Q: Do position ads ever get removed? (SAMPLE ENTRY)

Are positions advertised forever, or do the ads get removed after a while? --Bmeyer

A: needs further discussion

I think there is some flexibility there. All positions should have an expiration date (unless specified "no limit") but the ability to browse for older positions may be of interest. I think it should be a yes/no field in the submitter interface: discard after deadline/keep after deadline. --JSmith

A: default should be remove

Most employers will want positions removed. The default should be to remove after the deadline for applications. --Petra_Hirsch

Q: What should happen when a submitter is inactivated or removed from the system?

Should the entries be deleted or handed over to another submitter? --Adrianh

A: Administrator should decide

The administrator should decide that when removing someone from the system. That is, the tool should offer the possibility to delete the entries belonging to the submitter or to hand them over to another submitter. There is no need to specify the handover on a more fine-grained basis, that is, per entry.

--Adam

Q: Is moderation of announcements wanted?

Under the assumption that submitters must have created an account to submit an entry, is a moderation system (i.e approval of new entries by an administrator) required? --Leo

A: Moderation of Announcements Required

Moderation is still required. There is always a danger of submitters creating fake logins and spamming the system. --Mitra

Q: Should modification of entries be permitted?
Should a submitter be able to modify his entry after it has been submitted? If so, should all parts of it be open to modification? (note: if moderation is desired the question of the combined behaviour will be raised) -- Leo

A: Modify entries

Of course the submitter has to be able to modify his entry, or else remove it before the deadline to replace it altogether. If the entries are moderated, then the changes should be moderated, too, otherwise this moderation does not really make sense. -- JoergD

Q: What attributes are associated with a job position?

What are the input fields on the submission page to describe a position? Which of them must be completed and which of them are optional?

I could imagine the following fields:

- Name: the name of the position (simple text input box, no more than x characters allowed)
- City: the city where the position is offered (simple text input box, no more than x characters allowed)
- Country: the country where the position is offered (submitter must select exactly one country out of a list of all countries)
- Deadline for applications: when is the deadline for applications? (date input box of the format DD/MM/YYYY)
- Archive: shall the advertisement be archived after the deadline for applications? (submitter must select "Yes" or "No" ("No" is default))
- Category: for whom is the announcement intended? (submitter must select one of: "professors", "PhD students", "postdocs")
- Sub-Category: only for category "professors" (submitter must select one of: "assistant professors", "associate professors", "full professors")
- Position Type: only for category "professors" (submitter must select one of: "tenured position", "untenured position", "tenure-track position")
- Position Summary (optional): short description of the job (text input box, no more than x characters allowed)
- Position Requirements (optional): what are the requirements on the applicant (text input box, no more than x characters allowed)
• Contact Information: where to send an application

-- Ulrich

A: I would also add fields:

• Company: the name of the company (simple text input box, no more than x characters allowed)
• Contact address (optional): the contact address of the company (simple text input box, no more than x characters allowed)
• E-mail: the e-mail of the company (simple text input box, no more than x characters allowed)
• Link to the company (optional): the link to the company’s web site (simple text input box, no more than x characters allowed)
• Duration of appointment (optional): the duration of the position (simple text input box, no more than x characters allowed)

All other is OK.

-- Arsenii Rudich

A: Attributes of Job Position

Most of the above list looks good to me. There should also be an attribute for the University (or organisation, like PSI or CSCS), and (in the case of universities) the Institute and maybe also the Chair offering the position.

I don't like the size restriction on the Position Summary, and, in fact, on most of the attributes. Do you know for sure the maximum length of any place name, and any university name?

Instead of Category and Sub-Category, I would use the Position Type to specify what kind of position is to be filled, i.e. extend the selection with "PhD Student" and "Postdoc". If there is a restriction on who is supposed to apply, e.g. if the university only wants people to apply for a postdoc position that already hold a postdoc position somewhere else, they can say so in the Position Requirements.

-- JoergD

A: Which kind of input boxes?

Text input boxes can be further specified in text fields and text areas: for example Position Summary and Position Requirements info could go into text areas.

-- Rod
Q: Is having no size restriction on input fields not a security issue?

What happens when a user enters a very long text (in bad faith)?

--Ulrich

A: hackers are not welcome

The application may crash. A good tradeoff would be to have some size limit in HTML fields, not really intended for normal users but just to avoid the bad situations you mentioned. I agree with Joerg that you may not know the size limit for sure, but you may reasonably guess it to minimize the risk of someone hacking into the system.

--Rod

Q: How are the submitter and admin interfaces accessed?

Will there be links to the submitter and admin interfaces on the reader interface?

