

Interaction and collaboration between users on remote tangible tabletops, revisited from the territoriality point of view

Amira Bouabid*, Sophie Lepreux and Christophe Kolski

LAMIH-UMR CNRS 8201, Univ. Polytechnique Hauts-de-France, Valenciennes, France

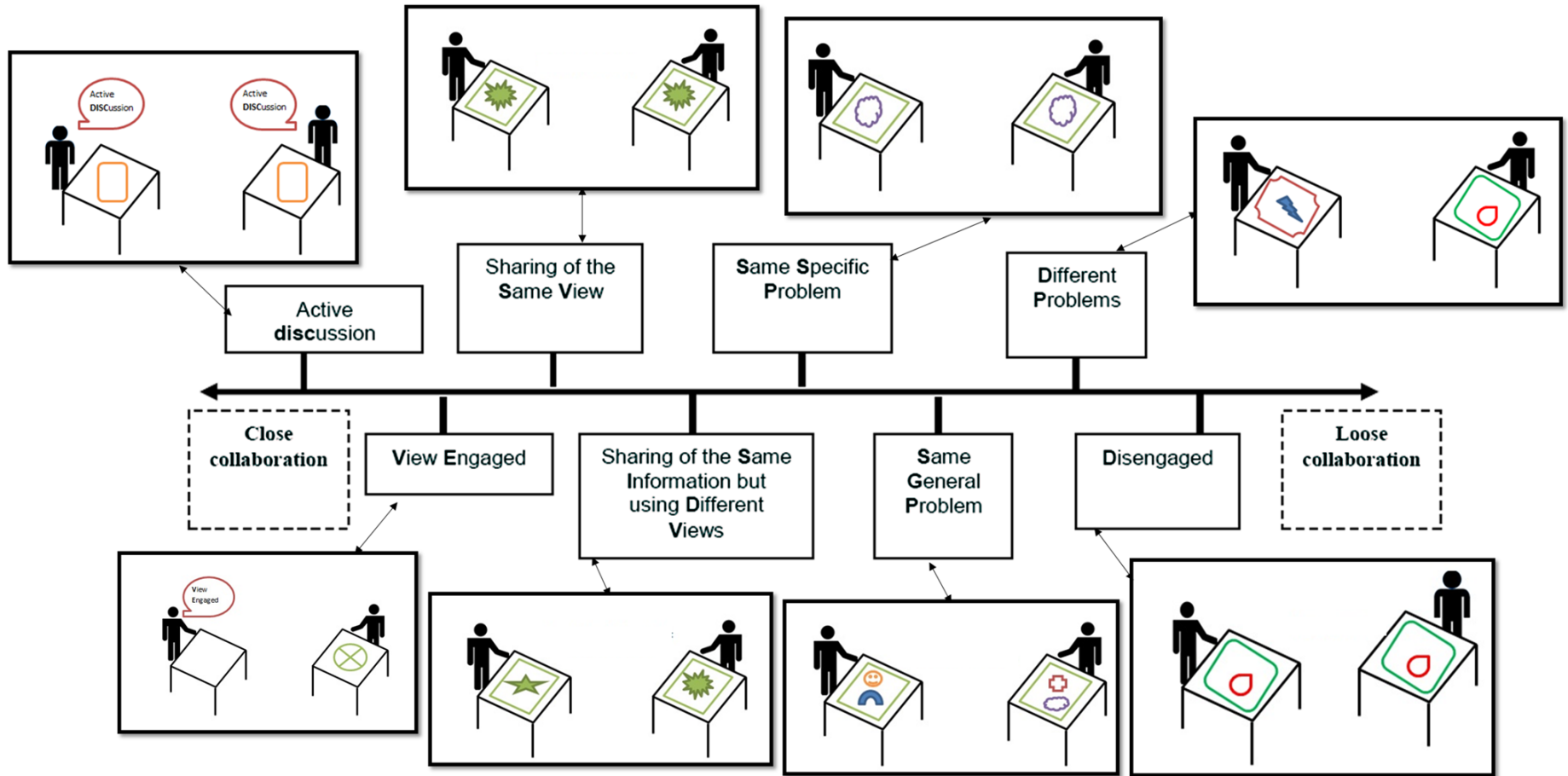
*First author: formerly in this lab



UMR CNRS 8201



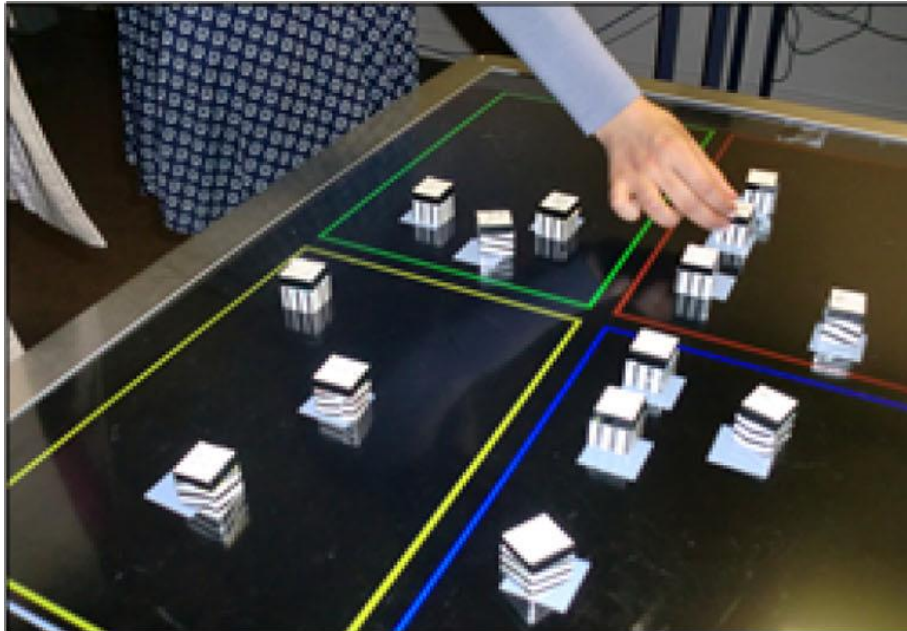
Collaborative situations



