



Pädagogische Hochschule Freiburg · Kunzenweg 21 · 79117 Freiburg
ZIK - E-Learning Service Team

ILIAS developers / ILIAS Serviceprovider

**Zentrum für Informations- und
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Call for Bids: Base Concept ILIAS Offline

Name of Project: Base Concept ILIAS Offline

Deadline for Bids: 2019-10-08

Hand in Bids to: Denis Strassner, PH FR, strassner@ph-freiburg.de

Dear All,

Denis Strassner from the Pädagogische Hochschule Freiburg hereby calls for bids for the aforementioned project.

In various context such as working with learning modules while traveling or answering test questions in a large scale e-exams, the offline capability of the respective modules is a key factor. There are already existing implementations (see:

https://docu.ilias.de/goto_docu_wiki_wpage_4131_1357.html) or ideas on how to implement such requirements (see:

https://docu.ilias.de/goto_docu_wiki_wpage_5723_1357.html). However,

the ILIAS Client-Side JS Patterns are heavily under developed in the current state of ILIAS. It would be possible to implement multiple different solutions using different patterns for each further scenario. Since several of the underlying challenges, will appear in each scenario, we believe it to be a good approach, to discuss possible patterns among interested developers and agree on solutions, which enable as much reuse among different components as possible.

Therefore, we ask for bids for a Base Concept on how components of ILIAS can be used offline.



Details of the project are outlined on the next page. Please hand in your bids and a corresponding statement of work by email according to the information in the header.

Bids will be judged by the offered price and the details outlined in the statement of work. We are looking forward to your submissions.

Best regards,

D. Strassner

Denis Strassner

Pädagogische Hochschule Freiburg



Project Details

- Name of Project:** Base Concept ILIAS Offline
- Latest date of delivery:** 2020-02-21 (Latest Date of first VC: 2019-12-06)
- Goals and Benchmarks:** The concept should show possible solutions for the following key challenges when working with offline content in ILIAS:
- How can a robust communication without loss of data between a server and a client be ensured over an unreliable or intermittent connection?
 - What kind of service(s) do we need to provide on the server side?
 - What type(s) and structure(s) of the payload should be chosen?
 - How can data be stored by the client to avoid loss of data?
 - How can different modules of the client side communicate with each other?
 - How can JS code (or code compiled to JS at some point) be structured to make it easy to be read by PHP developers (you may investigate options like type script to achieve this goal)?
 - How is the offline content rendered? What is the relation to the existing UI-Components? How is data generated on the client rendered into the DOM (client side rendering/templating)?

Provide a proof of concept implementation of an offline scenario of your choice in ILIAS (e.g. Learning Module, Test, Survey etc.). Note that our preferred scenario is an offline player for test questions, however you are free to choose another one as long as the implementation of the key aspects mentioned above is demonstrated. Note that the proof of concept does not need to be a mergeable solution at all. You may completely ignore design or other feature specific aspects.

- Deliverables:**
- A preliminary VC of about 2h with interested ILIAS developers to gather initial requirements, ideas and possible relations to other components.
 - A PR containing the requirements, initial ideas and relations to other components as prose or code.
 - A discussion of the initial collection and possible solutions based on the PR with interested developers via a VC of about 2h.
 - A PR containing a concept and proof of concept with answers to the questions outlined in "Goals and Benchmarks". The PR should take the current state of the discussion, and the results of the preliminary workshop into account.
 - A presentation and discussion of the concept and proof of concept with interested ILIAS-developers via a VC of about 2h.
 - A summary of the discussions and the general state of the concept in the public PR



General Conditions:

- The PRs should be handed in at the official ILIAS Repo marked as [WIP] the ILIAS e.V.: <https://github.com/ILIAS-eLearning/ILIAS/tree/trunk>
- The concept should be written down as markup and located in docs/development
- The proof of concept needs to be well documented with readme and comments
- The PRs and VCs should respect common procedures of the ILIAS community.
- The concept must make use of existing concepts in ILIAS 6.0 (especially those in the src folder, especially the UI components) as much as possible.
- Try to make as little use of 3rd party libraries as possible. If one is needed nevertheless: document well, why it is needed and provide an analysis of the future prospect of the proposed libraries.