Also, are there any requirements on how the access to these pages is protected, i.e. will user and pwd data be stored in the database or will access be handled by the server using e.g. htaccess functionality?

-- Lorenz

A: only submitter links, with login via webpage

There should be a link on the reader page to the submitter page (and back!). The admin page does not have to be linked on the reader interface.

The login data should be stored in a database table, giving each user a role (submitter/admin). Authentication should be done via a web form and not by .htaccess

-- Hel

Q: Will the positions simply be listed or will there be "details"?

When a user searches or displays all entries, will the entries just be displayed in list form, or will certain fields be displayed (if so, which ones) and a click on the title (e.g.) lead to the display of all available information for that position in complete form on a new page?
A: Details list

I think that we should have a details page hyperlinked from every advertised position in the list.

--Rod

Q: Do submitters need to create an account and if so what are the semantics?

Must submitters have to register in order to post an entry, and if so a) is any information beyond name, institution (& desired password) required? b) Is approval of new submitters required? --Leo

A: Account creation details

Yes, they have to register, mainly to avoid robot spamming. a) We can content with the same information required for CSEL registration, for now, with the email acting as a username. b) Not really

--Rod

Q: Is there a sysadmin and if so what are his responsibilities?

- Keep the system running online.
- Should he administrate submitter accounts or their entries?
- Maintenance?
- Security? --Adrianh

A: Yes, there is a sysadmin just as for CSEL.

The sysadmin should:

- moderate the entries: new ones and modified ones,
- remove submitters: on request of submitter or e.g. if submitter seems to violate the etiquette (by filing improper entries),
- no moderation needed for creation of submitter accounts (since entries are moderated)

--Adam

A: Distinction between Admin and Sysadmin.
I think there should be a distinction between "System Administrator" and "Content Administrator".

The sysadmin takes care of the low-level tasks, like maintaining the operating system and web server. We do not need to consider that position in detail and just need to define our uptime requirements.

The content admin reviews submissions and maintains the content part of the site. This position must be analyzed in detail.

They might be two different persons, as the content admin only needs knowledge of the application domain (e.g. it might be an administrative assistant of a professor) and not of low-level system administration. -- GlennG

Q: Would it be of interest to have an applicants advertising page?

Is it of interest that an applicant looking for a job can post his own field of interest regardless whether such a job is already listed by a submitter? So that submitters looking for employees would be able to list all the advertisements made by applicants before submitting their own advertisement? -- Sbuenter

A: Too many applicants

The main goal of the project is to have a system for announcing open positions and not to let applicants keep their resumes etc. online. In general, there are more applicants/interested candidates than open positions. Moreover, Applicants may have varied interests. Since there is no dearth of applicants/candidates, employer may be least interested in browsing the list of interested applicants. Therefore, instead of letting the applicants advertise their interests/skills, let them contact on their own to the submitter. A suggestion: What you could do instead is: When an applicant creates a login, you can ask him/her for his area of interest, education, work experience etc. so that the submitter can have a look when he/she is interested/ desperately needs to fill up a position. -- Mitra

Q: Are there any accounts for applicants?

Will applicants that look for a position register themselves, i.e. create an account (Mitra is suggesting something like that)? If yes, is the process of applying for a position handled by the CSARDAS system (e.g. by showing submitters a list of interested applicants)? Or is application directly done between submitter and applicant by mail, phone, etc.? In this case it makes not much sense having accounts for applicants, right?

-- Ulrich

A: Announcing positions
CSARDAS is for announcing positions and not for applicants to apply or to advertise their skills. In most cases, the applicant should contact the submitter. But in the hour of crisis when submitter is desperately looking for filling up a position, CSARDAS can give him a list of applicants and their interests and experience. This is NOT a necessary feature. It could be kept as a low priority feature. Its not mandatory on the reader to register. The reader can register if he wants to.

--Mitra

**Q: Operations of the server and database**

As described, CSÀRDÀS will run on a Linux OS, communicate with the client over an Apache-Server and will store its information on MySql Database. Who is responsible for the operation of these systems after CSÀRDÀS has been deployed? --Walter

**A: Informatics Europe**

Informatics-Europe provides that service. -- Hel

**Q: What are the conditions for the availability of CSÀRDÀS?**

Are the environmental systems of CSÀRDÀS (Linux, Apache, MySql) available 24 hours/7 days a week? Or is there a maintence window for these systems? --Walter

**A: 24/7 is preferable**

The service should always be available. If the service is down because of maintainance for more than 1h, it has to be communicated on the main website 3 working days in advance. -- Hel

**Q: What versions of Apache / mySQL will be used?**

For developing/testing the application it is helpful to know which versions of Apache / mySQL will be used. -- OLI

**A: Apache and MySQL versions**

XAMPP 1.6 for windows, linux and mac include:

- Apache 2.2.4
- MySQL 5.0.33

--Rod

**A: Versions on the production system**
Q: Must there be an email notification mechanism?

Should the system send an email to the administrator if someone submitted/changed a job position description? Should the system send a confirmation email to a submitter if a job position was submitted or reviewed/accepted by an admin? -- OLI

A: Email notification is due

Yes to both the questions. That proved to be a useful feature for CSEL application.

