

Domain Driven Design - Domain or Security

Asked 11 years ago Modified 11 years ago Viewed 391 times



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I'm building an application using DDD. Its an employee appraisal application. As part of the Domain layer I have an Appraisal Document. What can be done to this document is dependant on the role the user plays in relation to the Appraisal Document but also is dependant on the document status.

Are these Domain concepts or is this the cross cutting concern - Security???

How do you relay to the UI what actions are permissible???

[domain-driven-design](#)

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asked Dec 2, 2013 at 21:01



David

3,589 ● 1 ● 26 ● 33

1 Answer

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This is a somewhat tricky question. The problem might be that your business experts have already settled with the concept of an **Appraisal Document**, which is a relic of pre-computer eras or old applications that they are already used to. However, an **Appraisal Document** is a merely a pre-computer era tool that people use to **document** the actual appraisal process, but it is most probably not a concept that actually occurs in the real business of appraisals. For example, if you replaced the **Appraisal Document** with mouth-to-mouth communication, your appraisal process would most probably change only very little, and those security concerns on the **Appraisal Document** would translate to policies such as "a supervisor must not talk about an employee's appraisal with other employees" or "always get a 2nd opinion".

(I sometimes see a related problem in the area of medical health records where most doctors are already used to software, such that they seem to confuse the Electronic HR -- that documents something -- with the actual treatment/diagnosis -- to be documented.)

To solve this, your business experts should liberate from the concept of an `Appraisal Document` and focus on the actual appraisal process. As you said already, there are certain roles that people play during the appraisal, e.g., Supervisor, Participant, Employee, Referee, and the document status actually refers to a concept in the process (2nd eye principle or similar). These roles and the process should be modeled explicitly and precisely in your Appraisal BC, possibly involving a saga/long running process. It then also becomes clear that those security concerns that shall restrict access the `Appraisal Document` are actually constraints within the actual domain and are strongly tight to the respective roles and process state in your domain.

The application interface of your Appraisal BC could offer services to your application that uses the respective roles, e.g., `gradeEmployee(String supervisorId, String employeeId, Integer grade)` Or `viewAppraisal(String viewingSuperVisorId, String appraisalId)` Or `involveReferee(...)`. It is then the duty of the application interface of the Appraisal BC to ensure that the actions are actually allowed; for, it would call business methods of the domain model, e.g.

```
AppRaisalDomainService.mayPublishReport(supervisor, appraisal)
```

All that is left to do in your Application is to map the users of your application to the respective `supervisorId / employeeId`. For an example, you may want to take a look at Vaughn Vernon's "Collaboration"

bounded context in the [IDDD_Samples][1] repository, where people have roles such as `Moderator`, `Author` etc, and how the collaboration context is used from other related BCs.

Finally, in your UI you can then present the current state of the appraisal process to your users. The "details" page of a single appraisal will automatically become the "Appraisal Document" people are used to. You can even entitle your UI view by "Appraisal Document" or similar in order to satisfy your users, and if they print out that view, they actually hold such a document in their hand. In the underlying application, however, access is not restricted to the "Appraisal Document", but rather to the underlying appraisal process, and the access restrictions are a domain concept.

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answered Dec 3, 2013 at 10:18

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Alexander Langer

2,893 ● 18 ● 18

Thanks very much for the timely response. Your explanation reaffirmed what I thought, always great to get that second opinion. Bought Vaughns book! Thanks for the reference.

– David Dec 5, 2013 at 16:29

Alexander - The mapping of users to respective supervisor / employee Ids. Would you consider this to be part of the Appraisal BC or a separate Security BC? Similar to described in Vaughns book?? – David Dec 10, 2013 at 10:24

I think a separate Security BC would be overkill here. Just do the mapping in the application layer. You can later move it to a separate BC if it becomes too complex. In the Appraisal

BC, the respective Roles can then be treated as Value Objects (as with Author/Moderator etc in Vaughn's book).

– [Alexander Langer](#) Dec 10, 2013 at 18:31

Thanks again, would have been great to setup a online chat to pick your brains more on this topic. – [David](#) Dec 10, 2013 at 21:06 