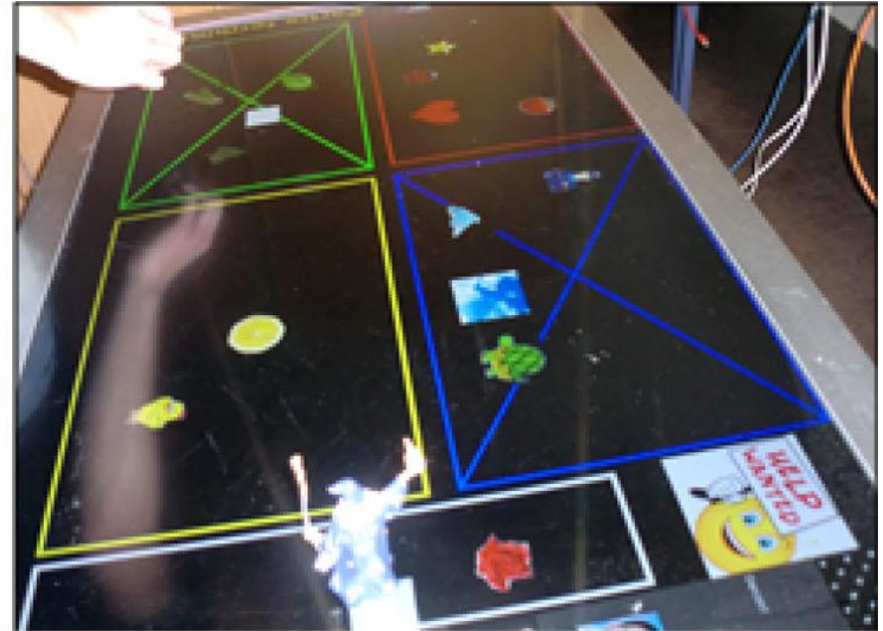
Collaborative situations (so-called styles by the authors) proposed by [Isenberg et al., 2010], illustrated with **two remote interactive tabletops**

Applicative domain

- Distributed version of the Recognition and learning of colors application, dedicated to very young children (initial centralized version available in Kubicki et al., 2011, 2015):



(a)



(b)