--Rod

Q: Automatic removal of outdated positions?

Should a position be removed by the system automatically if its deadline exceeded or does an admin have to confirm the removal? (see also next questions) -- OLI

A: Mechanism should be automatic

In order to lessen the burden of the administrator, expired entries should automatically be removed from the list of active positions. --Adam

Q: Deletion or archiving of outdated positions?

What should happen with outdated positions? Should they remain in the system and still being viewable by an administrator (in an archive section) or should the positions simply be deleted? -- OLI

A: Maintain archive

Entry submitter should be able to decide upon submission whether his/her outdated entry should go into the archive or not. Such an archive should be viewable for everyone (i.e. not only to administrator). --Adam

Q: Is the use of Javascript and cookies allowed?

Some people disable the use of Javascript and cookies in their browsers. They wouldn't be able to use the system properly if we use Javascript and/or cookies in the implementation. Therefore the question is if we are allowed to use these mechanism for the implementation? -- OLI
A: We don't like Javascript

Javascript is not a good choice when you don't know all the different kind of browsers the users have installed (that is, for internet applications) because it may not be interpreted correctly. Even if you use the more common Javascript functions for checking input data you may end up in trouble, because as you said the interpreter may be disabled on the local machine, letting potentially corrupted data find a way through. To avoid the latter, server side checks are always necessary, so client-side Javascript sounds like a duplicated effort anyway. About sessions, a more professional technique exists to handle sessions without using cookies: it is called "session url rewriting" and J2EE, for example, supports it. Conclusion: try to avoid javascripts at all and use url rewriting if you can manage to. Otherwise use cookies and warn the user to enable them or the web site will not work properly. Also think carefully if you need sessions at all...

--Rod

A: cookies: yes, javascript: no

You are allowed to use cookies.

You are not allowed to use JavaScript.

Arsenii Rudich

A: Only if really needed, and should be portable

There has been a discussion on this topic within the teaching group. We don't all agree on this point. Arsenii's position, as you can see above, is totally against. Personally I am more open because I see the limitations of pure HTML. A good example of where Javascript helps is on a site (such as Thinkpad for IBM/Lenovo) where you can make up your own laptop configuration; with Javascript, the total price can be updated immediately each time you change or add an option. Having to click "Recompute" and wait for a full trip to the server, as on some manufacturer sites, is not the most effective GUI.

The arguments against Javascript are lack of portability (not all browsers support all functions) and potential security risks.

My view regarding Javascript for this project is:

- Form follows function: don't use Javascript for something that can be done without much extra effort without it; use it if the result really adds to the value of the site.
- In particular, don't use Javascript for application functionality ("application logic", "business model"), since such elements should be implemented on the server --and Javascript is not a good language for long-term software engineering, e.g. extendibility, reusability etc.). Javascript should be used only to help enhance the user interaction experience.
• If you do use Javascript, stick to the subset of facilities known to be supported by all major recent browsers, and not known to cause security issues.

With these caveats, I think one does not need to ban Javascript altogether.

-- Bertrand Meyer

Q: What kind of possible position types and categories are there?

In addition to the question asked above I could imagine something like this:

• Category: What kind of categories do exist? (example: "professors", "PhD students", "postdocs")
• Sub-Category: only for category What are the possible sub-categories for the main categories? (example for professors: "Assistant Professor", "Full Professor" etc.
• Position Type: Are there some possible sub-types for positions? (example for professors: "tenured position", "untenured position"

Is the list of categories and and types fixed and the user can only select one of these possible options or should the user be able to define new categories and types? -- degger

A: The list of categories and types fixed and the user can only select one of these possible options.

Categories and Sub-categories:

• PhD student
• postdocs
• professor
  o Assistant Professor
  o Associated Professor
  o Full Professor

Positions could be permanent or temporal

Arsenii Rudich

Q: Which are the needed informations to create a submitter account?

