

Language Grid Service Manager (Ver. 1.2)

2010/10/04

Table of Contents

1.	Preface.....	1
1.1.	Functions of Language Grid Service Manager.....	1
1.2.	System Requirements.....	3
1.3.	Usage Notes.....	3
2.	Common Functions	3
2.1.	Login	3
2.2.	Access to Registered Information in the Language Grid.....	3
2.3.	Edit User Profile.....	8
2.3.1.	Update of User profile.....	8
2.3.2.	Change Password	9
3.	Functions of Providing Services.....	9
3.1.	Registration/Unregistration of Language Resources.....	9
3.1.1.	Registration of Language Resources	9
3.1.2.	Edit Language Resource Profile.....	11
3.1.3.	Schedule Unregistration of Language Resources.....	12
3.1.4.	Cancellation of Unregistration of Language Resources	13
3.2.	Registration/Unregistration of Language Services.....	13
3.2.1.	Registration of Atomic Services.....	13
3.2.2.	Endpoints Setting	14
3.2.3.	Registration of Composite Services	15
3.2.4.	Edit Registered Language Service.....	16
3.2.5.	Schedule Unregistration of Language Services.....	16
3.2.6.	Cancellation of Unregistration of Language Services	17
3.3.	Suspension/Restart of Language Services.....	17
3.3.1.	Suspension of Language Services	17
3.3.2.	Cancellation of Suspension of Language Services.....	17
3.3.3.	Restart of Language Resource.....	17
3.4.	Monitoring of Language Services	18
3.4.1.	Statistics of Usage and Access Log.....	18
3.5.	Setting Access Rights for Language Services	19
3.5.1.	Blocking and Permitting Access of Language Grid Users	19
3.6.	Access Control Settings of Language Services	20
3.6.1.	Add an access control setting	20
3.6.2.	Clear Access Control Settings.....	21

3.6.3. Initial Settings of Access Control.....	21
4. Functions for Language Grid Operator	22
4.1. Task Management of the Language Grid Operator.....	22
4.1.1. View of Operational Tasks.....	22
4.2. Prevention of Fraudulent Use.....	22
4.2.1. Request for Changing Users' Passwords.....	23
4.2.2. Monitoring Excessive Use.....	23
4.3. Registration/Unregistration of a Language Grid User.....	24
4.3.1. Registration of User ID	24
4.3.2. Deletion of a User ID	24
4.4. Edit User Profile.....	24
4.4.1. Update of User Profile.....	24
4.4.2. Change Password	25
4.5. Access Control of Language Grid Users	25
4.6. Registration/Unregistration of Language Resources.....	25
4.6.1. Registration of Language Resources	25
4.6.2. Edit Language Resource Profile.....	26
4.6.3. Schedule Unregistration of Language Resources.....	26
4.7. Registration/Unregistration of Language Services.....	26
4.7.1. Registration of Atomic/Composite Services	26
4.7.2. Edit Language Service Profile.....	26
4.7.3. Schedule Unregistration of Language Resources	27
4.8. Suspension/Restart of Language Services.....	27
4.9. Monitoring of Language Services	27
4.9.1. Statistical Usage Information and Access Log Display	27
4.10. Setting Access Rights for a Language Services	27
4.10.1. Blocking and Permitting Access of a Language Service User	28
4.11. Access Control Settings of Language Services	28
5. Inquiries.....	28

1. Preface

Language Grid Service Manager is a Web-based management tool of the Language Grid developed by the Language Grid Project at the National Institute of Information and Communications Technology. With this tool, Language Grid Users can manage their language or computation resources easily. Also, the Language Grid Operator can manage the entire operation of the Language Grid. The tool allows easy management of registered information of the users, access by the users, language resources, and language services.

1.1. Functions of Language Grid Service Manager

This tool provides a different range of controls to each role in the Language Grid. Currently, it provides a function to view registered information in the Language Grid to all roles.

The functions available for both the Language Grid User and the Operator are below:

- Access to registered information in the Language Grid

You can refer to information about all events in the Language Grid, such as registration/suspension/restart/unregistration of language resources and services. You can also access all sorts of registered information in the Language Grid, such as lists of Language Grid Users, language resources, and language services.

- Monitoring of language services

You can monitor usage statistics of all registered language services in the Language Grid. You can check the total number of accesses per year/month/day.

- Edit User Information

You can edit registered your profile information in the Language Grid. You can also change your password for login.

The Language Grid Service Manager offers the Operator the following functions.

- Task management of the Language Grid Operator

There are various tasks for the Language Grid Operator, such as authorizing language resource and service registration. This tool enables tasks to be managed.

- Registration/unregistration of Language Grid Users

The Operator issues an ID and a password to register a user with this function. The Operator can also delete an ID of a registered user.

- Monitoring of language services

The Operator monitors usage statistics of all registered language services in the Language Grid. The total number of accesses per year/month/day can be checked. Logs of each access (time, source IP address, data traffic) can also be checked.

- Access right setting of language services

The Operator can set access rights of each Language Grid User for all registered language

services. The Operator can also permit access rights to particular users or block access by other particular users.

- Operation as a superuser

On behalf of Language Grid Users, you can change a user's profile information and password, and can register language resources and services. You can also operate the following tasks on language services on behalf of Language Grid Users: (1)suspension/restart (2)change of resource/service profile information (3)setting of terms of service use, and (4)access monitoring.

The Service Manager offers the following functions to Language Grid Users:

- Registration and deletion of language resources

You can register your atomic and composite services in the Language Grid and add the services' profile information (such as name, type, target languages) and release it to other users. You can also unregister the services and profile information.

- Setting of copyright and license information

You can put the URL describing the copyright or license information of your language resources in the Language Grid to notify the Users. The information can be displayed with each response message to the Language Grid Users.

- Registration and deletion of language services

You can register your language services and add the services' profile information (such as a name, type, target languages of the services) and release to other Users. Also you can delete the services and profile information from the Language Grid.

- Suspending and restart of language services

You can change the status of your language resource to accessible/inaccessible from the Language Grid.

- Access right control of language resources

You can set access rights of each Language Grid User for your language resource. You can also permit access rights to particular users or block access by other particular users.

- Access control of language services

You can set access controls on your language services. For each user, you can control access to your service by limiting the number of accesses per year/month/day. Likewise, you can limit the maximum amount of data per access per year/month/day by each user.

- Monitoring of language services

You can check the statistical information on the use of your language services, which includes total number of accesses to your service per year/month/day, or logs of each access (time, source IP address, data traffic). You can also check the registered information of users of your language services.

1.2. System Requirements

Since the Language Service Manager is a Web-based tool, all you need is a Web browser. We recommend Internet Explorer 7.0 or FireFox, as they are used to check operation of the system.

1.3. Usage Notes

To maintain security, each screen expires in 30 minutes. If you open a window and leave it for 30 minutes without moving onto another screen, your account will logout automatically. In that case, if you try to do something on the screen, the window will display the message “The page you requested has expired.” Click “Return to homepage” to login again.

2. Common Functions

2.1. Login

This section gives instructions for logging into the Language Grid Service Manager.

1. On the Web browser, access the URL (http://langrid.org/operation/service_manager/) of the Language Grid Service Manager.
2. Click “login” on the upper left corner of the top page and a login page will appear.
3. Enter the user ID and password issued by the Operator, and click “Login”. When you forget your password and cannot login, please contact the Operator (operation@langrid.org).
4. When login is successful, you can check the list of all events on the Language Grid, such as registration/suspension/restart/unregistration of language services.
5. When 90 days pass since the last change of your password, you are suggested to change your password. If you want to change it next time, please click the cancel button.

2.2. Access to Registered Information in the Language Grid

You have access to registered information in the Language Grid, such as information on Language Grid Users, language resources, and language services.