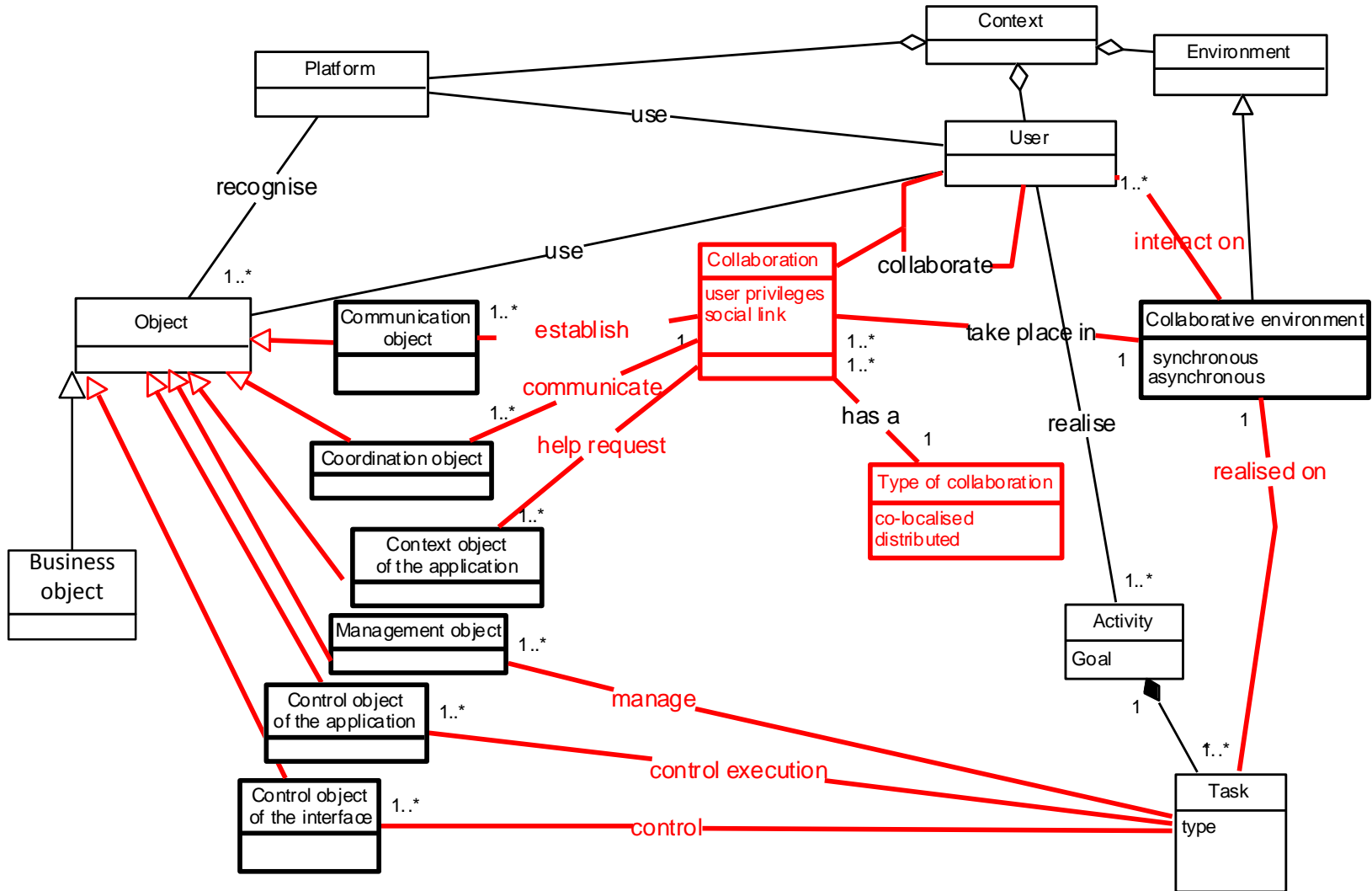
Tangible tabletops used in the collaborative application: on the left, simulation of the child tabletop (two users); on the right, simulation of the adult tabletop

