List of Wireless Sensor Networks Papers

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1 Wireless Sensor Network Papers

This document maintains a running bibliography of wireless sensor network papers that was initiated while I was on sabbatical in 2007. I have tried to continually update and adjust the list since that time with the newest entries including sensors used for Body Area Networks. I hope to add a section on the Internet of Things soon.

The current count of papers in this sensors bibliography is 155!

1.1 General Sensor Papers, Surveys and Tutorials

Papers that provide an overview of wireless sensor networks include: [25, 28, 43].

Papers that survey power-aware MAC protocols include: [2, 4, 16, 30, 76, 77, 119, 145].

Zhu et al. [155] provides a top level survey of the whole 802.11 Quality of Service problem that includes some rate adaptation.

1.2 Papers about Measurements and Measurement Tools

Toolkit for multimedia sensors is [124]. Energy measurement tool presented in [123]. Scale [15] is a UCLA measurement tool. One measurement study of TinyOS MAC in three environments is [151].

1.3 Papers Focused on Power, Power Control Protocols and Power Measurements

One paper about power from Berkeley is [26]. More power papers [54, 89]. Newer power papers include [17, 40].

Power Control MAC protocols include: ATPC [86], BSD [72], MiSer [111], RPAR [23], TPC [136].

1.4 Papers Involving Video Sensors

The Panoptes paper [41] is from Wu-chi Feng's group measurement study of video sensors and is the basis for Rui Lu's thesis.

More Video power papers include: [22, 105]. Video and energy in [93] and low power mote in [107].

1.5 Papers Involving the MAC Protocol and Beacons

TinyOS MAC is explained, modified and measured in [151]. Papers with new proposals for WSN MAC protocols include: A-MAC [34], Adaptive-AS-MAC [153], AI-LMAC [19], AS-MAC [62], B-MAC [105], BAS-MAC [66], BEAM [5], BitMAC [117], BSD [72], BuzzBuzz [84], C-MAC [87], Contiki-MAC [33], Crankshaft [45], CSMA-MPS [90], D-MAC [88], DE-MAC [64], DSMAC [85], DS-MAC [148], DW-MAC [127], ELE-MAC [39], EM-MAC [132], f-MAC [118], FLAMA [114], Koala [98], L-MAC [139], LPL [52], MaxMAC[59], M-MAC [3], MC-LMAC [60], MD-MAC [46], ME-MAC [142], MH-MAC [9], MiX-MAC [95], ML-MAC [92], MS-MAC [104], NPM [8], P-MAC [154], PAMAS [122], PEDAMACS [27], PE-MAC [7], pico-radio [44], PRMAC [14], PSM [58], R-MAC [31], RA-MAC [20], RateEstimation-MAC [96], RI-MAC [128], S-MAC [143], SCP-MAC [144], SEA-MAC [38], Sift [61], SMACS [125], STEM [121], T-MAC [138], TA [99], TRAMA [115], Tree-MAC [126], VL-MAC [6], W-MAC [100], WiseMAC [36] WiseNet [37], WUR-MAC [91], X-MAC [12] and Z-MAC [116], .

Klues et al [71] use the MLA to compare five WSN MAC protocols.

One paper with a beaconless MAC is [99].

One paper that adjust frame size to save energy is Lettieri et al [79].

Three related papers are: a unifying protocol SP [106], wakeup scheduling [67] and RATS to deal with clock synchronization [42].

1.6 Papers Involving Routing and Configuration

A paper with a multi-tier architecture is: [73]. A paper about traffic aggregates is [152].

1.7 Papers Related to the Internet of Things and the ConTiki Stack

This is a new section to be filled in soon!!

1.8 Papers Involving Cluster Algorithms

Papers that introduce clustering algorithms for WSNs are:

BMA [82], CODA [78], EE-MAC [113], GCA [97], HEED [147] LEACH [50], LEACH-C [51], LEACH-HEFA [81], TH-MAC [83], and [140].

1.9 Papers involving WSN Simulators

Coleri [26] uses TOSSIM from Berkeley. A good but dated survey of sensor simulators is [130]. An evaluation of WSN simulators is done in [63].

2 Sensor Applications

2.1 Papers Involving Environmental Applications

Habitat papers include: [131, 94, 56].

Vineyard sensor paper: [13]

2.2 RFID Papers

RFID in Healthcare: [53].

2.3 WSN Health Care Applications and Body Area Networks

[35] provide a new survey of health care WSN protocols and applications.

Papers that survey Wireless Body Area Networks (WBANs) are: [135] and [134].

Papers that study specific Body Area Networks topics include: [32], [49], [108] and BANMAC [109], This Tang paper [133] discusses a scheme for implanted biosensors that addresses temperature damage issues.

This Heinzelman paper [50] is focused on the scheduling of the microsensors.

3 Dynamic Rate Adaptation

A long list of dynamic rate adaptation papers includes: ARF [65], AARF [74], CARA [69], CROAR [150], Fast-LA [110], HRC [47], LA [103], LD-ARF [102] MPDU [112], OAR [120], ONOE [1], PER [75], RBAR [55], RRAA [141], SampleRate [11], SwissRA [21].

DOFRA [18] uses frame fragmentation with rate adaptation. Kim et al [68] studies dynamic fragmentation and Yin et al [146] varies the packet size; Hou et al [57] adaptive frame size and modulation; and Lettieri et al [80] adjust frame size.

Berthou et al [10], Haratcherev et al [48] and VanBeek [137] propose techniques specifically designed for multimedia apps over WLANs.

One paper that does rate adapatation and power conservation is: MiSer [111].

One paper about band estimation problems for video over WLANs is [29]. Performance comparisons and analysis of 802.11 MAC dynamic rate adaptation algorithms include: Almeroth mesh performance [129], ARF performance [70], Pal PAM paper [101] and Choi SigMetrics paper [24].

Yun et al [149] not yet published paper looks at new collision detection schemes for WLANs.

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