1. From the left menu, click “View of Language Grid”. A submenu will appear that lists Language Grid Users, Language Resources, and Language Services.
2. To see a list of Language Grid Users, click “Language Grid Users” in the submenu. Click each organization name for detailed information on a user (Figure 1). The information includes the items listed below:
 - User ID: An ID issued to the Language Grid User
 - Organization: The name of the organization of the Language Grid User, who exchanged the Agreement with the Language Grid Operator.
 - Responsible Person: The name of the person in charge at each user organization
 - E-mail: Contact E-mail address of each user organization. The Operator will send

notifications or inquiries to this address.

- Homepage: URL of the user's website
- Address: Postal address of the user
- Registration Date: The date the user was registered

The screenshot shows a Windows Internet Explorer window titled "Language Grid Service Manager - Windows Internet Explorer". The URL in the address bar is http://landev.nict.go.jp/service_manager/. The main interface has a sidebar menu on the left with items like Overview, View of Language Grid, News, Language Grid Users, Language Resources, Language Services, Computation Resources, Language Resource Provider, Language Grid Operator, Language Service Settings, User Settings, and Manual. The "Language Grid Users" item is currently selected. A central panel displays the "User Profile" of a user named Hitoshi Isahara. The profile information includes:

Organization	Computational Linguistics Group, National Institute of Information and Communications Technology
Responsible Person	Hitoshi Isahara
E-mail	clg-info [at] khn.nict.go.jp
Homepage	http://www2.nict.go.jp/x/161/en/index.html
Address	3-5 Hikaridai, Seika-cho, Soraku-gun, Kyoto, 619-0289, Japan
Registration Date	2007/11/28

A red arrow points from the "User Profile" section to the bottom of the page, where a tooltip says "Click here to open a popup window of a User's profile." Below the profile table, there is a list of language resources, each with a name and a corresponding URL. One entry, "Future University-to-kodate", is highlighted with a red arrow.

Figure 1: Detailed information on Language Grid Users

3. To see a list of registered language resources, click “Language Resources” in the submenu. Click each name in the language resource list to get detailed information (Figure 2). The information includes the items listed below:

- Resource ID: The ID issued to the language resource
- Resource Name: The name of the language resource
- Resource Type: The type of language resource. Currently there are twelve types as follows: BILINGUAL DICTIONARY, CONCEPT DICTIONARY, DEPENDENCY PARSER, DIALOG CORPUS, MULTILINGUAL DICTIONARY, MORPHOLOGICAL ANALYZER, PARALLEL TEXTS, PARAPHRASER, PICTOGRAM DICTIONARY, SIMILLARITY CALCULATOR, and TRANSLATOR.
- Resource Description: Description of a language resource

- Languages: Target languages of the language resource. The languages are displayed in language codes. If you do not know which code represents which language, check the table of ISO language codes (http://www.loc.gov/standards/iso639-2/php/code_list.php).
- Copyright: Copyright information of the language resource
- License: URL of the web site where the license information of the language resource is described.
- Provider: Information of the provider of the resource.
- Registration Date: The date the language resource was registered.
- Last Update Date: The last date the language resource was last updated.
- Status: Status of the language resource. There are three statuses as follows: Pending (after registration, waiting for authorization), Run (after authorization), and Unregister (when the unregistration date is set).

The screenshot shows the Language Grid Service Manager interface in Internet Explorer. On the left, there's a sidebar with a menu. In the center, there's a table titled 'Language Resource' with columns for 'Resource Name' and 'Resource'. One row in this table is highlighted with a red arrow pointing to it. To the right of the table is a large panel titled 'Resource Profile' containing various details about the selected resource. A second red arrow points from the bottom of the table towards the 'Resource Profile' panel.

Resource Profile	
Resource ID	jserver.nict
Resource Name	J-Server
Resource Type	Translator
Resource Description	-
Languages	Single/Bidirectional pairs - Japanese: [ja] <-> Chines (Traditional): [zh-TW] - Japanese: [ja] <-> Korean: [ko] - English: [en] <-> Japanese: [ja] - Japanese: [ja] <-> Chines (Simplified): [zh-CN]
Copyright	Kodensha Co., Ltd.
License	-
Provider	Language Infrastructure Group, National Institute of Information and Communications Technology
Registration Date	2007/11/28
Last Update Date	2010/08/05
Status	Run

Click here to open a popup window of language resource's profile.

Figure 2: Detailed information of language resources

4. To see the list of registered language services in the Language Grid, click “Language Services” in the submenu. Click each name of the language service for detailed information (Figure 3 & 4). The information includes the items below:

- Service ID: The ID issued to a language service

- Service Name: The name of a language service
- Service Type: The type of a language service. Currently there are fourteen types as follows: ADJACENCY PAIR, BACK TRANSLATION, BILINGUAL DICTIONARY, BILINGUAL DICTIONARY WITH LONGEST MATCH SEARCH, CONCEPT DICTIONARY, DEPENDENCY PARSER, MORPHOLOGICAL ANALYSIS, MULTIHOP TRANSLATION, PARALLEL TEXT, PARAPHRASER, PICTOGRAM DICTIONARY, SIMILARITY CALCULATION, and TRANSLATION.
- Service Description: Description of a language service
- Atomic or Composite: Shows whether the service is atomic or composite.
- Languages: Target languages of a language service. The languages are displayed in language codes. If you do not know which code represents which language, check the table of ISO language codes (http://www.loc.gov/standards/iso639-2/php/code_list.php).
- Purpose of Use: You can set the restriction on the purpose for which a language service may be used (including the “Non-profit Use”, and “Research Use”)
- Type of Application Control: You can set the restriction on the type of control adopted for an application system that uses the language service (including the use “Under Client Control” or “Under Server Control”);
- Permitted Users: You can set the range of access permission. There are two types as follows: “For All Users”: for all Language Grid Users. “Members Only”: exclusively for permitted users.
- WSDL: URL of WSDL to access a language service
- Wrapper Source Code: URL of a uploaded wrapper source code
- BPEL: BPEL file that comprises a composite service
- Resource in Use: A language resource being invoked
- Services in Use: The names of language services that together form a composite service
- Provider: Information of the provider of the service.
- Registration Date: The date a language service was registered
- Last Update Date: The date of a language service was last updated
- Status: Status of a language service. Status of the language resource. There are five statuses as follows: Pending (after registration, waiting for authorization), Run (after authorization), Suspend (when the suspension date is set), Suspended (when the language resource is suspended), and Unregister (when the unregistration date is set).

In addition, you can search a language service by Service name, Service Type, Languages, Purpose of Use, and Type of Application Control. You can also display only the available services for login users by checking the box of “show only the services you have permission to access.”

The screenshot shows the Language Grid Service Manager interface. On the left, there's a sidebar with options like 'Language Resource Provider', 'Language Grid Operator', 'Language Service Settings', 'User Settings', and 'Manual'. The main area displays a table of services under 'Atomic Services'. One row is selected, highlighted with a red arrow pointing to it. This row corresponds to the 'Service Profile' window on the right.

Service Name		Service Type
Abstract Bilingual Dictionary	BILINGUAL DICTIONARY	EDR J/E Word Dictionary
Headwords Extraction Service	HEADWORD EXTRACTION	
Abstract Extractable Bilingual Dictionary Service	BILINGUAL DICTIONARY	BilingualDictionaryWithLongestMatchSearch
Abstract Morphological Analysis Service	MORPHOLOGY ANALYSIS	
Abstract Translation Service	TRANSLATION	
Abstract Translation Service 2	TRANSLATION	
Abstract Translation Service 3	TRANSLATION	
Dialog Corpus for Medical Scenes service	ADJACENCY	
EDR J/E Word Dictionary	BILINGUAL DICTIONARY	EDR J/E Word Dictionary

The 'Service Profile' window contains the following details:

Service ID	EDRDictionary
Service Name	EDR J/E Word Dictionary
Service Type	BilingualDictionaryWithLongestMatchSearch
Service Description	-
Atomic or Composite	Atomic Service
Languages	Single/Bidirectional pairs - English: [en] <-> Japanese: [ja]
Purpose of Use	Non-profit
Type of Application Control	Under Client Control
Permitted Users	For All Users
WSDL	http://localhost:8080/langrid-2.0/wsdl/EDRDictionary
Wrapper Source Code	-
Resource in Use	1. Resource ID: EDR_Bilingual_Dictionary Resource Name: EDR Japanese/English Bilingual Dictionary Resource Type: BilingualDictionary

Click here to open a popup window of an atomic service profile.