Generic objects proposed for remote collaboration

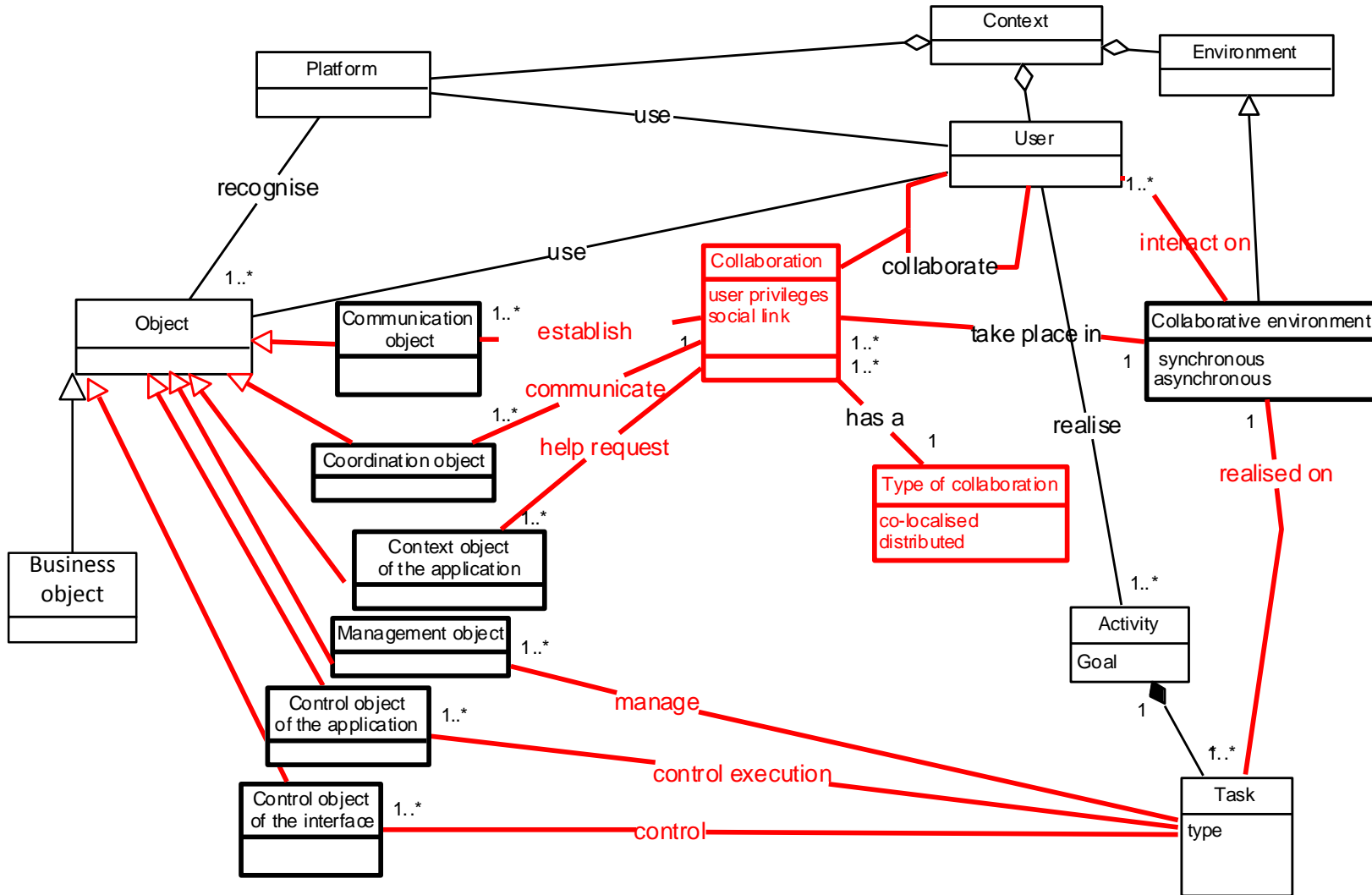
Table 3 Step 2: Generic objects proposed for remote collaboration

Name of the tangiget	Main function	Type of tangiget
Identification	Used to identify users who are currently using the collaborative application and want to enter into collaboration with other users	Tangible communication object
Task assignment	Used to organize tasks between different users of the collaborative application	Tangible management object
Starting synchronization	Used to synchronize the start of the activity distributed on connected tabletops	Tangible control object of the application
Request help	Used to ask for help or ask a question about a step or a detail of the collaborative activity	Tangible context object of the application
Provide help	Used to offer help about a step or detail following a request	Tangible coordination object
Display mode	Used to change the display of the main interface according to the user needs	Tangible control objects of the user interface
End task	Used to mark the end of a task and/or to switch to another task	Tangible control object of the application
Criticism	Used to work on all of the activity (not on one task)	Tangible coordination object

