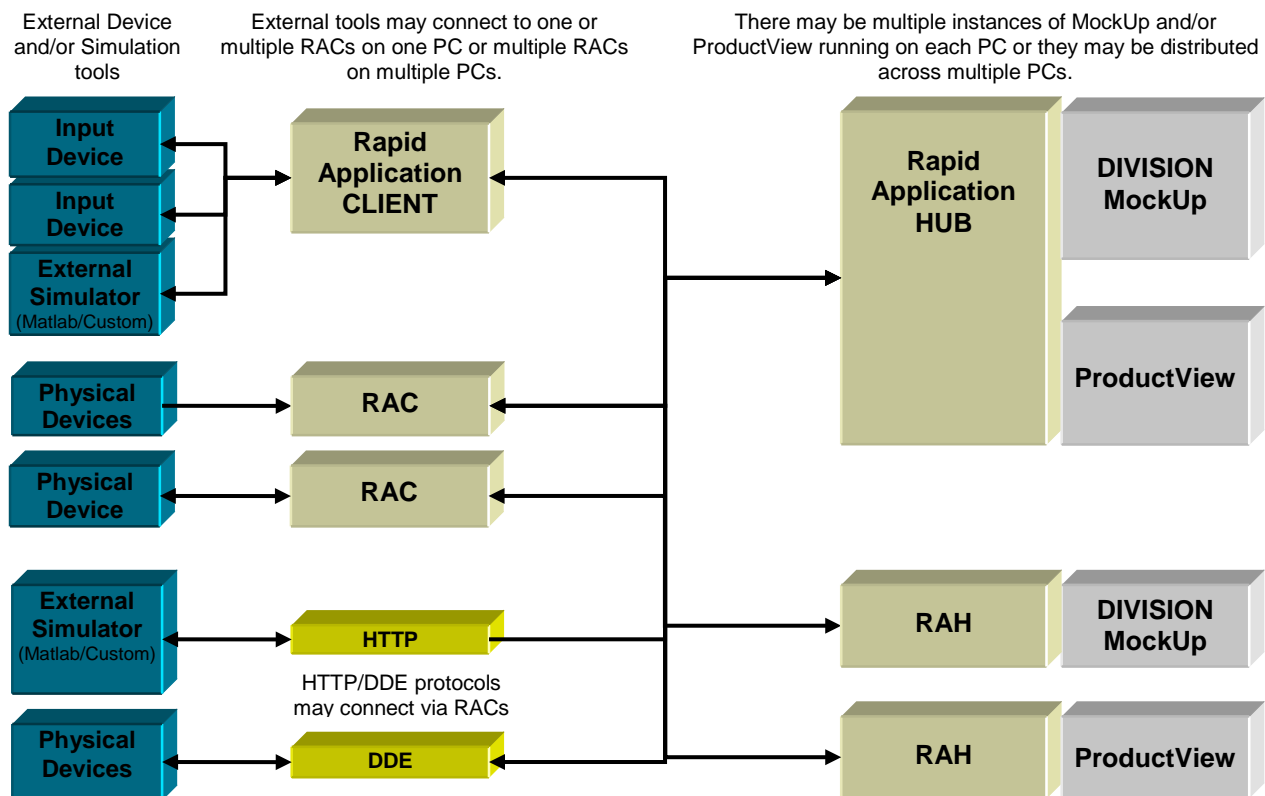# Real-time networked solutions
# for 3D Visualization and Digital Mock-ups

**connecting real-world control environments to DIVISION MockUp & ProductView**

Real-time 3D Visualization products exist in many contexts today. In the Product Design markets, DIVISION MockUp and ProductView provide very high performance solutions for Digital MockUp analysis and 3D model review; supporting a wide range of the leading CAD formats used throughout the Product Design industry.

## Overview

The solutions described here are based on a set of components, configured as necessary as a set of resources for any specific solution. The components may be distributed across a network and 'custom' applications and resources may be connected into the total solution.



