

CMSC 691T Project Proposal

Group Members.

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Background Reading

☞☞ CC/PP <http://www.w3.org/Mobile/CCPP/>

☞☞ W3C Mobile Maillist <http://lists.w3.org/Archives/Public/www-mobile/>

☞☞ CSS Mobile Profile 1.0 <http://www.w3.org/TR/2001/WD-css-mobile-20010129/>

☞☞ Device Independence Working Group <http://www.w3.org/2001/di/Group/>

☞☞ “An End–End Approach to Wireless Web Access” by Vladimir Korolev and Anupam Joshi

Main Idea

Composite Capabilities/Preference Profiles (**CC/PP**) is a working draft made available by the World Wide Web Consortium (**W3C**), which specify how client devices express their capabilities and preferences (the user agent profile) to the server that originates content (the origin server). The origin server uses the "user agent profile" to produce and deliver content appropriate to the client device.

CC/PP draft defined some use cases where CC/PP format can be used. Vladimir Korolev and Anupam Joshi described a “simple CC/PP” in the paper “An End–End Approach to Wireless Web Access”, which implemented HTTP use case with repository (CC/PP: Requirement 2.1.3) and WAP use case (CC/PP: Requirement 2.2). Here, different devices will get HTML page with different size based on their profile.

CC/PP is based on RDF, and RDF is for semantic web. So, the power of CC/PP is not in providing some profiles which machine can read, but providing the profiles which machine can understand.

RDF can be parsed into triples and loaded triples into Prolog. Prolog can THINK!. So, with more reasoning rules, we can have a “**brain**” for CC/PP and can do some interesting implements of CC/PP :

☞☞ MIME use case (CC/PP: Requirement 2.3) : match of document profile and device profile;

☞☞ Intermediate Entity use case(CC/PP: Requirement 2.5): get request with profile difference, proxy amends profile with own properties and generate a amended profile;

☞☞ CC/PP: Design Goal DG-6: match two profiles for equality

Implementation Plan

☞☞ Create CC/PP devices profile: for Workstation (normal devices, high network bandwidth) and Mobile devices(low network bandwidth);

☞☞ Create a Proxy Server : accept HTTP request, add CC/PP profile and send to origin server, get reply from origin server, forward to client;

- ✍✍ Define Prolog rule for CC/PP profile match;
- ✍✍ CC/PP Inference Engine: generate triples from CC/PP profiles, output triples into Prolog;
- ✍✍ Servlet program : serve as origin server,
- ✍✍ Test and Compare of result from different profile.

Timeline (Assume 8 weeks available)

Research and Design: 3 week

Coding: 2 week

Debug and Testing: 2 week

Writing paper, Prepare presentation: 1 week