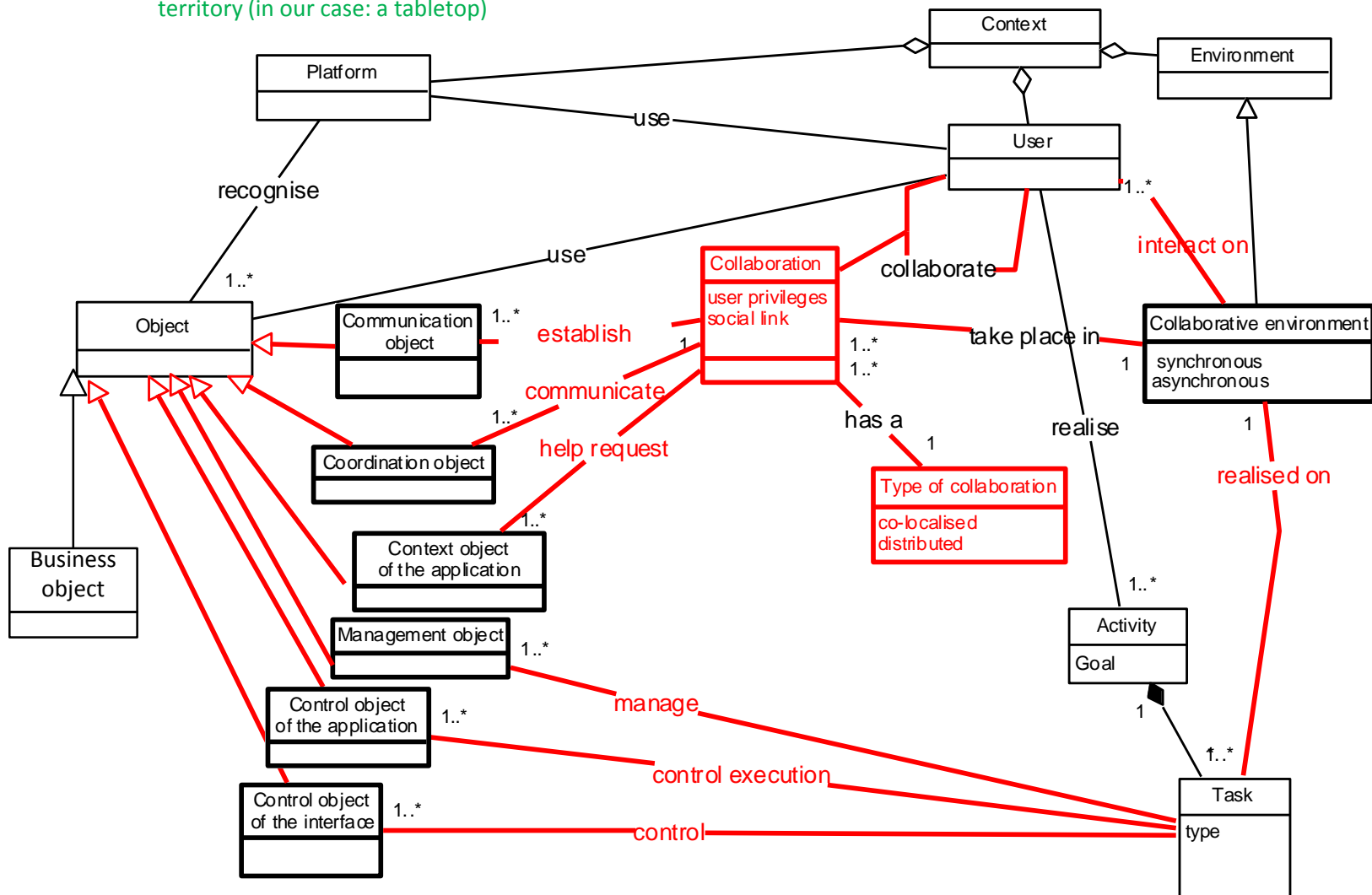
Initial context model



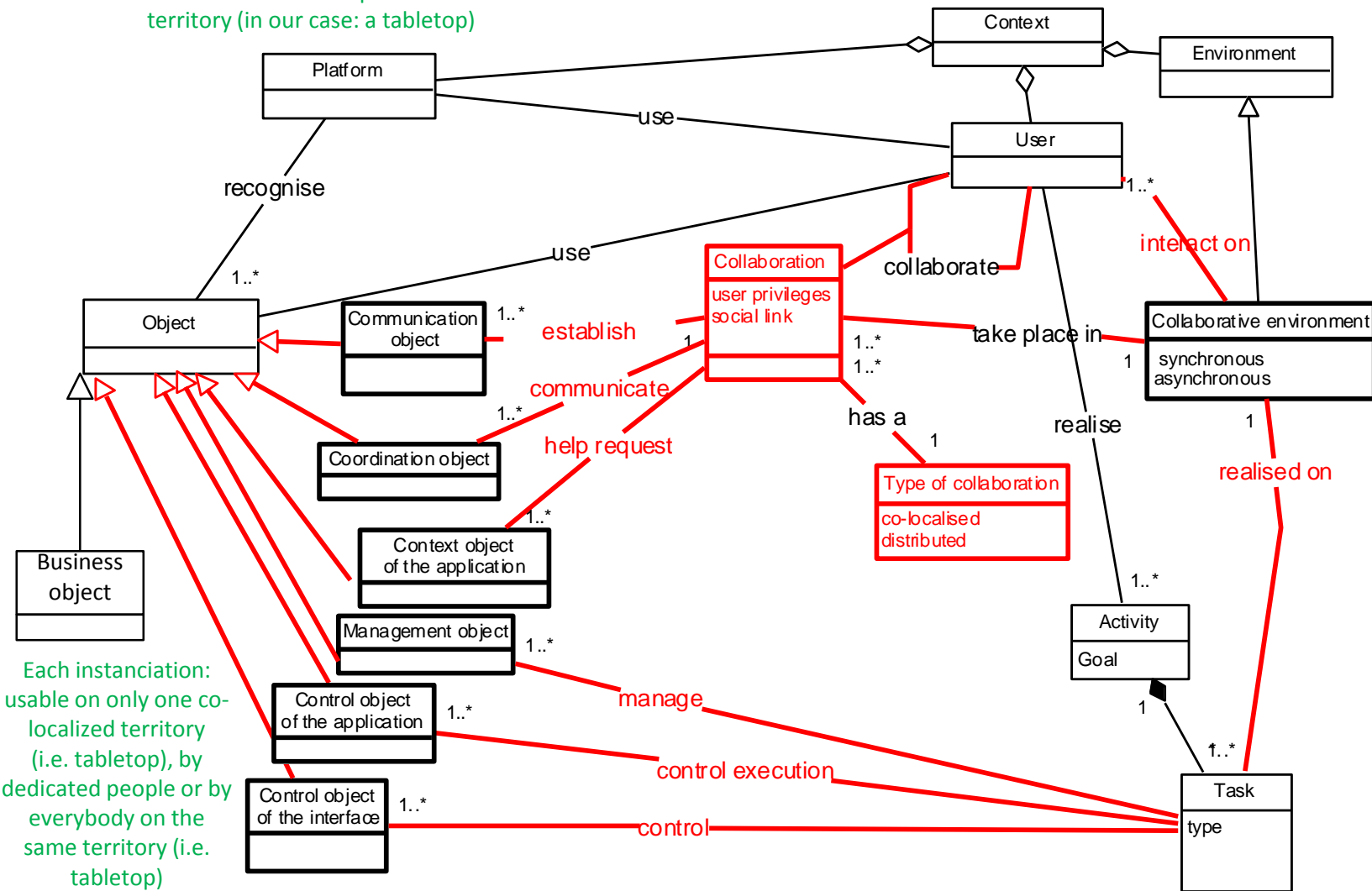
Initial context model => revisited from the territoriality point of view



