Exercise Sheet 7: Writing & Typesetting Maximilian Marx, Markus Krötzsch Academic Skills in Computer Science, 2019-05-28, Summer Term 2019

Please prepare exercise 7.4 for the exercise session on 2019-06-04.

Exercise 7.1. Find the paper "Unifying Tone System Definitions: Ordering Chromas" by T. Schlemmer. Read the introduction and find a "headline" for each paragraph. Then write a new introduction for the paper.

Exercise 7.2. Typeset your solution to exercise 7.1. Then rewrite and typeset the preliminaries of that paper.

Exercise 7.3. Typeset the following formulae:

$$\neg A \sqcap \exists R^{-}.A \sqcap (\leq 1 R) \sqcap \forall (R^{-})^{+}.(\exists R^{-}.A \sqcap (\leq 1 R))$$
(3.1)

$$\pi_x(\leq n \ R) = \exists^{\leq n} y. R(x, y) = \exists y_1, \dots, y_n. \bigwedge_{i \neq j} y_i \neq y_j \supset \bigvee_i \neg R(x, y_i)$$
(3.2)

$$\mathsf{Tree} \equiv \mu X.(\mathsf{EmptyTree} \sqcup (\mathsf{Node} \sqcap \leq 1 \mathsf{ child}^- \sqcap \exists \mathsf{child}. \top \sqcap \forall \mathsf{child}. X)) \tag{3.3}$$

$$(\mu X.C)^{\mathcal{I}}_{\rho} = \bigcap \{ \mathcal{E} \subseteq \Delta^{\mathcal{I}} \mid C^{\mathcal{I}}_{\rho[X/\mathcal{E}]} \subseteq \mathcal{E} \}$$
(3.4)

$$s \to_E t \text{ iff } \exists (l,r) \in E, p \in \mathcal{P}os(s), \sigma \in \mathcal{S}ub. \ s|_p = \sigma(l) \text{ and } t = s[\sigma(r)]_p$$
 (3.5)

$$\mathbb{K}[\mathfrak{C}]_r \coloneqq (G \cup \mathfrak{C}_{min}, M \cup \mathfrak{C}_{max}, I_{\mathfrak{C}} \cap (G \cup \mathfrak{C}_{min}) \times (M \cup \mathfrak{C}_{max}))$$
(3.6)

$$0 = \int_{\left\{s_n(u) > \frac{1}{k} + \mathbf{E}^{\mathcal{A}_n}u\right\}} \left(s_n(u) - \mathbf{E}^{\mathcal{A}_n}u\right) d\mu \ge \frac{1}{k}\mu\left(\left\{s_n(u) > \frac{1}{k} + \mathbf{E}^{\mathcal{A}_n}u\right\}\right)$$
(3.7)

Exercise 7.4. (Homework)

Use bibtex to typeset a bibliography of all published literature referenced on exercise sheets 0-7. Make all references as complete as possible, and strive for consistency among the references.