



Modelling for cancer proton therapy

IBA is igniting the second rocket stage for MBSE and is convinced of its great benefits

Press release



LieberLieber Software: Modelling for cancer proton therapy

IBA is the world leader in particle accelerator technology. Within IBA R&D, a small group of experts has been using Enterprise Architect for over 15 years for this purpose. Now the use of modelling is being significantly expanded with LemonTree, among others, as the company has come to appreciate the advantages of Model Based Systems Engineering (MBSE).

Vienna/Louvain-la-Neuve – With more than 2000 employees worldwide, IBA designs, produces and markets innovative solutions for the diagnosis and treatment of cancer and other serious illnesses, and for industrial applications such as the sterilization of medical devices. Around the world, thousands of hospitals use particle accelerators and dosimetry equipment designed, produced, maintained and upgraded by IBA.

Thibaud Thomas is Manager for System Architecture at the IBA Group and is delighted that, with LieberLieber's support, modelling with Enterprise Architect is being significantly expanded at the IBA Group: „Until now, we have only used Enterprise Architect in a niche area for many years. Our contact with LieberLieber convinced us to expand our modelling and gradually add to the tool chain. The aim of our efforts is to achieve comprehensive and model-based systems engineering in order to keep the complexity of our products under control. Figuratively speaking, we are now igniting the second rocket stage for this innovative process, and we are convinced of its great benefits.“



Thibaud Thomas
Manager for System Architecture at
the IBA Group (Source: IBA)

Better MBSE for the world leader in proton therapy

IBA (Ion Beam Application SA) is the world leader in proton therapy with IBA customers having treated more than half of all the proton therapy patients treated on commercial systems. The company has been a leader in proton therapy development for the last 35 years and has built the largest user community worldwide.

Dr Konrad Wieland, CEO of LieberLieber: „The IBA Group develops highly complex proton therapy devices and has previously used Enterprise Architect in a very limited way. The contact with LieberLieber has now sparked an interest in making better use of the advantages of modelling and developing both the skills and the tools accordingly. Model-based systems development (MBSE) unfolds its full potential particularly in such high-tech areas. We look forward to accompanying the IBA Group on its journey and supporting it with our comprehensive expertise.“

New tools and additional knowledge

The expansion of the tools used and the increase in the number of system modellers from a few experts to over 20 resulted in a considerable need for training. Thibaud Thomas: „The modelling group suddenly consists of people with very different levels of knowledge, from beginners to experts. Teamwork also brings with it new requirements that we have to adapt to. We also wanted to get to know LemonTree better and improve data exchange with Polarion. We therefore took advantage of LieberLieber’s extensive training and consulting services to expand our expertise accordingly.“

Two Enterprise Architect basic training courses were therefore completed, including the SysML language favoured by MBSE. Three „Advanced Workshops“ on LemonTree, LemonTree.Connect Polarion and Build Pipeline Model Automation (GitLab Build Pipelines) were agreed for dealing with LemonTree. In addition, the IBA Group is a pioneer in the use of LemonTree.Connect Polarion Automation, which can be used in an automated way in a build pipeline, similar to LemonTree.Automation. In order to be able to include stakeholders in the development communication who do not model themselves, the decision was made in favour of WebEA and ProCloud Server after a thorough evaluation.

