**Airtime fairness:**

Parameters introduced:

ATH\_AIRTIME\_QUANTUM 300 /\* usec \*/

s64 airtime\_deficit;

u32 airtime\_rx\_start;

struct ath\_airtime\_stats airtime\_stats;

struct ath\_acq {

struct list\_head acq\_new;

struct list\_head acq\_old;

};

Include this in struct ath\_chanctx {

struct ath\_acq acq[IEEE80211\_NUM\_ACS];

u32 ath\_pkt\_duration(struct ath\_softc \*sc, u8 rix, int pktlen,

int width, int half\_gi, bool shortPreamble);

#define AIRTIME\_USE\_TX BIT(0)

#define AIRTIME\_USE\_RX BIT(1)

#define AIRTIME\_USE\_NEW\_QUEUES BIT(2)

#define AIRTIME\_ACTIVE(flags) (!!(flags & (AIRTIME\_USE\_TX|AIRTIME\_USE\_RX)))

u16 airtime\_flags; /\* AIRTIME\_\* \*/

for (j = 0; j < ARRAY\_SIZE(ctx->acq); j++) {

INIT\_LIST\_HEAD(&ctx->acq[j].acq\_new);

INIT\_LIST\_HEAD(&ctx->acq[j].acq\_old); }

Ctx – instance of channel context structure - [**ath\_chanctx**](http://lxr.free-electrons.com/ident?i=ath_chanctx)

debugfs\_create\_u16("airtime\_flags", S\_IRUSR | S\_IWUSR,

sc->debug.debugfs\_phy, &sc->airtime\_flags);

struct ath\_airtime\_stats {

u32 rx\_airtime;

u32 tx\_airtime;

u32 queued\_new;

u32 queue\_cleared;

u32 dequeue\_failed; };

void ath\_debug\_tx\_airtime(struct ath\_softc \*sc,

+ struct ath\_buf \*bf,

+ struct ath\_tx\_status \*ts);

+void ath\_debug\_rx\_airtime(struct ath\_softc \*sc,

+ struct ath\_rx\_status \*rs,

+ struct sk\_buff \*skb);

+void ath\_debug\_airtime(struct ath\_softc \*sc,

struct ath\_node \*an,

u32 rx, u32 tx);

{

+ struct ath\_airtime\_stats \*astats = &an->airtime\_stats;

+

+ astats->rx\_airtime += rx;

+ astats->tx\_airtime += tx;

+}