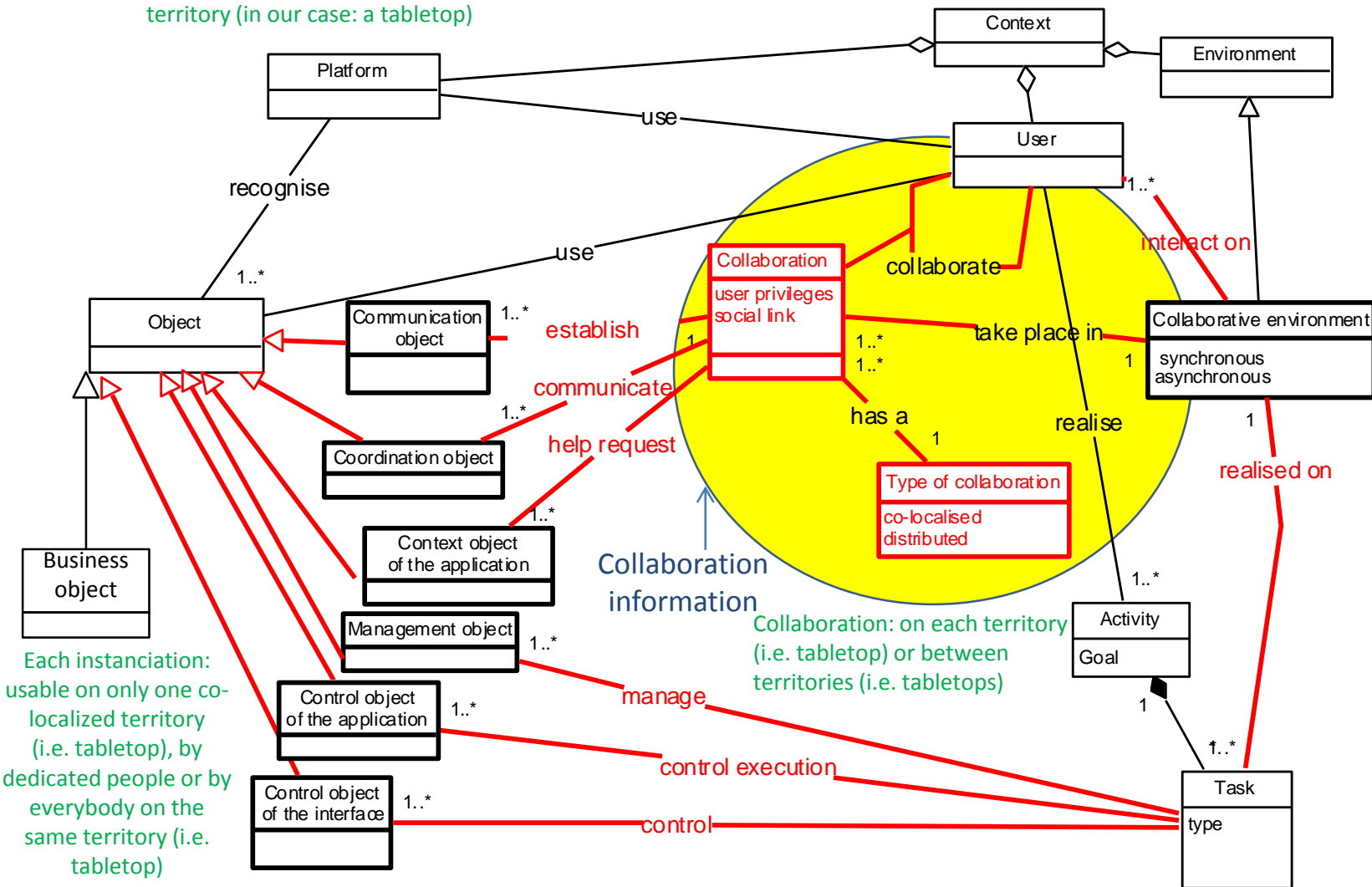
Each instantiation of platform: becomes a territory (in our case: a tabletop)