Information from the models is useful for many users

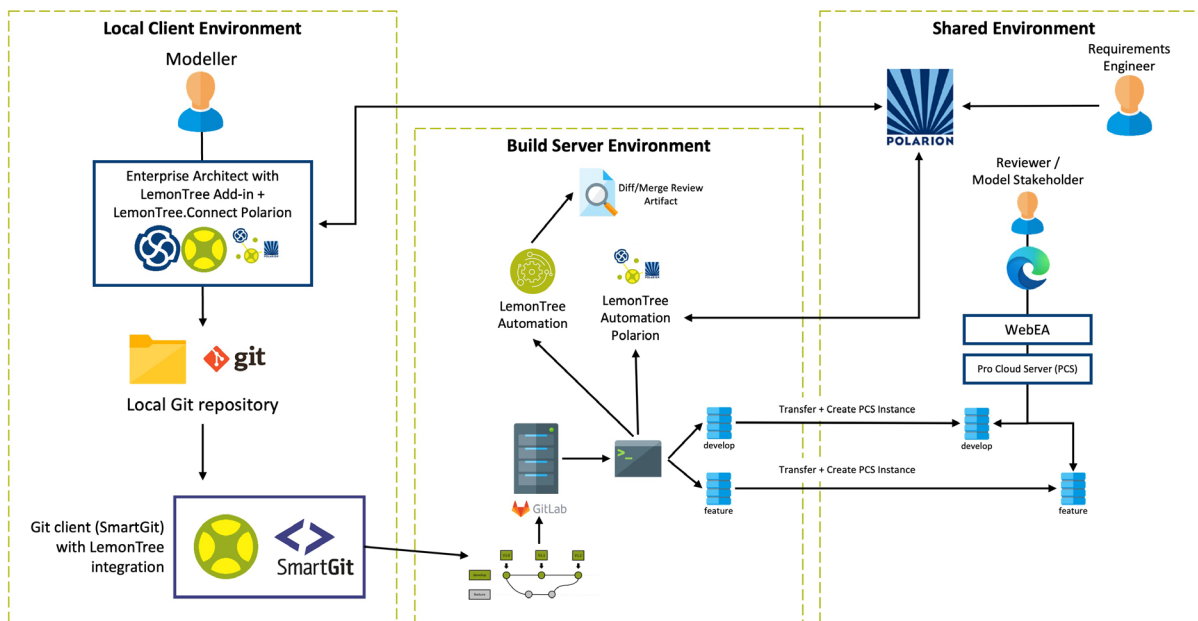
Thibaud Thomas: „The focus of the modelling is of course entirely on our product. However, our processes should become less document-heavy and we also want to make better use of the data from the domain-specific tools (e.g. Polarion for requirements management). Ultimately, there will be a large number of users for the models, because every department in the company should always have up-to-date information in WebEA perspectives embedded in Confluence pages. We still have a long way to go, which we want to cover as quickly as possible with the support of LieberLieber.“



Konrad Wieland
CEO of LieberLieber

The IBA Group uses these tools in the Enterprise Architect environment

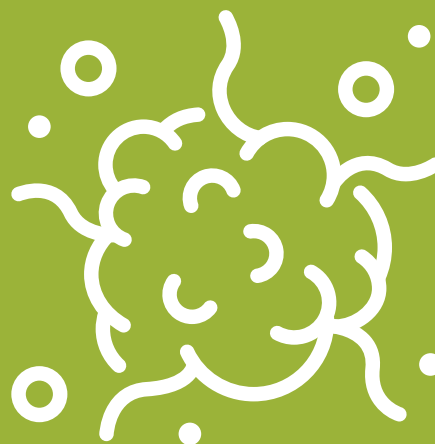
- Enterprise Architect
- WebEA
- Pro Cloud Server – Team Server Edition
- GitLab
- SmartGit
- LemonTree (floating)
- LemonTree Automation
- LemonTree.Connect Polarion Automation
- Polarion



The workflow managed by LieberLieber at the IBA Group

Advantages of proton therapy

Proton therapy aims to destroy cancer cells by delivering proton beams to a target tumor. Protons release the maximum energy within the tumor target area while limiting the radiation to the surrounding healthy tissues. This is not the case for photon radiotherapy, the most common type of radiation currently used in cancer therapy. Moreover, proton therapy can potentially improve local control through dose escalation while limiting side effects and long-term complications. As a consequence, this may enhance the outcome of the treatment and patients "quality of life".



ABOUT IBA GROUP

IBA (Ion Beam Application S.A.) is a global medical technology company focused on bringing integrated and innovative solutions for the diagnosis and treatment of cancer. The company is the worldwide technology leader in the field of proton therapy.

www.iba-worldwide.com

ABOUT LIEBERLIEBER SOFTWARE

We are a software engineering company. The know-how of our employees lies in model-based software and system design based on tools such as Enterprise Architect from Sparx Systems.

Our customers are companies that place particular importance on the quality of their software and systems development. They wish to maintain a constant overview of their complex development scenarios while ensuring that security-relevant requirements are clearly represented in models.

For this task we provide our own special tools, such as LemonTree and Embedded Engineer. In addition, we offer a range of useful tool integration services to help make our customers' development processes more productive.

LieberLieber is a business unit of Lieber.Group.

www.lieberlieber.com



LieberLieber Software GmbH
Gumpendorfer Straße 19, 1060 Vienna, Austria
+43 662 90600 2017, welcome@lieberlieber.com, www.lieberlieber.com