



A Database Is Catching On

For the International Baccalaureate organization, Werum Software & Systems and the company eXist Solutions have adjusted exist Solution's publishing system, which is based on their open source database eXist-db, to provide all teachers and coordinators involved with uniform access to documents and information.

International Baccalaureate is a foundation registered in Switzerland with their principal offices in Geneva, who have been offering an internationally accepted school-leaving qualification since 1968: the International Baccalaureate (IB). Students at the age of 3 to 19 years can attend the four-level teaching program – at over 5000 schools in more than 150 countries across the world. The teachers and coordinators at these schools receive the curriculum and exam guidelines directly from the International Baccalaureate organization. They are offered in English, Spanish and French language and up to 30 other languages on request. Until a few years ago, those data were distributed onto various platforms with different workings – a confusing, at times rather cumbersome solution. For this reason, the International Baccalaureate decided to replace the old systems by one uniform publishing platform on the internet: the Programme Resource Centre (PRC). The PRC was designed in cooperation with IB's The Hague office and launched in 2017. Ever since, all schools working by the IB directives and offering the international school-leaving qualification can access it online.

From cumbersome to simple

The PRC is based on the eXist-db database and the TEI Publisher, both of them open source products that were initiated and are still actively fostered by eXist Solutions. In cooperation with Werum Software & Systems, who are based in Lüneburg in Northern Germany, eXist Solutions has adjusted the publishing system to make it a tailored solution that meets IB's requirements and needs. The two

companies were in charge of implementing the server application and the user interfaces, adapted the backend and took on various programming tasks. The PRC now combines the functionality of the old systems and enhances them with a centralized publishing component for information and documents, such as curriculums, exam regulations, training documents or schedules and announcements. The documents are offered in English, French and Spanish and, if necessary, in up to 30 other languages.

Also yielding technical advantages

On technical level, too, introducing the PRC has made things easier: the International Baccalaureate can now maintain the platform themselves as well as provide and update contents. Moreover, there is uniform workflow support to supply new contents and the newly integrated TEI Publisher facilitates their upload and release: it transforms different source formats like Word or XML into various target formats like HTML and PDF, which are the basis for publishing the contents on the online platform. In addition to this, full-text search across any contents is now available and importing, publishing and rendering documents with complex content like videos or audio files is much easier. Based on appointments, the PRC can also be used for automated calendar generation. The service agreement also covers a continuous advancement of the PRC. The next version with improved functions is due to be launched before the end of 2021 – and Werum is again intended to be the implementation partner at eXist Solution's side.

Transferrable to other school and education programs

The PRC publishing system is designed to be employed in many fields of education – in schools as well as in adult education or vocational training of companies. The Corona pandemic has shown once again that online programs are increasingly needed to support conventional face-to-face learning. Here, too, a central database where the organizations and teachers file and exchange documents and information is a predestinated solution – or even a database for students to view and download teaching contents, worksheets or exams. The International Baccalaureate is very content with the new solution: "Owing to the new software, our editors are now able to deliver precisely fitting information and documents promptly, independently and reliably to all the 5,000 IB schools across the world," says Michael Sprong, Senior Manager for product development/management at the IB Global Center, The Hague (Netherlands) of the Geneva organization.

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