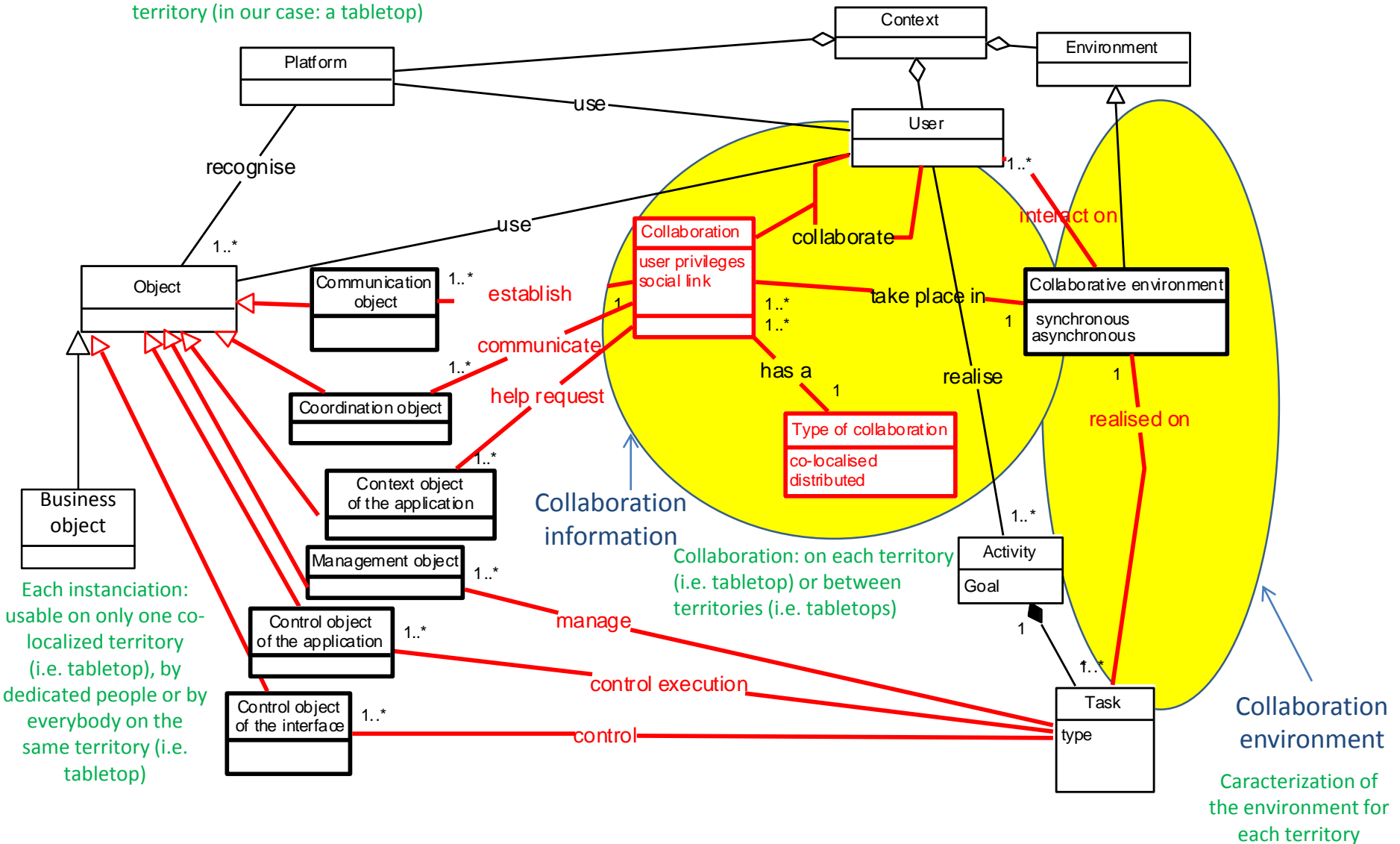
Each instantiation of platform: becomes a territory (in our case: a tabletop)