What does an user have to provide to open a submitter account, e.g. real name, user name, email address, institute/department city, ... and how will he log in further, by user name or email address? -- Ramon
A: question 11

Look at question 11; using email as username can be sufficient if the security restrictions are not too demanding (like in this case)

--Rod

**Q: Forgotten Passwords**

Should the system provide the possibility to recover forgotten passwords? If yes, in which form (resend password or "reminder question")? -- BHerlig

**A: Yes**

The system should send a newly generated password.

-- Hel

**Q: How to searching/filter job positions?**

After which criteria should the job list be searchable? -- BHerlig

**A: Jobs can be found by any field**

All fields of a Job should be used to find a Job. Of course, it would be nice to use select boxes in the search mask for the fields that can only contain certain values. -- Hel

**Q: Disclaimer needed?**

Does the system need (e.g. for legal reasons) a "disclaimer section"? Which information should it contain? -- BHerlig

**A: Disclaimer**

Since all such services have some sort of disclaimer, this one should probably have one, too. I would not worry about the wording, however, since once CSARDAS goes live there will probably a disclaimer produced by some lawyer. For now, it should suffice to state something like

Disclaimer: The provider of this service does not guarantee the correctnes of the offered positions.

-- JoergD
Q: Help section?
Does the system have to provide a help section (sort of an online manual)? -- BHerlig

A: Not Necessary
If the user interface is good, one does not need a manual! Moreover, the system is not so complex! -- Mitra

Q: Data fields on main overview page?
Which are the desired fields of a job entry to be listed in the overview part of the system? -- BHerlig

A: Question 33
please take a look at the answer for question 33! if you are not satisfied or convinced, please post a more specific question!

-- Mitra

Q: Admin contact for entries?
Should the user have the possibility to enter an administration-contact (i.e.: job applicants shall respond to "HR@company.com", but the systems administrator may contact "job-submitter@company.com" in case of questions)? -- BHerlig

A: Yes
this could be useful in some cases, but is not essential. -- GlennG

Q: Denial of entry without notification?
should the system provide the possibility to deny/delete requests without notification (e.g. for spam)? -- BHerlig

A: Yes
this sounds like a useful feature. -- GlennG

Q: Target browsers
Which browsers must the system be compatible with? -- Leo
A: Which browsers?

The application should at least work properly on the latest IE and Mozilla browsers.

--Rod

Q: Password Database

Should the same password-database be used for authentication as for the event-list? Or should we use our own password DB? -- TA

A: Use Separate Databases

The two services should be completely independent. -- GlennG

A: GlennG. is right!

I agree with GlennG. – Arsenii Rudich

Q: Which attributes must be displayed on the job list?

I think it makes no sense to display all attributes in the job list. I think the following attributes are important for an overview in the job list:

• Position name
• University name
• Country
• City
• Position type
• Position tenure

Is that correct? All attributes can be viewed in a job detail view by clicking on the interesting job list item.

-- Walter

A: Add application deadline

Your proposal looks good to me. I'd extend it with application deadline since that is very important for someone browsing the site. Being able to search/sort based on the deadline is also useful. -- Adam

Q: Will modified job offers be displayed in their old version before approval?
After an ad is modified and before its approved again, will the old version be displayed or what? --dmany

**A: Yes**

The old job offer should be displayed before approval of the changes.

--Mitra

**Q: Information about rejection**

Shall the Administrators be able to give a reason for the rejection? Can Submitters see by which Administrator an ad was rejected? --dmany

**A: Give reason**

If desired, the admin can send a reason for the rejection to the submitter. -- GlennG

**A: Administration should appear as one unit**

I do not see the need to distinguish between different admins. -- GlennG

**Q: How many submitters?**

How many submitter-accounts should the system be able to store and manage at least? How many administrator-accounts? --kohlers

**A: No submitter limit**

How many chairs on European universities are there? If you have to limit the number of submitter-accounts due to technical reasons, you should state so in the SRS. There is no organisatorial reason for a limit. The same should be true for administrators.

**Q: How are administrators created?**

How should new administrator accounts be created or existing ones modified / deleted? Who has the permission to do this task. --kaeserm

**A: Administering administrator accounts**

Unless we want some kind of super-administrator, I think that administrators should be able to create and modify administrator accounts. We may want to prevent an administrator from deleting his own account, though, or ensure that there is always at least one administrator account left.
Q: Are there any system informations from CSEL available?

Have you some statistics (especially average and maximum) about memory usage and used filesystem size from CSEL? -- Walter

A: Yes

There are statistics about memory usage and others available for the whole system produced by SAR. For details please look at [1]. A per user statistic is not available.

-- Luc

Q: How many institutes and chairs are member of Informatics Europe?

-- Walter

A: This wasn't too difficult to find out...

http://www.informatics-europe.org/members.html

--Rod

Q: How much does the Chair of Software Engineering advertise new academic positions?

