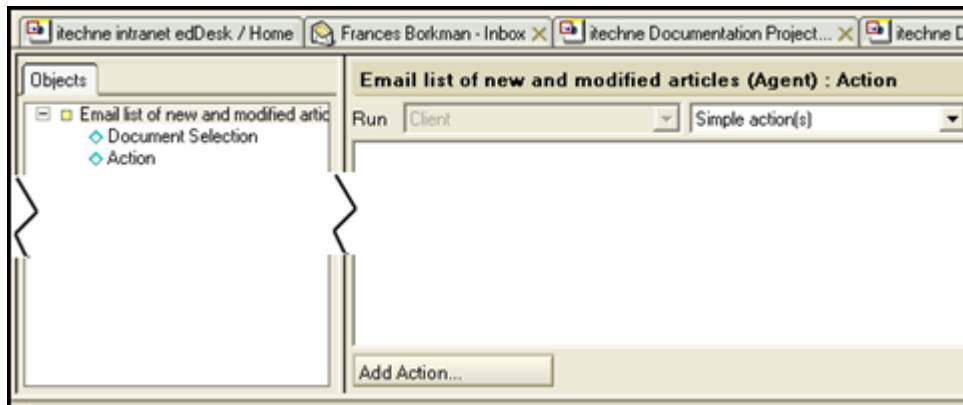
4. Click on **<OK>** when you have set your Agent Schedule.
5. **Target:** select the articles on which the agent will be run. On schedule has only two options:
 - *All documents in database*
 - *All new and modified documents*
6. Click on the close icon  (top right of the dialogue box) when you have entered your agent properties.
7. The **Programmer's pane** is displayed.

Programmer's pane

The **Programmer's pane** is where you select the actions done by the agent. That is, *what* the agent does. You can also specify which articles are to be selected.

The Programmer's pane is divided into two panes – the left pane is the **Objects** tab. There are two available options - *Document Selection* and *Action*. *Document Selection* is not always used, but it is where you can specify that the agent run on only a particular set of articles. Use *Document Selection* if the **Agent properties**

dialogue box did not allow sufficiently refined article selection criteria. Action is always used and is the selected option when you first enter the **Programmer's pane**.



Action object

1. Click on <Add Action...>.
2. The **Add Action** dialogue box displays.

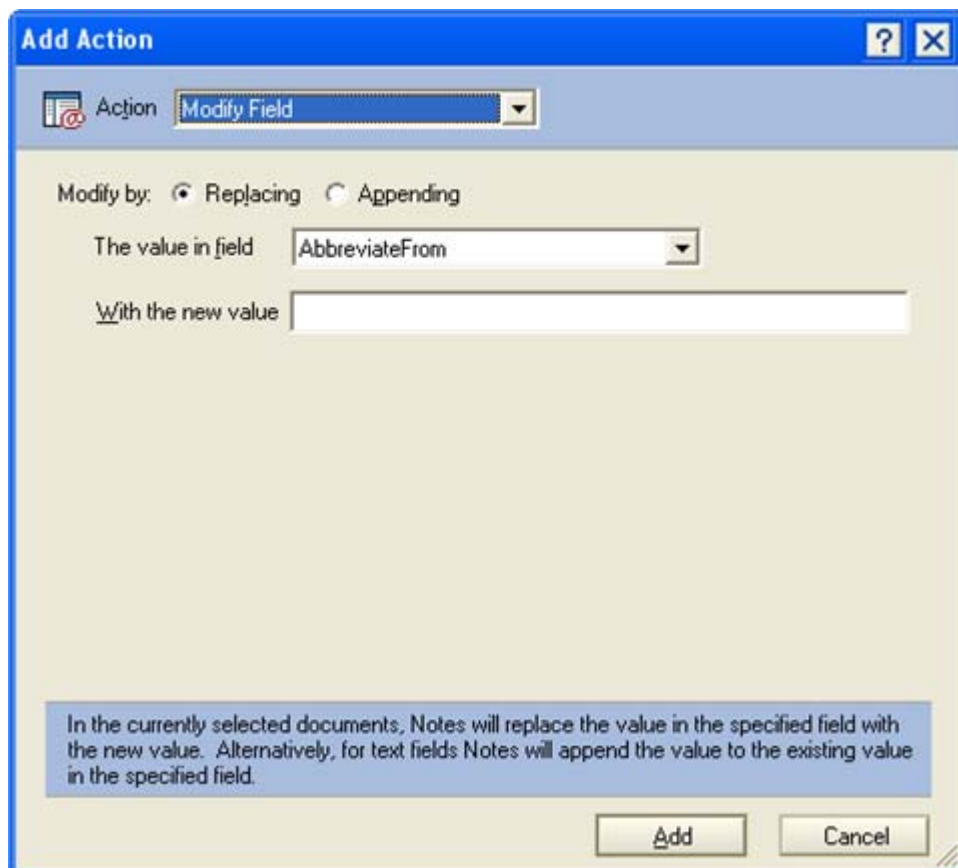


Figure 216: Add Action dialogue box on entry, showing default action of "Modify Field".