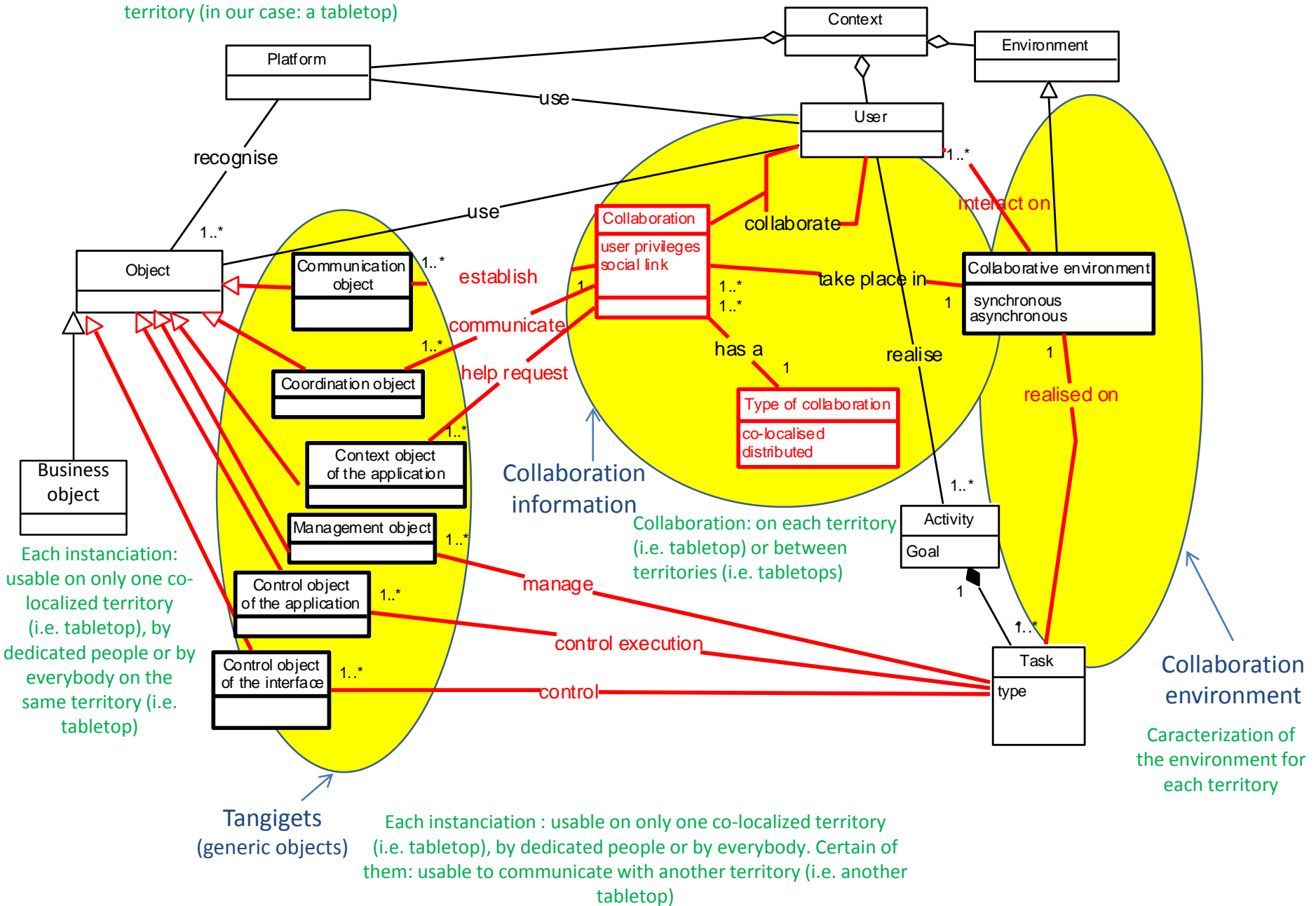
Each instantiation of platform: becomes a territory (in our case: a tabletop)



Each instantiation of platform: becomes a territory (in our case: a tabletop)



Each instantiation of platform: becomes a territory (in our case: a tabletop)



Interaction and collaboration between users on remote tangible tabletops, revisited from the territoriality point of view

Amira Bouabid*, Sophie Lepreux and Christophe Kolski

LAMIH-UMR CNRS 8201, Univ. Polytechnique Hauts-de-France, Valenciennes, France

Thank you for your attention

*First author: formerly in this lab



UMR CNRS 8201

