In the Matlab program, variables of the outer bound LP are indexed in their order of appearance in constraints (101)-(141) in the outer bound proof (see .pdf document online). These indexes are used to fill the constraint matrices A and Aeq in the function and this is their index in the solution vector r that the function computes. Note once again that information terms are treated as arbitrary nonnegative variables, thus the solution vector is not necessarily meaningful and cannot be interpreted directly as parameters of a scheme. In the outer bound program the following variables are used with the indexes as defined below:

$$1 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{1i};W|Y_1^{i-1}Y_2^{i-1}) \qquad 2 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{2i};W|Y_1^{i-1}Y_2^{i-1})$$

$$3 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{1i};W|Y_1^{i-1}Y_2^{i-1}Z_1^{i-1}) \qquad 4 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{2i};W|Y_1^{i-1}Y_2^{i-1}Z_1^{i-1})$$

$$5 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{2i};W|Y_1^{i-1}Y_2^{i-1}Z_2^{i-1}) \qquad 6 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{1i};W|Y_1^{i-1}Y_2^{i-1}Z_2^{i-1})$$

$$7 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{1i};W|Y_1^{i-1}Y_3^{i-1}) \qquad 8 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{3i};W|Y_1^{i-1}Y_3^{i-1})$$

$$9 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{1i};W|Y_1^{i-1}Y_3^{i-1}Z_1^{i-1}) \qquad 10 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{3i};W|Y_1^{i-1}Y_3^{i-1}Z_1^{i-1})$$

$$11 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{3i};W|Y_1^{i-1}Y_3^{i-1}Z_3^{i-1}) \qquad 12 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{1i};W|Y_1^{i-1}Y_3^{i-1}Z_3^{i-1})$$

$$13 \sim \frac{1}{n}\sum_{i=1}^{n} I(Y_1^{i-1}Y_2^{i-1};X_{1i}|Z_1^{i-1}W) \qquad 14 \sim \frac{1}{n}\sum_{i=1}^{n} H(X_{1i}|Y_1^{i-1}Y_2^{i-1}Z_1^{i-1}W)$$

$$15 \sim \frac{1}{n}\sum_{i=1}^{n} H(X_{2i}|Y_1^{i-1}Y_2^{i-1}Z_1^{i-1}W) \qquad 16 \sim \frac{1}{n}\sum_{i=1}^{n} I(Y_1^{i-1}Y_2^{i-1};X_{2i}|Z_2^{i-1}W)$$

$$17 \sim \frac{1}{n}\sum_{i=1}^{n} H(X_{2i}|Y_1^{i-1}Y_2^{i-1}Z_2^{i-1}W) \qquad 18 \sim \frac{1}{n}\sum_{i=1}^{n} H(X_{1i}|Y_1^{i-1}Y_2^{i-1}Z_2^{i-1}W)$$

$$19 \sim \frac{1}{n}\sum_{i=1}^{n} I(Y_1^{i-1}Y_3^{i-1};X_{3i}|Z_3^{i-1}W) \qquad 20 \sim \frac{1}{n}\sum_{i=1}^{n} H(X_{3i}|Y_1^{i-1}Y_3^{i-1}Z_3^{i-1}W)$$

$$21 \sim \frac{1}{n}\sum_{i=1}^{n} H(X_{1i}|Y_1^{i-1}Y_3^{i-1}Z_3^{i-1}W) \qquad 22 \sim \frac{1}{n}\sum_{i=1}^{n} I(Y_1^{i-1}Y_3^{i-1};X_{1i}|Z_1^{i-1}W)$$

$$23 \sim \frac{1}{n}\sum_{i=1}^{n} H(X_{1i}|Y_1^{i-1}Y_3^{i-1}Z_1^{i-1}W) \qquad 24 \sim \frac{1}{n}\sum_{i=1}^{n} H(X_{3i}|Y_1^{i-1}Y_3^{i-1}Z_1^{i-1}W)$$

$$25 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{1i};Y_1^{i-1}|Z_1^{i-1}W) \qquad 26 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{1i};Y_3^{i-1}|Y_1^{i-1}Z_1^{i-1}W)$$

$$27 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{3i};Y_3^{i-1}|Z_3^{i-1}W) \qquad 28 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{3i};Y_1^{i-1}|Y_3^{i-1}Z_3^{i-1}W)$$

$$29 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{1i};Y_2^{i-1}|Y_1^{i-1}Y_3^{i-1}Z_1^{i-1}Z_3^{i-1}W) \qquad 30 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{3i};Y_2^{i-1}|Y_1^{i-1}Y_3^{i-1}Z_1^{i-1}Z_3^{i-1}W)$$

$$31 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{3i};Z_1^{i-1}|Y_1^{i-1}Y_3^{i-1}Z_3^{i-1}W) \qquad 32 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{2i};Y_1^{i-1}|Y_2^{i-1}W)$$

$$33 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{2i};Z_1^{i-1}|Y_1^{i-1}Y_2^{i-1}W) \qquad 34 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{3i};Z_3^{i-1}|Y_3^{i-1}Y_1^{i-1}Z_1^{i-1}W)$$

$$35 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{3i}; Z_3^{i-1}|Y_2^{i-1}Y_3^{i-1}Y_1^{i-1}Z_1^{i-1}W) \quad 36 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{1i}; Z_3^{i-1}|Y_1^{i-1}Y_3^{i-1}Z_1^{i-1}W)$$

$$37 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{1i}; Z_1^{i-1}|Y_1^{i-1}Y_2^{i-1}W) \quad 38 \sim \frac{1}{n}\sum_{i=1}^{n} H(X_{1i}|Y_1^{i-1}Y_3^{i-1}Z_1^{i-1}Z_3^{i-1}W)$$

$$39 \sim \frac{1}{n}\sum_{i=1}^{n} H(X_{3i}|Y_1^{i-1}Y_3^{i-1}Z_1^{i-1}Z_3^{i-1}W) \quad 40 \sim \frac{1}{n}\sum_{i=1}^{n} I(X_{1i}; Z_1^{i-1}|Y_1^{i-1}Y_3^{i-1}Z_3^{i-1}W)$$