Figure 3: Detailed information of an atomic service

The screenshot shows the Language Grid Service Manager interface. The sidebar and the main service list are similar to Figure 3. A red arrow points to a specific row in the service list, which corresponds to the 'Service Profile' window on the right.

Service Name		Service Type
BackTranslation Service	BACK TRANSLATION	TwoHopTranslation
Specialized Translation Service	TRANSLATION	Two-Hop Translation Service
Three-Hop Translation Service	TRANSLATION	MultihopTranslation
Three-Hop Translation Service through En-Ja Translator	TRANSLATION	This service consists of two translation services. These two translation services are connected sequentially, and you can set the language codes of the input text, the output text.
Three-Hop Translation Service through Ja-En Translator	TRANSLATION	
Two-Hop Translation Service	TRANSLATION	
Two-Hop Translation Service through English	TRANSLATION	
Two-Hop Translation Service through Japanese	TRANSLATION	

The 'Service Profile' window contains the following details:

Service ID	TwoHopTranslation
Service Name	Two-Hop Translation Service
Service Type	MultihopTranslation
Service Description	
Atomic or Composite	Composite Service
Languages	Multihop Languages * (* Any language): [*]->* (Any language): [*]->* (Any language): [*]
Purpose of Use	Non-profit
Type of Application Control	Under Client Control
Permitted Users	For All Users
WSDL	http://localhost:8080/langrid-2.0/wsdl/TwoHopTranslation
BPEL	TwoHopTranslation.bpel

Click here to open a popup window of a composite service profile.

Figure 4: Detailed information of a composite service

6. To monitor registered language resources on the Language Grid, click “Monitoring Language Services” in the submenu. Click “Monitor” to open a window to specify duration for monitoring (Figure 5). You can specify the duration either by directly entering the date (yyyy/mm/dd) in each text box or by clicking the calendar icon and choosing the date. You cannot choose the date after current day. Enter the date of start/end of monitoring and click “Set” to check the number of accesses and data traffic of each user.

The screenshot shows a Windows Internet Explorer window titled "Language Grid Service Manager - Windows Internet Explorer". The URL is http://langgrid.org/service_manager/?x=NcVSR5wtSNlK3Qv76VIKZQ. The menu on the left includes "Overview", "View of Language Grid", "News", "Language Grid Users", "Language Resources", "Language Services", "Computation Resources", "Monitoring Language Resources", "Language Resource Provider", "Language Grid Operator", "Language Service Settings", "User Settings", and "Manual". The main content area is titled "Monitoring EDR Japanese/English Bilingual Dictionary". It displays a table with the following data:

User	Access Count	Data Transfer Size (Bytes)
Language Grid Project, National Institute of Information and Communications Technology	12	22157
Ishida and Matsubara Laboratory, Department of Social Informatics, Graduate School of Informatics, Kyoto University	1	1751
Computational Linguistics Group, National Institute of Information and Communications Technology	1	1302

A red box surrounds the "Duration (JST)" input fields, which show "From 2008/09/26" and "To 2008/09/26". A red arrow points from the text "Specify monitoring duration" to this box. Another red arrow points from the text "Number of accesses" to the "Access Count" column, and another points from "Data transfer size (Bytes)" to the "Data Transfer Size (Bytes)" column.

Figure 5: Result of the monitoring

2.3. Edit User Profile

The Language Grid User and the Operator can edit their registered profile. This section gives instructions for updating profiles and changing passwords.

2.3.1. Update of User profile

1. Click “User Settings” to open submenu for profile edit and password change.
2. Click “Edit User Profile” in the submenu to check your organization’s profile registered in the Language Grid, including organization name, responsible person’s name, e-mail address, website, and postal address. The information is editable in this window (Figure 6). Edit the information as you wish, then click “Update” to update your profile.

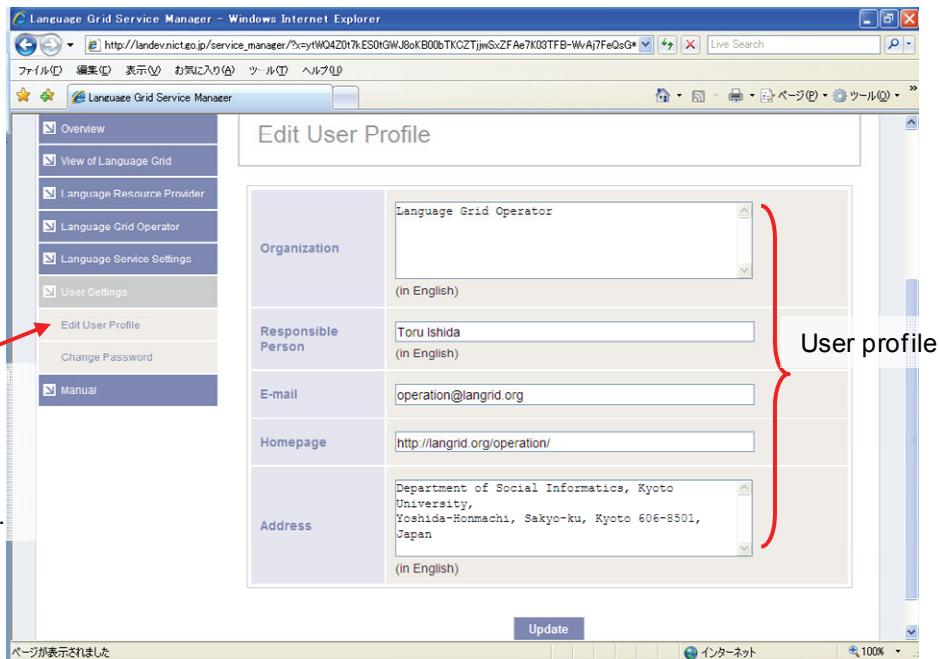


Figure 6: Profile update

2.3.2. Change Password

Click “Change Password” in the submenu of “User Settings” to open a textbox. Enter your current password and new password in the fields and click “Change” to complete password change.

3. Functions of Providing Services

3.1. Registration/Unregistration of Language Resources

Language Grid Users can register their language resource in the Language Grid with the Service Manager. This section gives instructions for registration and unregistration of language resources.

3.1.1. Registration of Language Resources

1. Click “Providing Services” from the left menu. The list of operations for providing services appears as a submenu.
2. Click “Your Language Resources” in the submenu to open a window for your language resource list.
3. Click “Registration” to open a window for registering your new language resource (Figure 7).
4. Set an ID for your language resource. The ID may consist of at least four letters, numbers and/or characters such as “.” (dot), “-” (hyphen), or “_” (underscore).
5. Select a resource type from the list below:
 - BILINGUAL DICTIONARY: This consists of index words and their translations.