3. Action: The default action is *Modify Field*. Click on the dropdown list to see a list of available actions. Look at the bottom of the dialogue box - outlined in blue is a description of what the selected action does.

The options for the actions change as you select different actions. Compare [Figure 216](#), above, with the **Add Action** dialogue box below (after a different action has been selected).

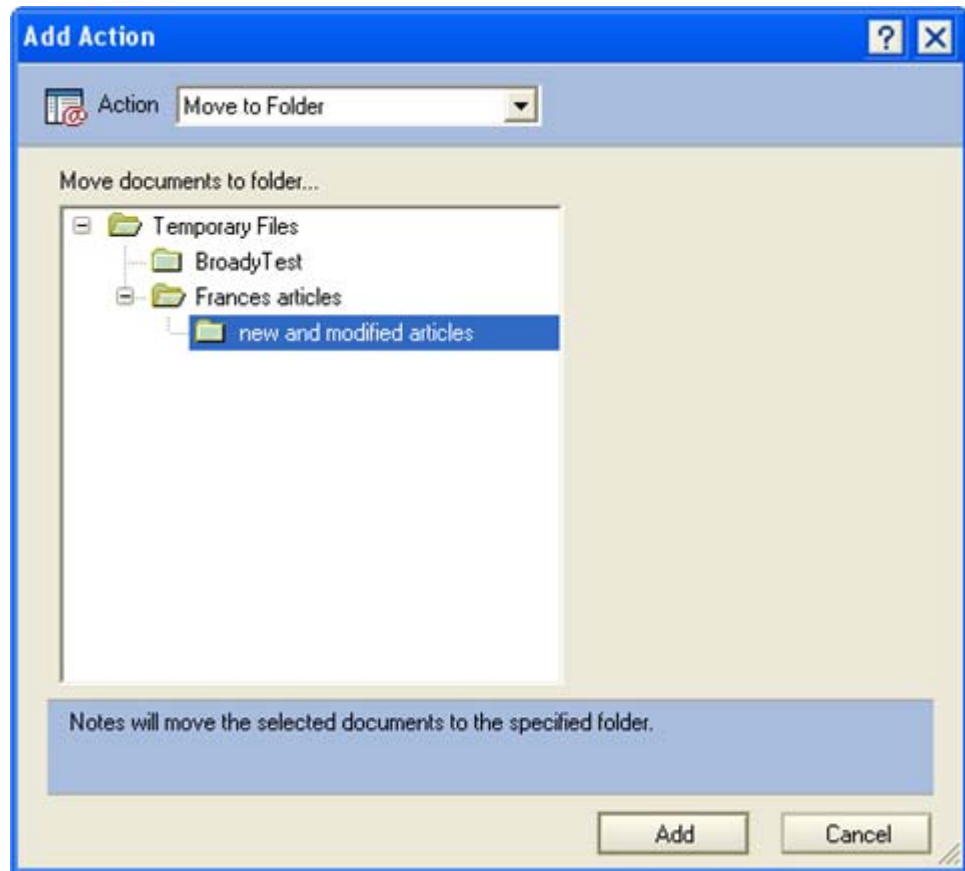


Figure 217: Add Action dialogue box with a the Action “Move to Folder” selected. This action moves articles specified in the Agent properties dialogue box to the selected folder.

4. Select the required action and the parameters that your selected action needs to be completed. (In [Figure 217](#), above, the parameter is to select the folder to which you want to move your articles).

Some Actions have no parameters.

If there are no parameters for an action the blue action description box will contain “This action does not require any parameters.” There will be nothing for you to select other than the action itself.

