interpretations as the corresponding single user results.

**Bit loading**

Figure 21 demonstrates the bit loading profile and the assignment of sub-carriers to the users, on execution of Algorithm 8. Figures 21(a), (b) and (c) depict the result of the Lagrangian optimization, rounding and bit removal, respectively. Figure 22 represents the comparative sum SU throughput of the various bit loading schemes, viz. Algorithm 8, Algorithm 9, Algorithm 10, the cap-limited scheme and sub-carrier nulling, averaged over 100 independent realizations of the channel. The highest throughput is achieved by the cap-limited scheme, since it only mitigates interference to the closest PU band. It is followed closely by that obtained from the proposed Algorithm 8. Algorithm 9 and Algorithm 10 follow, in that order. The sub-carrier nulling scheme gives the lowest throughput. Figure 23 depicts the PU interference profile.

**Sub-carrier power allocation, bandwidth sizing and bit-loading**

On executing Algorithm 12, first the optimum bandwidth is obtained with the corresponding power allocation. Figure 24(a) reports the optimum number of sub-carriers as $N_{\text{opt}}=144$ and the bandwidth $B_{\text{opt}}=68.97\text{kHz}$, while Figure 24(b) depicts the power allocation profile and the assignment of sub-carriers to the 3 users. The bit loading profile is as shown in Figure 24(c). The results of Algorithm 11 have not been included, since they would be similar to the results of bandwidth sizing, power allocation and the assignment of sub-carriers to users,