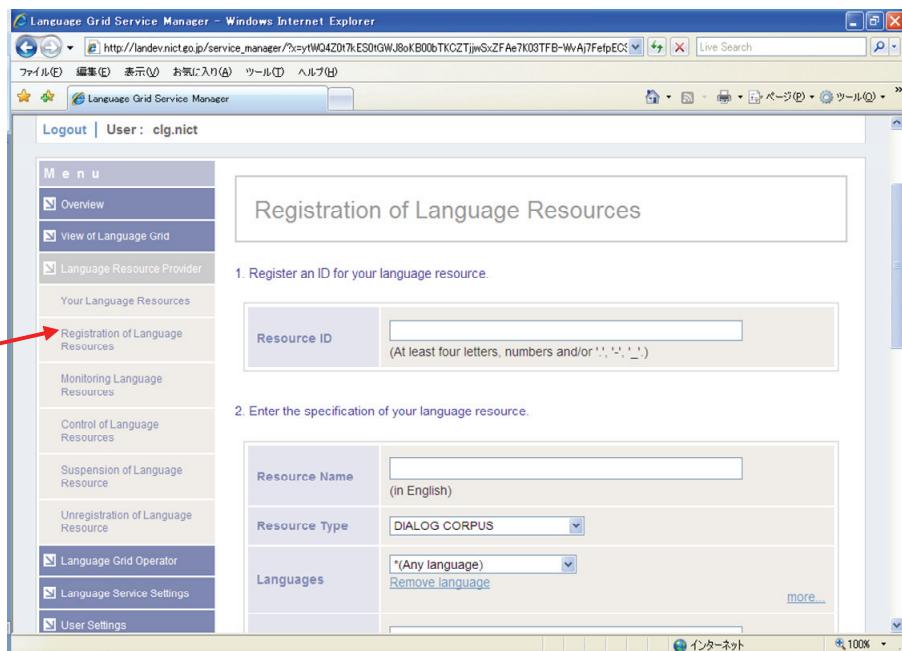


Figure 7: Language resource registration

- CONCEPT DICTIONARY: This consists of concepts comprising groups of synonyms and the relations between the concepts.
- DEPENDENCY PARSER: This analyzes the modification relations between segments.
- DIALOG CORPUS: This consists of lists of questions and answers.
- LANGUAGE IDENTIFICATION: This identifies a language of an input text.
- MULTILINGUAL DICTIONARY: This consists of index words and their multilingual translations.
- MORPHOLOGICAL ANALYZER: A tool for morphological analysis. This language resource separates an entered phrase into morphemes, and outputs base form and word class information on each morpheme.
- PARALLEL TEXT: This consists of pairs of quotations and parallel translations.
- PARAPHRASER: A tool for paraphrasing. This language resource paraphrases an entered sentence.
- PICTOGRAM DICTIONARY: This consists of pairs of headwords and pictograms.
- SIMILARITY CALCULATOR: This language resource calculates the similarity of two entered phrases.
- TEXT TO SPEECH: Text speech engine. This synthesizes a audio file of an input text.
- TRANSLATOR: Translation engine. This translates an entered phrase into a specified target language.

6. Add description of the resource to explain what the resource is.

7. Select target languages of your language resource from the list. The setting fields (list of target languages or language pairs) change depending on the type of language resource you choose in step 4. You can select more than one target language. Here are the instructions for setting target languages of your language resource:
 - BILINGUAL DICTIONARY: Select language pairs for index words and translations.
 - CONCEPT DICTIONARY: Select languages used for synonym groups comprising concepts.
 - DEPENDENCY PARSER: Select available language for analysis.
 - DIALOG CORPUS: Select languages for the lists of questions and answers.
 - LANGUAGE IDENTIFICATION: Select available language for analysis.
 - MULTILINGUAL DICTIONARY: Select the languages for translation.
 - MORPHOLOGICAL ANALYZER: Select the languages for morphological analysis.
 - PARALLEL TEXT: Select the languages for parallel text.
 - PARAPHRASER: Select the languages for paraphrasing.
 - PICTOGRAM DICTIONARY: Select the language of headwords.
 - SIMILARITY CALCULATOR: Select the languages for the calculation.
 - TEXT TO SPEECH: Select available language for output audio file.
 - TRANSLATOR: Select language pair for input and output.
8. Enter copyright and license information of the resource.

3.1.2. Edit Language Resource Profile

1. Click “Your Language Resources” in the submenu for providing services to see your language resource list. Choose a language resource you wish to modify the profile of, and click “Edit” in the same line.
2. When you click “Edit”, you will see the profile of your language resource, including resource name, resource description, languages, copyright, and license description. This information is editable in this window (Figure 8). Edit the information as you wish, then click “Update” to complete the update of the profile.

Edit Resource Profile

Resource information.

Resource ID	EDR_Bilingual_Dictionary
Resource Name	EDR Japanese/English Bilingual Dictionary (in English) *Make sure to separate words with a space.
Resource Type	BilingualDictionary
Resource Description	(in English)
Languages	English <-> Japanese
Copyright	National Institute of Information and Communications Tec (in English)
License	Users can copy or modify all or part of EDR only for non-profit use. Users shall not distribute, transfer or lend the resource to anyone without our permission. See also http://langrid.nict.go.jp/edr/bilingual_dictionary.htm (in English)

Edit language resource profile.
Add

Cancel **Update**

Figure 8: Edit language resource profile

3.1.3. Schedule Unregistration of Language Resources

1. Click “Your Language Resources” in the submenu for providing services to see a list of your language resources. Select a language resource to be unregistered, and then click “Unregister” in the same line. If the atomic service associated with the resource is running, the “Unregister” button is not clickable. Unregister the service first, and then complete the procedure for unregistration.
2. Click “Unregister” to set the unregistration date of the selected language resource (Figure 9). The date can be set by entering the year/month/day in the text box or clicking the calendar icon to select the date. After the date is set, the field “Status” of the language resource will be changed to “Unregister (yyyy/mm/dd)”.
3. At 0:00 (JST) on the scheduled day, the language resource will be unregistered, and the name will be deleted from the language resource list.

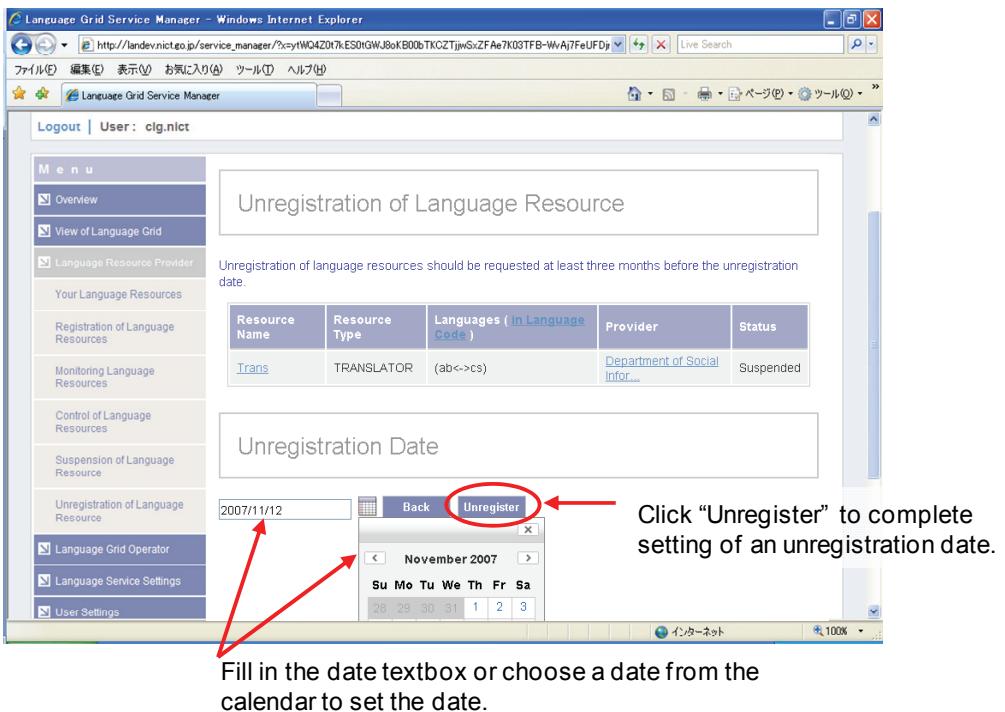


Figure 9: Setting of unregistration date of a language resource

3.1.4. Cancellation of Unregistration of Language Resources

1. Click “Your Language Resources” in the submenu for providing services to see the list of your language resources. Select a language resource for which you wish to cancel the scheduled unregistration, and then click “Cancel” in the same line. The unregistration schedule will be cancelled and its “Status” will be changed back to the previous one before the unregistration date was set.

3.2. Registration/Unregistration of Language Services

Language Grid Users can register their language service in the Language Grid with the Service Manager. This section gives instructions for registration and unregistration of language services.