5. Click on <Add>. Your action is added to the agent and appears in the **Programmer’s pane**.

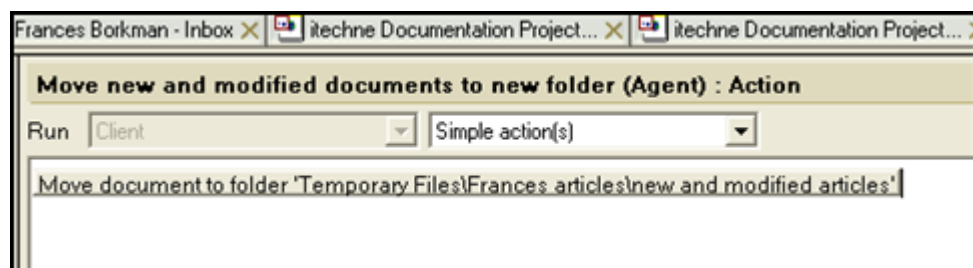


Figure 218: Action “Move to Folder” now added to programmer's pane.

6. If you want to add more actions for your agent to perform repeat steps 3 to 5. Actions must be added in the order that you want them to be run.

Document Selection object

1. Click on *Document Selection* in the **Objects** tab.
2. The **Programmer's** pane displays as below:

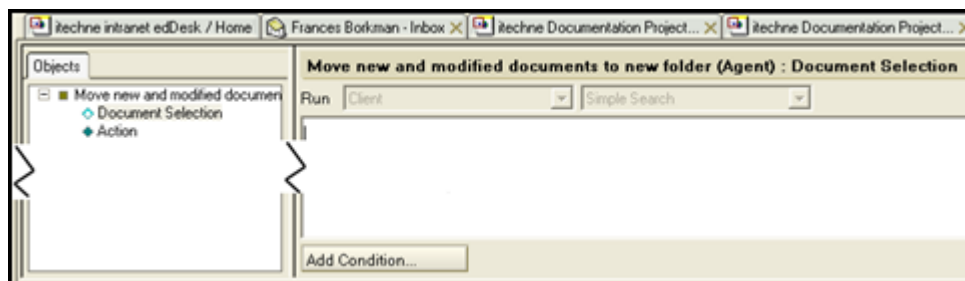


Figure 219: Document Selection object selected in the Programmer's pane.

3. Click on <Add Condition...>. The **Add Condition** dialogue box displays.
 ⓘ see section 5.6i: Conditions for details on specifying the most commonly selected conditions.

SAVING YOUR AGENT

Do **one** of the following:

4. Press <Ctrl> + s; OR
5. Select the **File** menu then select *Save*; OR
6. Click on the close icon (the cross at the top right of the Agent tab name). You are prompted "Do you want to save your changes?" Click on <Yes>.

TESTING YOUR AGENT

It is important to test your agent to make sure that it runs correctly.

If your agent is going to manipulate articles, or email you a list of new or modified articles then create at least one new article so that you receive some indication that the agent is running correctly.

Have a new or modified article ready

It is best to ensure that there is at least one new or modified article in your database, so that you can see exactly what the email will look like. If necessary create a dummy article (you only need to complete the mandatory fields in the **Basics** tab).

1. Close the agent (click on the cross at the top right of the **Agent** tab name).
2. Go to the **View** menu.
3. Select *Agents*. A list of all of your agents is displayed.

Name/Comment	Alias	Trigger	Private	Last Modified	Last Modified By	No Refresh	Notes	Web
Frances' agent action menu selection		Scheduled	✓	16/03/2006 11:27:34 AM	Frances Borkman/Techne/V	✓	✓	✓
Move new and modified documents to ne		Scheduled	✓	15/05/2006 11:56:27 AM	Frances Borkman/Techne/V	✓	✓	✓
new agent		Menu	✓	17/05/2006 02:18:58 PM	Frances Borkman/Techne/V	✓	✓	✓
New and Modified Articles sends daily email about new and modif		Scheduled	✓	21/03/2006 07:59:16 PM	Frances Borkman/Techne/V	✓	✓	✓
pasted agent pasted documents		Pasted	✓	21/03/2006 12:27:49 PM	Frances Borkman/Techne/V	✓	✓	✓

Figure 220: List of all of my agents.

4. Highlight the agent that you want to test.
5. Go to the **Agent** menu.
6. Select *Test*.
7. After the agent has been tested a **Test Run Agent Log** displays.

