$n = \#UEs = 5 = \{U_1, U_2, U_3, U_4, U_5\}$ UE = USER EQUIPMENT

GBR = GUARANTEED BIT RATE $= D_U(i)$

PRIORITY $= P_U(i)$

LOCATION OF U_x AT TIME t $L_U(i) \Rightarrow L_U(i,t)$?

λ = #BASE STATIONS = 3

mBSs = MOBILE BASE STATIONS $= \{B_1, B_2, B_3\}$

$U_x \Leftrightarrow B_y$ FOR BEST SINR (SIGNAL TO INTERFERENCE PLUS NOISE RATIO)

PROBLEM SATISFACTION

$MAX\left(\sum_{i=1}^{n} SS_i\right)$ $\quad SS_i \Rightarrow$ if (GBR)

$SS_i = P_U(i)$

else

$SS_i = 0$

STEPS TO CALC GBR $\forall_x UE_x$ (FIGS)

$UE_x \Rightarrow B_y$ FOR < SINR ? DISTANCE CALC ?

SINR dB $\Rightarrow$ CQI (CHANNEL QUALITY INDICATOR)

CQI $\Rightarrow$ MODULATION
$\Rightarrow$ CODING SCHEME
$\Rightarrow$ BIT RATE

COST

SIM PARAM

UE MOVEMENT

RWP => RANDOM WAY POINT

- INIT EQUAL SPACING
- RANDOM DESTINATION AND SPEED [0,4] m/s
- ONCE AT DESTINATION

RANDOM WAIT [0,60] seconds

GRANULARITY OF SIMULATION?

SIM PARAM

UEs GBR IS 4000 Kbps - 200 Kbps = HD VIDEO

30 Kbps = VOICE

1M - 800 Kbps = SENSOR DATA

GENETIC ALGORITHM

STATIONS (X, Y)

? → BINARY ENCODING

? → REAL VALUES

GENOME

$\lambda * (BITS(X) + BITS(Y))$