3.2.1. Registration of Atomic Services

1. Click “Your Language Services” in the submenu for providing services. The list of your language services will be displayed separately by “Atomic Services” and “Composite Services”. Click “Registration” over the service list.
2. Select a language resource for which you wish to register its service, and then click “Register” in the same line. A new window for registration will open.
3. Enter language service ID. The ID may consist of at least four letters, numbers and/or characters such as “.” (dot), “-” (hyphen), or “_” (underscore).

4. Enter the name of the language service.
5. Select the service type from the following list:
 - ADJACENCY PAIR
 - BACK TRANSLATION
 - BILINGUAL DICTIONARY
 - BILINGUAL DICTIONARY WITH LONGEST MATCH SEARCH
 - CONCEPT DICTIONARY
 - DEPENDENCY PARSER
 - LANGUAGE IDENTIFICATION
 - MORPHOLOGICAL ANALYSIS
 - MULTIHOP TRANSLATION
 - PARALLEL TEXT
 - PARAPHRASER
 - PICTOGRAM DICTIONARY
 - SIMILARITY CALCULATION
 - TEXT TO SPEECH
 - TRANSLATION
 - TRANSLATION WITH TEMPORAL DICTIONARY
6. Add the service description.
7. Select languages that the language service supports.
8. Select the range of access permission. Select “All Users” to permit access from all Language Grid Users by default. Select “Members Only” to block access from all users by default. You can permit certain users to access the language resource in the page “Control of Language Services.” See “3.6 Access Control Settings of Language Services” for details.
9. Select the purpose for which the service may be used and the type of control adopted for an application system using the service.
10. Enter WSDL information. Upload WSDL or enter URL that the file is deployed.
11. Enter endpoint information where the service is deployed.
12. Click “Register” to complete the registration.

3.2.2. Endpoints Setting

1. Click “Your Language Services” in the submenu for providing services. The list of language services will be displayed.
2. To add several endpoints to an atomic service, click “Edit” button in the service and click “Add” in the Endpoint Information item. The window to enter the URL will open.
3. To remove an endpoint that is already set, click “Edit” button in the service and click

“Remove” in the Endpoint Information item

3.2.3. Registration of Composite Services

1. Click “Your Language Services” in the submenu for providing services. The list of your language services will be displayed separately by “Atomic Services” and “Composite Services”. Click “Registration” over the service list.
2. Enter language service ID. The ID may consist of at least four letters, numbers and/or characters such as “.” (dot), “-” (hyphen), or “_” (underscore).
3. Enter the name of the language service.
4. Select language service type from the following list:
 - ADJACENCY PAIR
 - BACK TRANSLATION
 - BILINGUAL DICTIONARY
 - BILINGUAL DICTIONARY WITH LONGEST MATCH SEARCH
 - CONCEPT DICTIONARY
 - DEPENDENCY PARSER
 - LANGUAGE IDENTIFICATION
 - MORPHOLOGICAL ANALYSIS
 - MULTIHOP TRANSLATION
 - PARALLEL TEXT
 - PARAPHRASER
 - PICTOGRAM DICTIONARY
 - SIMILARITY CALCULATION
 - TEXT TO SPEECH
 - TRANSLATION
 - TRANSLATION WITH TEMPORAL DICTIONARY
5. Add the service description.
6. Select the languages that the language service supports.
7. Select the range of access permission. Select “All Users” to permit access from all Language Grid Users by default. Select “Members Only” to block access from all users by default. You can permit certain users to access the language resource in the page “Control of Language Services.” See “3.6 Access Control Settings of Language Services” for details.
8. Select the purpose for which the service may be used and the type of control adopted for an application system using the service.
9. Enter BPEL information. Upload BPEL file or enter the URL of the file.
10. Enter WSDL information. Upload WSDL file or enter the URL of the file.

- Click “Register” to complete the registration.

3.2.4. Edit Registered Language Service

- Click “Your Language Services” in the submenu for providing services. The list of language services that you registered will be displayed separately by Atomic Service and Composite Service.
- Select the language service to refer/edit and click “Edit” in the same line. You can edit the registered information (language service name, service type, service description, languages, and terms of service use) in the window. Click “Update” to confirm the update
- For composite service, you can change WSDL as well as BPEL. Specify the files for WSDL and BPEL. When you change WSDL for several language services that comprise composite service, click “Add” and add more boxes for new WSDLs. You cannot only change BPEL; specify WSDL file at the same time.

3.2.5. Schedule Unregistration of Language Services

- Click “Your Language Services” in the submenu for providing services. The list of your language services separately by “Atomic Services” and “Composite Services.” Select the language service to unregister and click “Unregister” in the same line. If the atomic service associated with the resource is running, the “Unregister” button is not clickable. Suspend the service first, and then complete the procedure for unregistration.

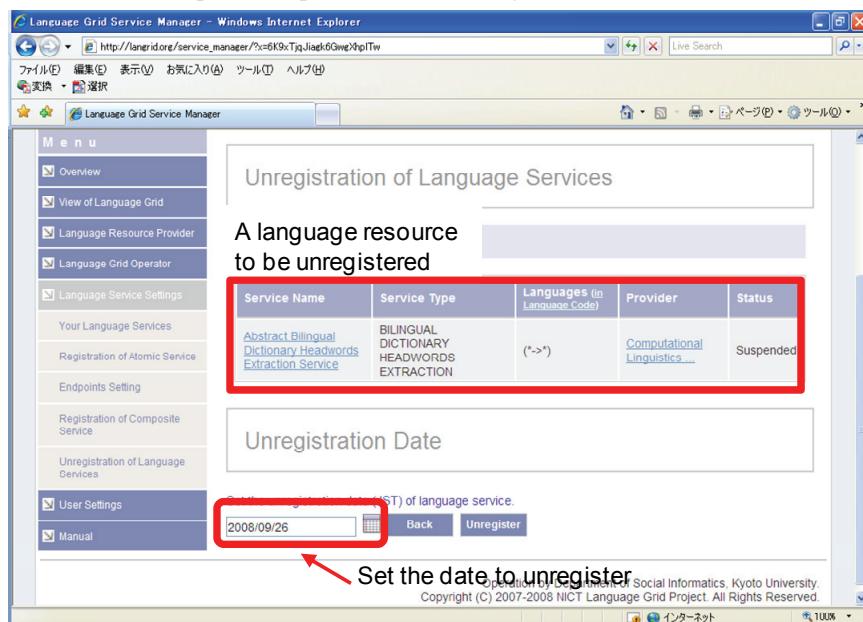


Figure 10: Set the date of unregistration of a language service

- Set the time and date to unregister the language service (Figure 10). You can specify the date either by directly entering the date (yyyy/mm/dd) in the text box or by clicking the calendar icon

and choosing the date. When the timer is set, the field of “Status” of the language service will change as “Unregister(yyyy/mm/dd)”.

3. At 0:00 on the registered date (JST) the language service will be deleted and its name will be removed from the language service list.

3.2.6. Cancellation of Unregistration of Language Services

1. Click “Your Language Services” in the submenu for providing services. The list of your language service will be displayed. Select the language service to cancel its unregistration, and click “Cancel” in the same line. Then the unregistration will be cancelled and the status will be changed back to “Suspended.”

3.3. Suspension/Restart of Language Services

Language Grid Users can block access by other users in order to suspend operation of their language service for replacement or maintenance.

3.3.1. Suspension of Language Services

1. Click “Suspension of Language Services” in the submenu for providing services to see your language service list. Select a language service you wish to suspend, and Click “Suspend” in the same line.
2. Click “Suspend” to set a suspension date for the selected language service. The date can be set by entering the year/month/day in the text box or clicking the calendar icon to select the date. After the date is set, the “Status” field of the language service will be changed to “Suspend (yyyy/mm/dd)”.
3. At 0:00 (JST) on the scheduled day, the language service will be suspended, and the status of the resource will be changed to “Suspended”.