Can you give us an average number per year? And how many job applications come in for a single position? Can you give us an average number per advertised position? -- Walter

A: Numbers highly variable

There is no rule. Basically things work like this: each professor has a number of "permanent" positions (typically 6 for a full professor and 2 for an assistant professor), which can be used for administrative support personnel as well as for research positions. In addition research groups often submit grant proposals to one of several possible sources: internal ETH funding mechanism (TH-Gesuch), Swiss National Science Foundation (FNS), European projects, foundations, industry... Typically these fund a PhD student for 3 years or a postdoc for a year or two, although this can vary. A position becomes available when:

- A researcher leaves a permanent position, typically after completing a PhD or postdoc assignment.
- A new grant request is approved, with positions to be filled.
For the Chair of Software Engineering the first case has not happened much yet since the group was created only 5 years ago with the first PhD students joining in the following period. Typically we have advertised 2 to 5 positions a year as a result of receiving grants.

Typically we might get 20 to 50 applications for a PhD position, a dozen for a postdoc position.

**Q: Is Informatics Europe responsible for the operation and maintenance of the environment systems (Linux, Apache2, MySql)?**

Has Informatics Europe guaranteed reliabilities for their running systems? Especially we are interested in the Mean Time Between Failure (MTBF), the Mean Time To Recover (MTTR) for the following systems: Operating System (LINUX), Webserver (Apache2) and Database (MySql)

**A: At the moment, Informatics Europe is hosted on the SE servers [2].**

The web server runs on a HA-clustered system with automated fail over in case of a hardware failure or system crash. The applications are not heartbeated at the moment. A typical fail over causes an outage of approx. 130sec. A planned switch over due to maintenance will cause an outage of approx. 4sec. All data is replicated in real time to avoid any data loss. An overall availability of the services is typically more than 99% -- Luc

**Q: Has Informatics Europe a recovery plan for their MySql Databases? And, if yes, how fast can a full recovery be done depending on the database size?**

-- Walter

**A: The databases are backed up daily**

In the worst case data from the same day is lost. In case of an accidental deletion of data, the backup of the database can be recovered manually from the filesystem during office hours (UTC+1) within minutes. In case of a complete dataloss due to failed disk sub system it can take more time, depending on the availability of idle tape drives in the tape robot of the central backup infrastructure. -- Luc

**Q: Should passwords be saved in cleartext or encrypted?**
If passwords are saved directly to the database, the administrator or hackers may see them. Encryption (e.g. with a oneway function) will eliminate this possibility. What is preferred? -- Thertli

A: Encryption would be nice

We don't have many security concerns, but still encrypting passwords is seldom a bad idea. This is a low priority feature in my opinion.

-- Rod

Q: How many positions should be displayed at one time?

I suggest that there should be a maximum of table entries displayed at one time, e.g. limited by a constant number of entries. Should there be such a maximum and what would be the constant? -- Thertli

A: 30

30 entries each page seems reasonable, but most important is having the possibility to order column entries by different column headers (like in CSEL). Of course customizing the number of entries could also be nice, but I would give low priority to this.

-- Rod

Q: Is it possible to fully integrate the administrator interface into the general user interface?

This would also mean to use the normal login procedure for the administrators. There would be no separate administrator entry point then. -- Thertli

A: Possible, but not desirable

We prefer to have a separate access point for the administrator, like in CSEL. This means a different URL, of course. Reason: potential hackers has to guess the administrator interface url to start with, and cannot even try to mess up things staring from the user interface. This does not mean that you cannot reuse some code from the user application, of course. See also answer to Q9 (by Hel). ---Rod

Q: Which library should we use for database connectivity?

I suggest EiffelStore. -- Thertli

A: EiffelStore or ECLI
Both can do the job. -- Rod

Q: Administrator can edit submissions?

Can administrators edit submissions, approved or non-approved? I can imagine that as a submitter I would not want this to be possible, but the project description suggests it. --Leo

A: Yes

I think it should be possible. As a submitter you should trust the administrator, and anyway you know who to complain to in case of problems.

--Rod

Q: Deadline extension without approval?

Should submitters be able to extend the deadline on approved entries without requiring approval of the modification? --Leo

A: No, thanks

See Q6 and Q12

-- Rod

Q: Should newly registered accounts be confirmed (automatically)?

Either the submitter can choose his own password and receives a link to confirm his address, or he receives a generated password and has to login, for example within 24 hours, or else the account will be deleted. How long should the system wait before doing so? --trickli

A: Yes

I think that the first solution you suggested is fine.

--Rod