

# Liberating Expression: A Freehand Approach to Business Process Modeling

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**Abstract:** Tools that support business process modeling are designed for experienced users to draw a process with precision and professional appearance. These tools are not conducive to sketching quick business design ideas. This demo proposal presents Inkus, a non-intrusive business process sketching tool which allows freehand sketches of process ideas and slowly brings the users to the required common business vocabulary. Our goal is to help unleash creativity in business designers and enrich the design process with values beyond drawing.

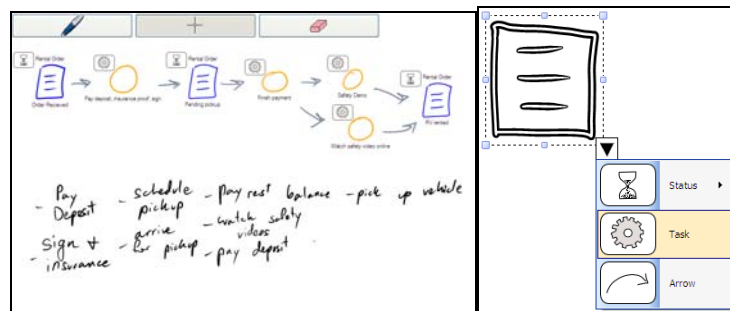
**Keywords:** Sketching, business process modeling, use case modeling, low-fidelity UI, creativity support.

## 1 Overview

Business process modeling (BPM) has become an important part of the business world. BPM helps businesses understand their own processes and increase the efficiency of their organizations. Unfortunately, the tools currently available to make such models are rigid and bulky to use. Although these CAD-based tools provide several advantages in terms of analysis and documentation, they limit BPM designers to a structured language that may not be conducive to the creative process [1]. Instead of relying on these tools to build the initial model, BPM designers typically work out a preliminary design on paper first [2]. With this in mind, we developed Inkus as a non-intrusive environment for creating freehand sketches of business process models. Inkus provides the user with a drawing space, where he or she can create freehand sketches, and a project management space, where a series of visualizations provide feedback on the sketches in the drawing space.

## 2 Sketching with Inkus

Inkus uses a hybrid approach of informal sketches and formal elements. The user can sketch a crude solution of their business process design, and later annotate their sketch such that Inkus recognizes it as a formal BPM notation. Inkus allows this by



**Fig 1.** Elements in the Inkus Sketching Canvas (Left) can be formalized using the lasso menu (Right).

first presenting the user with an empty field where he or she can work out the business process design. The user is allowed to sketch freely without any commitments regarding vocabulary or formalized components. Inkus deliberately refrains from automatically interpreting the drawings because an incorrect interpretation may be disruptive. Once the user is ready to refine their sketch into a more formal state, a selection tool can be used to assign a formal vocabulary to the elements of a sketch (see Fig 1). Inkus was built with the insight that design is not a linear process, and so the components can be left without a name or any other details until when the user is ready to specify them. Currently, Inkus provides the user with the vocabulary to define a rudimentary Artifact-Central Model.

As the user begins to assign meanings to the stroke clusters, Inkus starts providing feedback to the user through the project management space (not pictured). The project management space is dependent on the taxonomic assignments within the drawing space. Inkus uses these to build an internal model, which is then used to present alternative visualizations to the user. Since sketches can become messy and be difficult to manage over a long period of time, alternative visualizations, such as the Use Case View, allow the user with a better understanding of the broader consequences that a change may have on their model.

Drafting business processes using a sketch-based medium may be a promising approach. It offers a quick way to draw diagrams compared to the CAD tools that process designers currently use. Through these quick sketches, Inkus allows process designers to express concerns they would normally not be able to in more rigid media, thereby easing the cognitive burden of holding these concerns in their memory. The simple and lightweight UI of Inkus does not impose a steep learning curve, and the process models could also be shared easily with clients who may not be familiar with the domain. In creating a flexible and rapid medium like Inkus, we hope to allow the designer to maximize their creative potential.

## References

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