3.3.2. Cancellation of Suspension of Language Services

1. Click “Suspension of Language Services” in the submenu for providing services to see your language service list. Select the language service for which you wish to cancel the suspension, and then click “Cancel” in the same line. The scheduled suspension is cancelled and the status will be changed to “Run”.

3.3.3. Restart of Language Resource

1. Click “Suspension of Language Services” in the submenu for providing services to see the list of your language services. Select a language service you wish to restart, then click “Restart” in the same line. The language service will become accessible again, and its status will be changed to

“Run”.

3.4. Monitoring of Language Services

Language Grid Users can monitor how and by whom their language services are being used.

3.4.1. Statistics of Usage and Access Log

1. Click “Monitoring Language Services” in the submenu for providing services to display the list of registered language services. Select the language service you wish to monitor and click “Monitor” in the same line.
2. Clicking “Monitor” opens the window to specify monitoring duration (Figure 11). You can specify the duration either by directly entering the date (yyyy/mm/dd) in each text box or by clicking the calendar icon and choosing the date. Enter the date of start/end of monitoring and click “Set” to check the number of accesses and data traffic of each user.

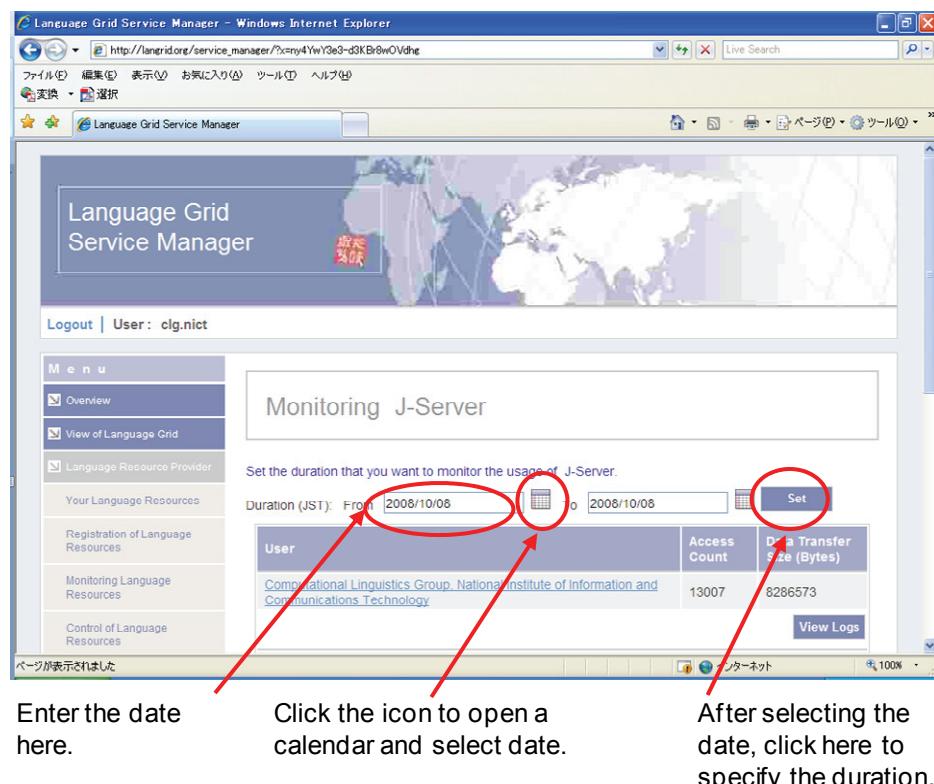


Figure 11: Setting of monitoring duration

3. To check the detailed access log of a certain user during the specified period, click “View Logs” in the same line as where the user’s name is. The list of access log will be displayed. The list contains the following information (Figure 12):
 - Access Date: Date and time of access (JST)

- User: Name of the user's organization
- IP Address: IP address of access source
- Data Transfer Size: Data transfer size of response message (Bytes)

Access Date (JST)	User	IP Address	Data Transfer Size (Bytes)
2008/10/08 18:01:55	Computational Linguistics Group, National Institute of Information and Communications Technology	133.243.3.18	808
2008/10/08 18:01:54	Computational Linguistics Group, National Institute of Information and Communications Technology	133.243.3.18	66
2008/10/08 18:01:52	Computational Linguistics Group, National Institute of Information and Communications Technology	133.243.3.18	808
2008/10/08 18:01:52	Computational Linguistics Group, National Institute of Information and Communications Technology	133.243.3.18	664
2008/10/08 18:01:50	Computational Linguistics Group, National Institute of Information and Communications Technology	133.243.3.18	769
2008/10/08 18:01:50	Computational Linguistics Group, National Institute of Information and Communications Technology	133.243.3.18	722
2008/10/08	Computational Linguistics Group, National		

Time and date of access (JST) User name IP address of access source Data transfer size

Figure 12: Access log

3.5. Setting Access Rights for Language Services

When you detect via monitoring a user who may be using a language service fraudulently, the Language Grid User can block access by the suspicious user. This section gives instructions for setting access rights of other users.

3.5.1. Blocking and Permitting Access of Language Grid Users

1. Click “Control of Language Services” in the submenu for providing services to display the registered language services. Select a language service you wish to set access rights for and click “Control” in the same line.
2. A list of access right settings for each user for a selected language service is displayed. When the Access Right field is “Permitted”, that means the user is allowed to access the service; if “Prohibited”, the user's access is blocked. To change access right settings, select a user and click “Prohibit” or “Permit” in the same line. When the change is completed, the status in the Access Right field will be changed.

3.6. Access Control Settings of Language Services

To block fraudulent usage, Language Grid Users can set upper limits of the number of accesses and the amount of data traffic.

3.6.1. Add an access control setting

1. Click “Control of Language Services” in the submenu for providing services to see a list of your language services. Choose a language service for which you wish to set access controls, then click “Control” in the same line.
2. To set access controls, select user(s) and click “Limit” in the same line.
3. You can check control settings of the selected user (Figure 13).
4. To add a new access control setting, click “Add” below the Access Control Lists. A line with blank fields will appear. There are three fields in a line including control type, upper limit and duration. There are two control types, such as “Access limit [hits]”, which limits the total number of accesses, and “Data transfer size limit [KB]”, which limits the amount of data transfer. For the number of accesses, you can specify a certain number of times as an upper limit, and for duration, you can select from three time periods: per year/month/day. For the data transfer, you can specify certain amount of data as an upper limit, and for duration, you can select from four settings: per year/month/day/access. After setting the access control, click “Set” to update the setting. The settings of control type and upper limit of durations will be replaced with the new settings at this time.

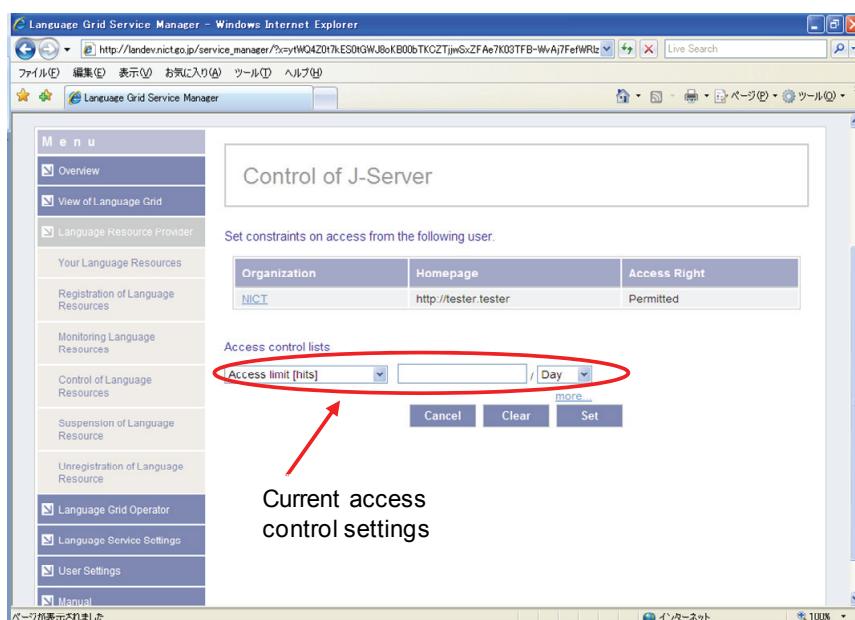


Figure13: View of access control settings of each user

3.6.2. Clear Access Control Settings

1. To clear current access control settings, leave the field for upper limit of access control that you wish to clear as a blank in the window of Figure 14, and then click “Set”. To set access controls, all three fields must be filled, so if one field is blank, the setting will not be completed.
2. When you wish to clear all access control settings for a particular user, click “Clear” and then “Set”. Clicking “Clear” button clears the upper limits of all settings, and clicking “Set” button reflects changes in the settings.