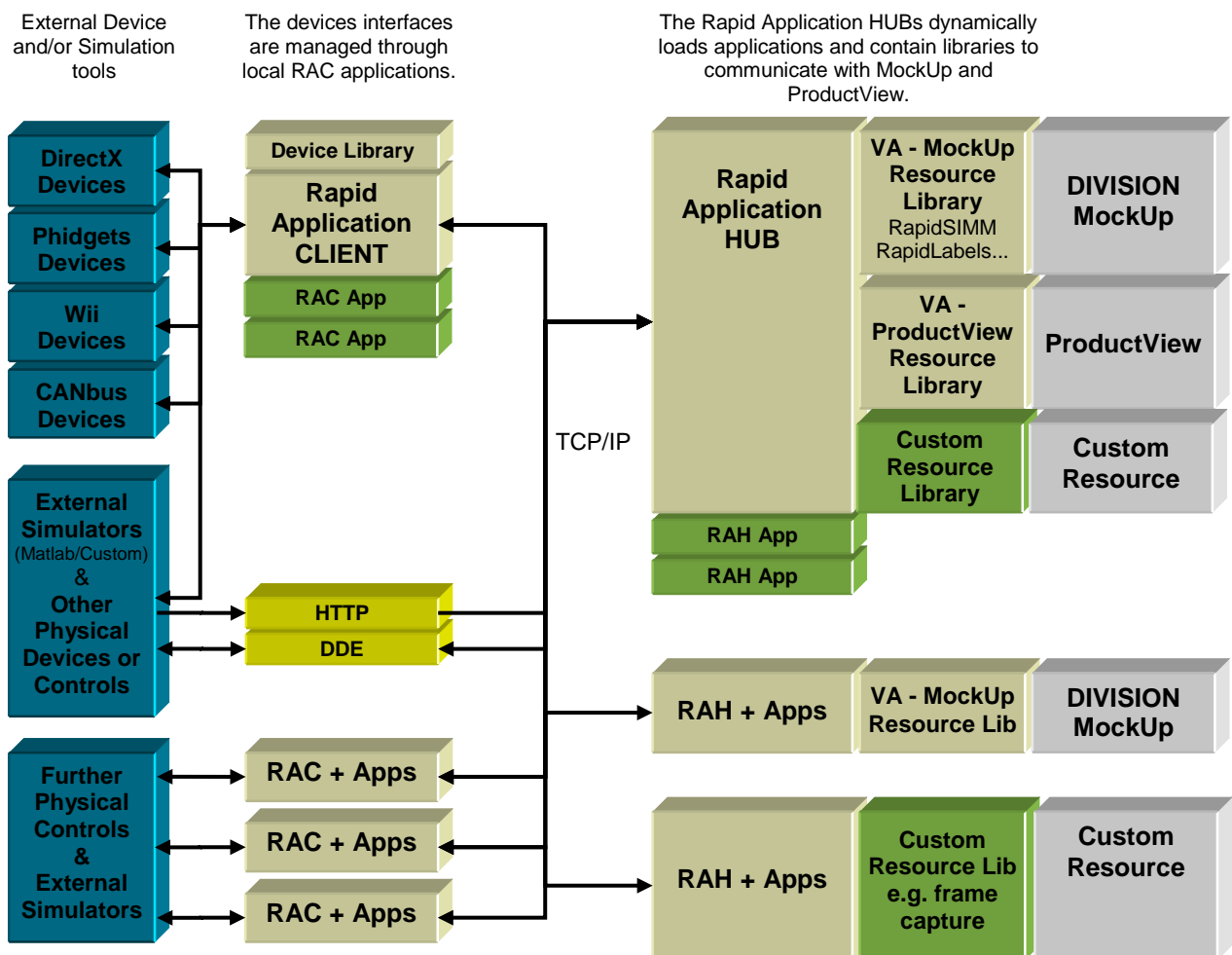## The Rapid Application HUB (RAH) and CLIENT (RAC)

RACs and RAHs form a fast, light-weight client-server framework for creating network applications and for connecting a range of input devices (peripherals) to MockUp and ProductView. One or many instances of MockUp and/or ProductView may run on each PC or distributed across multiple PCs. One or many input devices or remote applications may be connected to each RAC. Configurations are application specific and do not need to be complex.

Communications between RACs and RAHs are very efficient for small data packets and for bulk data (e.g. files or images). RAH applications may include RACs to form communications between HUBs.

## Application control

Visualization and other resource types are controlled through RAH resource library APIs. These are groups of methods that control the resource for specific purposes. In the case of the MockUp resource library these include methods for RapidSIMM and RapidLabels, and in the case of the ProductView libraries this includes methods for RapidGP (Game Pad controller). The MockUp and ProductView resource libraries are based on MockUp and ProductView toolkit interfaces. Custom resources may be added.

Applications are controlled from RACs. RACs can connect to one or many input devices/simulators and one or many RAHs, allowing one user to drive one resource, or multiple resources on one or multiple workstations. Physical devices are supported through APIs supplied with the Client. These APIs may be used in stand-alone contexts where appropriate.



RAC Device libraries and RAH Resource libraries are embedded with the RAC and RAH run-times. RAC and RAH Applications are typically loaded dynamically, although custom versions can be created to form a totally integrated solution for security and license management purposes. The VA-MockUp Resource Library is matched to MockUp plug-ins.


## About Visual Advantage

Visual Advantage has had extensive experience with DIVISION and PTC products over the past 20 years. We offer an extensive range of products and services to extend the functionality and performance of the MockUp product for clients who aim to realise its full potential. Visual Advantage is a PTC PartnerAdvantage™ member.

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