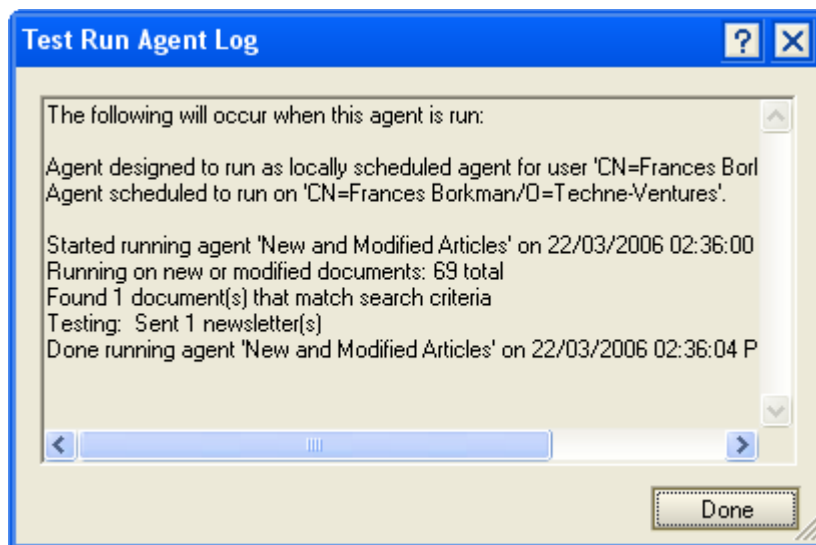


Figure 221: Test Run Agent Log

8. Read the **Test Run Agent Log** carefully as it tells you about the total number of articles in your database, how many meet the criteria specified by the agent and what will happen to those articles. In the Log above a newsletter summary will be sent to recipients specified in the programmer's pane.
9. Click on *<Done>*.

DELETING AND DISABLING AGENTS

Only delete agents that you have created and that only you run! If you are not sure that you are the only person who uses an agent disable it instead of deleting it.

Delete – permanently removes the agent from the database.

Disable – the agent is still in the database, but it cannot be run.

Deleting an agent

1. Go to the **View** menu.
2. Select *Agents*. The **Agents list** is opened.

3. Select the agent to be deleted.
4. Press <Delete>. You are prompted Delete agent '(agent name)' permanently from the database?
5. Click <Yes>.

Disabling an agent

1. Go to the **View** menu.
2. Select *Agents*. The **Agents list** is opened.
3. Select the agent to be disabled.
4. Click on <Disable>.

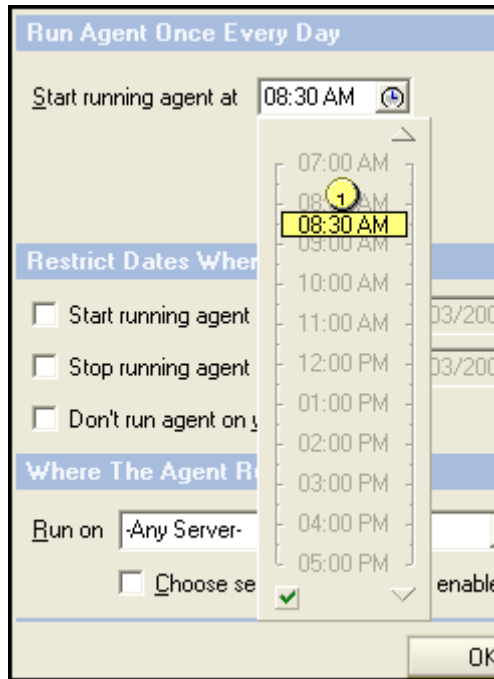
WORKED EXAMPLE – AN AGENT TO SEND A DAILY EMAIL THAT LISTS NEW AND MODIFIED ARTICLES

This agent sends an email each weekday morning (at 8:30am) to other people in an organisation. The email lists all new and modified articles in a database. Each new and modified article has a link so that people can open the article. Other information displayed is the article author, modification or addition date, article size (in bytes) and article subject.

1. Open the database in which you want to create the Agent.
2. Go to the **Create** menu.
3. Select *Agent*.

Agent properties dialogue box

4. Name: Type "*New and Modified Articles*"
5. Comment: Type "*sends daily email about new and modified articles*"
6. Trigger: Select *On schedule*.
7. Select *Daily* from the dropdown list.
8. Click on <Schedule...>
9. Start running agent at: Click on the clock icon in this field.
10. Scroll through the list until the time displayed is *08:30AM*.



11. Click away from the list. You are returned to the **Agent Schedule** dialogue box.
12. Don't run agent on weekends: Select this.
13. Click <OK>.
14. Target: select *All new and modified documents*.
15. Close the **Agent Properties** dialogue box.