3.6.3. Initial Settings of Access Control

1. Language Grid Users can specify initial settings for a new user in advance. In the window shown in Figure 14, select a language service. Then, click “Edit” next to “Initial Settings”.

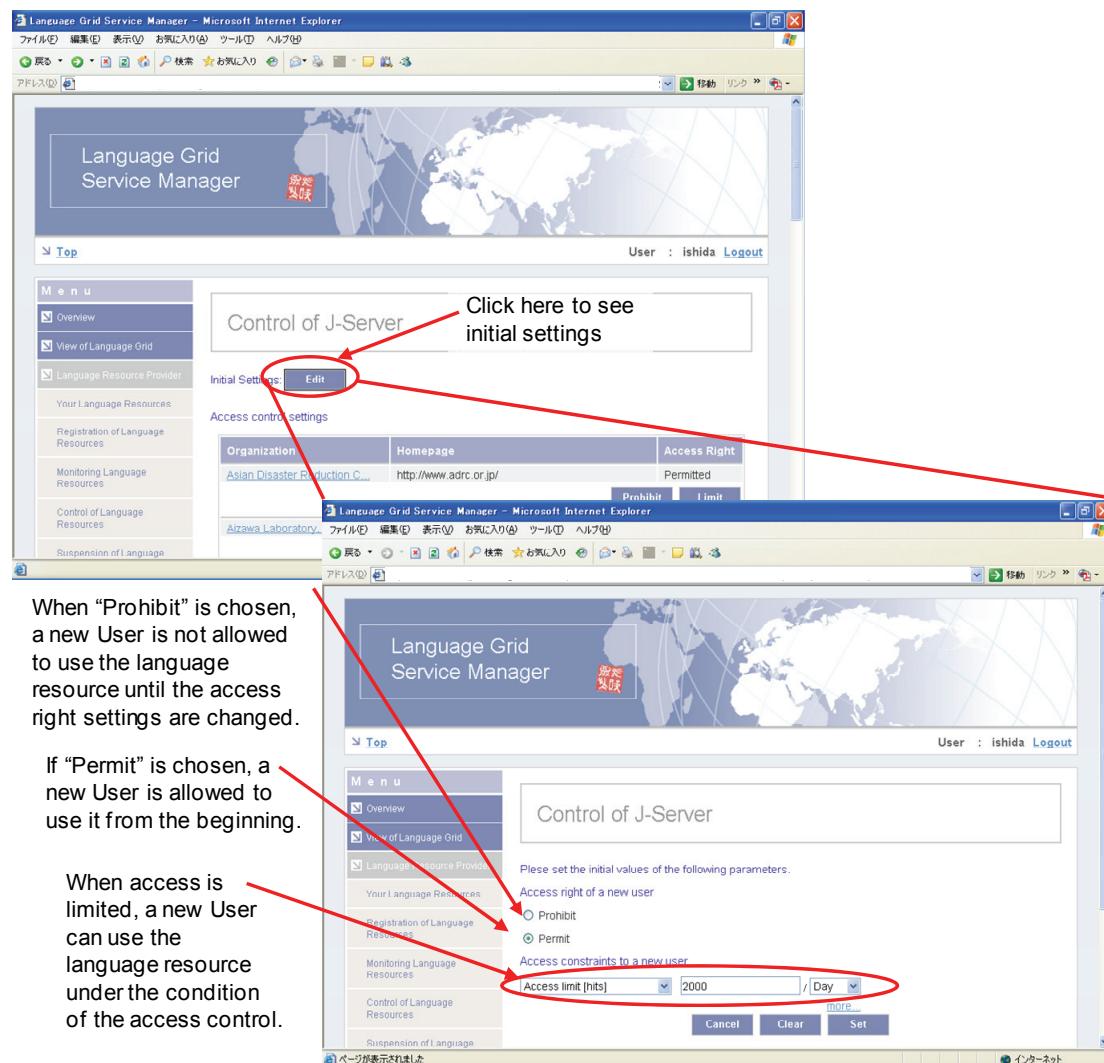


Figure 14: Default settings of access control

2. The window showing the initial settings of access rights and access control will open. Click “Prohibit” to block a new user. The user cannot use your language service until you change the settings. Click “Permit” to allow a new user to use your language service from the beginning. When access control is set in advance, the usage of the service is limited for a new user from the beginning.

4. Functions for Language Grid Operator

4.1. Task Management of the Language Grid Operator

There are various tasks for the Language Grid Operator depending on the events in the Language Grid. This section gives descriptions of functions for task management.

4.1.1. View of Operational Tasks

1. To see a task list for the Operator, click “Requested Operations” in the submenu (Figure 15). The tasks are as follows:

- Language resource "xxxx" has been registered. Do you approve?
- Language service "xxxx" has been registered. Do you approve?
- "www" accessed language service "xxxx" in excess of access limit ("XXXX/day" | "XXXX/month" | "XXXX/year"). Please check whether the user is accessing the service appropriately.
- "www" accessed language service "xxxx" in excess of data transfer limit ("XXXX/access" | "XXXX/day" | "XXXX/month" | "XXXX/year"). Please check whether the user is accessing the service appropriately.

Requested Operations		
Date	Request	From
2010/10/04	Language resource "Test Resource 20101004" has been registered, Do you approve?	Language Grid Project, N...
		<input type="button" value="Approve"/>

Figure 15: A task list for the Operator

4.2. Prevention of Fraudulent Use

To prevent fraudulent use of language services, the Language Grid Operator is able to request users to change their passwords regularly. He is also able to monitor if any user is overusing a specified language service. This section explains how to set up these functions.

4.2.1. Request for Changing Users' Passwords

1. Click "Grid Settings" in the sub-menu for the Operator, a page for setting up the password period, which you expect users change passwords within, (Figure 16) will appear.
2. Enter an arbitrary period, which you expect users to change passwords within, to "Period for changing password." Click "Set" and then the period will be set up to the system.
3. After the period you set up, if any users use the Language Grid with unchanged password, the request to change their passwords automatically is shown in logging in. This request will be shown every time they log in the Language Grid Service Manager.

The screenshot shows the 'Grid Settings' page with the following sections:

- Permission of Commercial Use:** A radio button group where 'Prohibit' is selected over 'Permit'.
- Auto Approval Settings:** A section with a 'Auto Approval' button and an unchecked checkbox labeled 'Enable'.
- Prevention of Fraudulent Usage:** A table with two rows.

Period for changing password	90 days
Criteria for determining fraudulent usage	<input type="button" value="Access limit [hits]"/> / <input type="button" value="Day"/> <input type="button" value="Clear"/> <input type="button" value="Add"/>
- Buttons:** A 'Set' button at the bottom left and a 'Save' button at the bottom right.

