

For every point x get

$$\sigma_f(x) = \{u \in \bigcup f \mid \text{dom } u = \langle \mu \rangle^* \{x\}\}.$$

$$q_f = \bigsqcup_{x \in \text{Ob } \mu} \sigma_f(x).$$

$$f[\nu'] g \Leftrightarrow \exists x \in \text{Ob } \mu: \bigsqcup q_f[\nu/\langle \mu \rangle^* \{x\}] \bigsqcup q_g.$$

or

$$f[\nu'] g \Leftrightarrow \nu \circ q_f = \nu \circ q_g.$$

[TODO: How to define galufunctors corresponding to the above formulas (if at all possible)?]

$$\exists x \in D: f[\nu(x)] g \Leftrightarrow \exists x \in D: g \not\star \langle \nu(x) \rangle f \Leftrightarrow ?? \Leftrightarrow g \not\star \bigsqcup_{x \in D} \nu(x).$$

The ?? does not generally hold: our lattices are co-brouwerian not brouwerian!

The above formula holds if g is a discrete reloids. So replace every functor $f \in \text{SLA}(\text{Ob } \nu)$ with $(\text{RLD})_{\text{in}} f$. Then continue for arbitrary reloids.

Another try: $\langle \nu' \rangle x = \nu \circ \bigsqcup \cup x$

$$y \not\star \langle \nu' \rangle x \Leftrightarrow y \not\star \nu \circ \bigsqcup \cup x \Leftrightarrow \nu \not\star y \circ (\bigsqcup \cup x)^{-1} \Leftrightarrow \nu^{-1} \not\star (\bigsqcup \cup x) \circ y^{-1} \text{ [FIXME: } x \text{ and } y \text{ are of different types.]}$$

$$x \not\star \langle \nu^{-1} \rangle y \Leftrightarrow x \not\star \nu^{-1} \circ \bigsqcup \cup y$$

The rest

One more other definition:

$$f[\nu''] g \Leftrightarrow (\bigsqcup \cup g)^{-1} \circ \nu \circ (\bigsqcup \cup f) \neq 0$$

Yahoo! $(i \cup j)[\nu''] g \Leftrightarrow i[\nu''] g \vee j[\nu''] g$ etc.

$$\text{Proof. } (i \cup j)[\nu''] g \Leftrightarrow (\bigsqcup \cup g)^{-1} \circ \nu \circ (\bigsqcup \cup (i \cup j)) \neq 0 \Leftrightarrow (\bigsqcup \cup g)^{-1} \circ \nu \circ ((\bigsqcup \cup i) \sqcup (\bigsqcup \cup j)) \neq 0 \Leftrightarrow (\bigsqcup \cup g)^{-1} \circ \nu \circ (\bigsqcup \cup i) \sqcup (\bigsqcup \cup g)^{-1} \circ \nu \circ (\bigsqcup \cup j) \neq 0 \Leftrightarrow (\bigsqcup \cup g)^{-1} \circ \nu \circ (\bigsqcup \cup i) \neq 0 \vee (\bigsqcup \cup g)^{-1} \circ \nu \circ (\bigsqcup \cup j) \neq 0 \Leftrightarrow i[\nu''] g \vee j[\nu''] g \quad \square$$

Proposition 24. ν'' is a galufunctor.

Proof. ?? □

An attempt of an alternate definition:

$$f[\nu^*] g \Leftrightarrow \text{xlim } f \circ \nu \circ \text{xlim } g \neq 0 \text{ [FIXME: Does this make sense?]} \text{ [TODO: Differentiate generalized limit as a set of functors or its variation as a functor-value function.]}$$

Proposition 25. $\text{xlim } f \in \text{SLA}(\text{Ob } \nu)$ if $f \in \text{FCD}(\text{Ob } \mu; \text{Ob } \nu) \setminus \{0^{\text{FCD}(\text{Ob } \mu; \text{Ob } \nu)}\}$.

Proof. ?? □

Proposition 26. $\tau(x) \in \text{SLA}(\text{Ob } \nu)$.

Proof. ?? □