Programmer's pane

16. Look down at the bottom of the pane. Click on <Add Action...>.
17. Action: Click on this list and select *Send Newsletter Summary*.
18. To: Type the email addresses of the people to whom you are sending the list of new and modified articles. If you have a group contact list, you may type its title. For example, #staff@company.com.
19. Subject: Type *New and Modified Articles*.
20. Send the following message: This field is for text that appears in the body of an email. Type *The following articles are new or have been modified:*
21. Include summary for each document using view: Make sure this field is ticked. Then select *All Documents*. Your email will include information displayed in the view "All Documents" (a very useful view!).
22. The **Add Action** dialogue box should look like the one below. (The address of the recipients will be different)

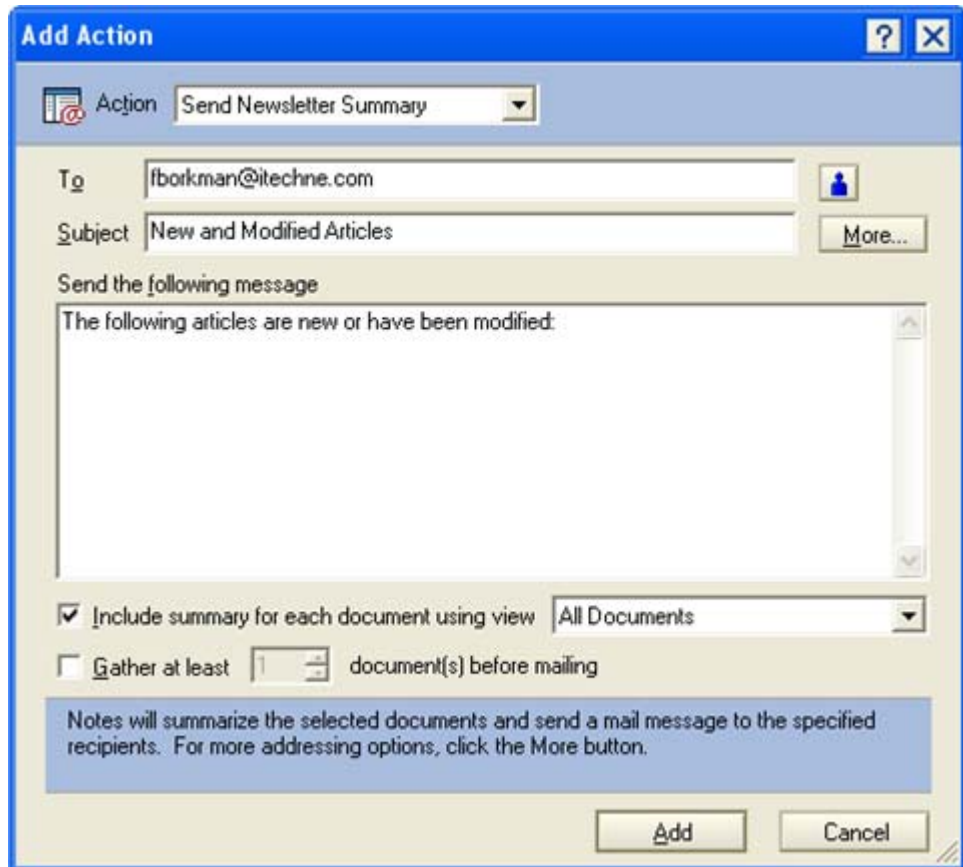


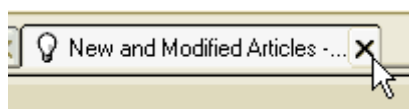
Figure 222: Completed Add Action dialogue box as per the instructions in this example.

23. Click on <Add>.
24. Your action is now added to the agent. The **Programmer's** pane is displayed as below.



Figure 223: Programmer's pane after you have completed the Add Action dialogue box.

25. Save your agent by either:
 - going to the **File** menu then selecting *Save* OR
 - pressing <Ctrl>+s
26. Close the agent. (Click on the cross in the agent's tab).



Test your agent

Have a new or modified article ready

It is best to ensure that there is at least one new or modified article in your database, so that you can see exactly what the email will look like. If necessary create a dummy article (you only need to complete the mandatory fields in the **Basics** tab).

27. Go to the **View** menu.
28. Select *Agents*.
29. Highlight the agent you want to test.
30. Go to the **Agent** menu.
31. Select *Test*.
32. Read the **Test Run Agent Log** carefully to make sure that your agent has run as expected. Make any required modifications to your agent.