Figure 16: A page for setting up preventive functions to fraudulent use

4.2.2. Monitoring Excessive Use

1. Click "Grid Settings" in the submenu for the operator, a page for setting up use restrictions, which is the prescribed criteria for safe use to avoid overuse, (Figure 16) will appear.
2. To restrict overuse, you can limit the number of accesses and the quantity of traffic on the prescribed criteria. You can restrict the numbers of accesses of a year, a month, or a day. Regarding traffic restriction, you can set limit per each access. To add a new criterion, please click "Add" which appears under the prescribed criteria. A box for setting up new criteria will

appear and it contains kinds of criteria, values and periods. Choose “Access limit [hits]” to set up access restriction, choose “Data transfer size limit [KB]” to set up traffic limitations. Enter upper limit of the value, and click “Set.” The upper limit will be confirmed in the system. When you change the kinds of criteria or values or periods, which you have set before, the old data will be overwritten by new data. When you delete the value or leave it blank, the value will be deleted from the criterion.

3. Any users who use Language Grid over the prescribed criteria will be reported to Requested Operations.

4.3. Registration/Unregistration of a Language Grid User

After concluding the Agreement with a Language Grid User, the Operator is required to issue an ID and a password for the user. This section gives instructions for issuing an ID and a password to a user.

4.3.1. Registration of User ID

1. Click “All Language Grid Users” in the submenu for the Operator to open the user list. Click “Register” button to open a window for user registration.
2. Set a User ID and a password. User ID may consist of at least four letters, numbers, and /or characters such as “.” (dot), “-” (hyphen), “_” (underscore). A password may consist of at least six letters, numbers, and characters such as “.” (dot), “-” (hyphen), “_” (underscore).
3. Enter the organization name, responsible person’s name, E-mail address, the URL of the organization’s website and the postal address, then click “Register” to complete registration.

4.3.2. Deletion of a User ID

1. Click “All Language Grid Users” in the submenu to open the user list.
2. Click “Unregister” to delete the selected user. When unregistration is completed, the organization name of the user is deleted from the user list.

4.4. Edit User Profile

The Operator can edit their registered profile. This section gives instructions for updating profiles and changing passwords.

4.4.1. Update of User Profile

1. Click “All Language Grid Users” in the submenu to display the user list. Select the organization whose profile you wish to edit, and click “Edit” in the same line. A new window will open. Edit the information and click “Update”.

4.4.2. Change Password

1. Click “All Language Grid Users” in the submenu to display the user list. Select the organization you wish to change its password, and click “Password” in the same line.
2. Enter your current password and new password and click “Change”.

4.5. Access Control of Language Grid Users

You can control access of Language Grid Users. For example, when you find fraudulent access through monitoring excessive use of a language service, you can block the suspicious user’s access to the Language Grid.

1. Click “Access Control of Language Grid Users” to display a window for control.
2. Select either “Permitted” or “Prohibit” for the user’s access right (Figure 17).

Organization	Homepage	Access Right
AI-Lab, Department of Computer Science, National Tsing Hua University	http://www.cs.nthu.edu.tw/	Permitted
AMARC JAPAN	http://www.tcc117.org/amarc_japan/	Permitted
Advanced Networking Division, Information Technology Center, Nagoya University	http://www.net.itc.nagoya-u.ac.jp/	Permitted
Agent Communication Laboratory, Department of Information and Communication Science, College of Information Science and Engineering, Ritsumeikan University	http://www.acl.ics.ritsumei.ac.jp/	Permitted
Aichi International Association	http://www2.aia.pref.aichi.lg.jp/	Permitted

Figure 17: Access control of Language Grid User

4.6. Registration/Unregistration of Language Resources

Based on the request of Language Grid User, the Operator may register and unregister a language resource instead of the user.

4.6.1. Registration of Language Resources

The operator can register a language resource on behalf of Language Grid Users.

1. Click “All Language Resources” in the submenu for the Language Grid Operator to show the resource list.
2. Click “Registration” over the resource list to display the user list.
2. Select the Language Grid User whose resource you will register, and click “Register” in the same

line. A new window will open.

3. Enter required information and complete registration. See “3.1.1 Registration of Language Resources” for the details of the process.

4.6.2. Edit Language Resource Profile

1. Click “All Language Resources” in the submenu to display the list of registered language resources. Select the language resource of which you wish to edit the profile, and click “Edit” in the same line.
2. The profile of your language resource will be displayed, including resource name, languages, copyright and license description, and system requirements. Edit the information in this window, and then click “Update”.

4.6.3. Schedule Unregistration of Language Resources

The operator can unregister a language resource on behalf of Language Grid Users. Click “All Language Resources” in the submenu to display the list of registered language resources. For the details of scheduling/cancelling unregistration of a language resource, see “3.1.3. Schedule Unregistration of Language Resources” and “3.1.4. Cancellation of Unregistration of Language Resources.”

4.7. Registration/Unregistration of Language Services

Based on the request of Language Grid User, the Operator may register and unregister a language service instead of the user.

4.7.1. Registration of Atomic/Composite Services

The operator can register a language service on behalf of Language Grid Users.

1. Click “All Language Services” in the submenu for the Language Grid Operator to show the service list.
2. Click “Registration” over the service list to display the user list.
3. Select the name of the Language Grid User’s name whose service you will register, and click “Register” in the same line. A new window for registration will open.
4. Enter required information. For the details, See “3.2.1. Registration of Atomic Services” and “3.2.3 Registration of Composite Services.”

4.7.2. Edit Language Service Profile

1. Click “All Language Services” in the submenu to display the list of registered language services. Select the language service of which you wish to edit the profile, and click “Edit” in the same

line.

2. The profile of your language service will be displayed, including service name, languages, and terms of service use. Edit the information in this window, and then click “Update”.

4.7.3. Schedule Unregistration of Language Resources

The operator can unregister a language service on behalf of Language Grid Users. Click “All Language Services” in the submenu to display the list of registered language services. For the details of scheduling/cancelling unregistration of a language service, see “3.2.5. Schedule Unregistration of Language Services” and “3.2.6. Cancellation of Unregistration of Language Services.”

4.8. Suspension/Restart of Language Services

The operator can suspend and restart operation of a language service on behalf of Language Grid Users. Click “Suspension of Language Services” in the submenu to display the list of registered language services. For the details of setting/canceling timer to suspend operation of a language service, and restarting the operation of a language service, see each section of “3.3.1. Suspension of Language Services”, “3.3.2. Cancellation of Suspension of Language Services”, and “3.3.3. Restart of Language Services.”

4.9. Monitoring of Language Services

The Operator is required to monitor the language services to detect a user who fraudulently uses the services for profit.

4.9.1. Statistical Usage Information and Access Log Display

1. If a message appears in the Operator’s task list saying, “*” (the name of the Language Grid User)*” seems to access “*(the name of the language service)*” excessively. Please check whether the user is accessing the service appropriately.”, you are required to monitor the usage of the mentioned language service to check for fraudulent use.
2. Click “Monitoring Language Services” from the submenu for the Operator to display the list of registered language services. Select a language service you wish to monitor and click “Monitor” in the same line. For the details of monitoring, see “3.4. Monitoring Language Services.”

4.10. Setting Access Rights for a Language Services

In monitoring the system, if you detect a user who may be using a language service fraudulently, you can block access from the suspicious user. This section gives instructions for access right settings of Language Grid Users.

4.10.1. Blocking and Permitting Access of a Language Service User

1. Click “Control of Language Services” in the submenu to display the registered language services. Select a language service for which you wish to set access rights, and click “Control” in the same line.
2. Click “Control” to display a list of access right settings for each user for a selected language service. When the Access Right field is “Permitted”, that means the user is allowed to access the service; if “Prohibited”, the user’s access is blocked.
3. To change access right settings, select a user and click “Prohibit” or “Permit” in the same line. When the change is completed, the status in the Access Right field will be changed.

4.11. Access Control Settings of Language Services

To prevent fraudulent use of language services, the operator can set access limit to language services. You can control it on behalf of Language Grid Users. Click “Control of Language Services” in the submenu to display the list of registered language services. Select the language service of which you wish to control access rights, and click “control” in the same line. For the details of adding and clearing access control, see “3.6.1. Add Access Control Settings” and “3.6.2. Clear Access Control Settings”. For initial control setting, see “3.6.3. Initial Settings of Access Control.”

5. Inquiries

Please send any inquiries to the following address:

operation@langrid.org