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Current Status and Trends for Mobile Clouds

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Abstract. Due to the increasing spreading of smart phones a new market is emerging. As a smart phone is a multi sensor device with at least one communication modul available and processors which get more powerful every year, it makes sense to move needed calculations for different services to the phones itself. This paper summarizes the different approaches of distributing calculation tasks and technical constraints. Due to the nature of smart phones they only can build unreliable ad-hoc networks. ...

Keywords: graph transformations, convex geometry, lattice computations, convex polygons, triangulations, discrete geometry

1 Introduction

1.1 Clouds

1.2 Mobile clouds

2 Task distribution models

2.1 Client/Server modell

2.2 Virtualization

2.3 Mobile agents

3 Technical constraints and solutions

3.1 Energy consumption

What protocols should be used? What wifi technologies are energy efficient?

3.2 Implementation issues

What constraints are set by operating systems? How could a mesh network build with iOS devices? With Android devices? Is it possible to connect Android and iOS-Devices?

4 Case studies in mobile clouds

Samsung project. Other projects?

Notes and Comments. The first results on subharmonics were obtained by Rabinowitz in **?**, who showed the existence of infinitely many subharmonics both in the subquadratic and superquadratic case, with suitable growth conditions on H'. Again the duality approach enabled Clarke and Ekeland in **?** to treat the same problem in the convex-subquadratic case, with growth conditions on H only.

Recently, Michalek and Tarantello (see Michalek, R., Tarantello, G. **?** and Tarantello, G. **?**) have obtained lower bound on the number of subharmonics of period kT, based on symmetry considerations and on pinching estimates, as in Sect. 5.2 of this article.

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