Assume inquirer wants to know the kth information unit I_k.

Step 1:

Agent sends the random numbers $RN_1 \ldots RN_n$ to the inquirer.

Step 2:

Inquirer sends $K_A^+(IRN) + RN_k$ to the agent.

Step 3:

Agent sends inquirer the following n items (for i=1..n):

$$K_A^-(K_A^+(IRN) + RN_K - RN_i) + I_i$$

Remark: Upon receiving $K_A^+(IRN) + RN_k$ from the inquirer, the agent offsets $K_A^+(IRN) + RN_k$ with RN_i for i=1..n; i.e., the agent derives n terms $K_A^+(IRN) + RN_K - RN_i$ for i ranging from 1 to n. Then the agent applies the decryption function $K_A^-(\bullet)$ to each of the n terms $K_A^+(IRN) + RN_K - RN_i$, and adds I_i to each corresponding ith outcome of applying the decryption function; i.e., $K_A^-(K_A^+(IRN) + RN_K - RN_i) + I_i$. Finally, note also that without knowing IRN, the agent could not know the specific kth item the inquirer is asking.

Step 4:

Inquirer offsets the kth terms sent by the agent in step 3 with IRN; i.e.,

$$K_A^-(K_A^+(IRN) + RN_K - RN_i) + I_i - IRN = K_A^-(K_A^+(IRN)) + I_i - IRN \text{ (for i=k)= } I_k$$

Remark: When $i \neq k$, $K_A^-(K_A^+(IRN) + RN_K - RN_i)$ is a value unknown to the inquirer as the inquirer does not know the decryption secret of the agent; thus, the inquirer could not derive the correct value of I_i when $i \neq k$. In other words, at the end of the process the inquirer will know only exactly I_k but nothing else.