

Patents – Department of Mechanical Engineering

A perfect fit: The collaboration between United Caps and Novagraaf

"We rely on Novagraaf's Mechanical Engineering team to draft and defend our patents around the world, and to meet the new European challenge."

Novagraaf's Department of Mechanical Engineering has provided patent services to United Caps, a manufacturer of plastic caps for the food industry, for more than 15 years. We spoke to Sébastien Rime, Director of Research and Development (R&D) at United Caps about current challenges in the manufacturing and production of plastic caps, and how Novagraaf's Department of Mechanical Engineering is able to help.

Whether applied to water or milk bottles, or to salt and pepper mills, the primary functions of a plastic cap may seem obvious. The caps keep the product safely in its packaging, provide secure access and the ability to (re)seal the container, thereby conserving its contents.

Dig a little deeper, however, and you will find that the design of the caps controls and fulfills many other functions, such as flow rate, opening and closing force and product life, as well as providing ergonomic and design benefits. While all these factors combine to make a product easy to use, below the surface there is considerable complexity, innovation and challenge.

The company: A leader in its field

With more than 10 billion caps produced every year, the ubiquity of United Caps' products belies the innovation and complexity needed to create them. The company creates unique designs for each of its customers in light of their specific product and market needs. On top of that, there are intellectual property (IP) questions that the company's R&D team needs to address, as well as meeting shifting requirements in light of environmental and regulatory changes.



R&D Director **Sébastien Rime** has worked at United Caps for more than 20 years. He heads up the R&D department at United Caps, which has a team of around 20 people at its centre in Jura, France. As the lead for product development in the company, he is also the lead for all IP matters, and at the forefront of innovation in the industry.

The challenge: A new European regulation

Plastic pollution is one of the major environmental challenges of our times, leading companies such as United Caps to find new and more innovative ways to minimise the impact of its plastic caps. The team needs to keep pace with both market demand and changing regulations. For example, by 2024, all plastic caps marketed in Europe will need to be equipped with a system that allows them to remain attached to the bottle.

With the ecological, economic and industrial stakes set so high, United Caps, its customers and its R&D department are responding rapidly to meet this new manufacturing constraint. The company's main objective is to develop a solution that meets the new European legislation while fulfilling the required functions of its caps, and without degrading ergonomics for users. IP is an essential element in this process of innovation, and the industry is already seeing an explosion of patent applications, as beverage companies and manufacturers race to adapt.

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According to Sébastien, the company's key strategy for meeting this challenge includes:

- **ensuring freedom to operate** through the company's innovations, including being warned upstream of the risk of third-party attacks;
- **maintaining competitive advantage** through patent protection of its technical solutions;
- **outsourcing patent drafting** to guarantee both quality and value;
- **working with an IP consultancy firm** that is close to United Caps' R&D centre to facilitate information exchanges and on-site visits, so as to develop a good understanding of the complexity of the products;
- **training internal teams** in IP, so that they have a better understanding of this subject and are able to answer the most frequently asked questions in this field.

The solution: How Novagraaf has been able to help

- **Expert opinion:** By identifying conflicting patents at the start of the technical development process, Novagraaf is able to help United Caps to reduce the risk of launching a product with features that infringe third-party rights. Our freedom to operate and prior art search services identify conflicting patent rights in a given field, as well as other potential obstacles to commercialising a new product, allowing restrictions to be bypassed during R&D activities.

As Sébastien puts it: *"Relevant advice from Novagraaf experts allows us to move in the right direction."*

- **Legal protection:** In competitive technical fields, patents are both highly valuable and frequently under attack. From pre-litigation verification to validity assessments, objection handling and litigation support, Novagraaf's litigation management services place clients in the strongest possible position in the event of a dispute or infringement action. Sébastien says the services *"fully meet our needs. We can count on Novagraaf's expertise to support us in challenging cases."*

- **Technical expertise:** To ensure the strength and validity of patent rights, it is essential to capture inventions in patent applications through clear and precise drafting that ensures the broadest possible claims in light of the existing prior art. Novagraaf's IP attorneys and subject matter experts specialise in drafting and filing such patent applications, advise on appropriate laws and formalities in different jurisdictions, and extend rights internationally via our network of selected agents. *"Outsourcing the drafting lightens the work of internal teams while ensuring the solidity of the resulting patents,"* comments Sébastien.



- **Close collaboration:** The locations of Novagraaf's offices in France (Besançon, Bordeaux, Lorient, Marseille, Paris, Strasbourg and Toulon) also allows us to meet United Caps' requirement for proximity: *"The director of Novagraaf's Department of Mechanical Engineering does not hesitate to visit us in the Jura when the need arises,"* says Sébastien.
- **Knowledge sharing:** Novagraaf has provided training to the teams at United Caps' R&D centre to help them to gain a better understanding of IP issues, and remain on hand to answer questions as they arise. *"There is a good reactivity to all our requests,"* agrees Sébastien, adding: *"Novagraaf knows our business and the problems that we face. We have built a good understanding, which adds to the pleasure of working together."*

We would like to take this opportunity to thank Sébastien Rime and United Caps for entrusting Novagraaf with the challenges that he and his team currently face, and for sharing how our Department of Mechanical Engineering has been able to help United Caps to achieve its goals.

For further advice on patent protection strategies in the sector of mechanical engineering, please contact customerservice@novagraaf.com or email our expert Vincent Robert, Director of the Department of Mechanical Engineering, at: v.robert@novagraaf.com.

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