Matching Pennies with Spying (Blackwell-Girshick)

Here the sides of the coins are chosen deterministically. 1 chooses H or T first, then 2 glances at his move then chooses her side. But her observation is imperfect: with probability π it's correct, otherwise wrong. Assume $\pi > 1/2$. Payoffs are as before, 1 wins if the sides match. In practice after 1 plays nature sends a signal h or t to 2, with distributions/lotteries $f_c(H) = (h, \pi; t, 1-\pi), f_c(T) = (h, 1-\pi; t, \pi)$. Draw the game in extensive form, and note that there are no subgames. Then draw its strategic form. Notice that 2 chooses after observing h (histories (H, h) and (T, h)) and after observing t (histories (H, t) and (T, t)) so we may denote her strategies by ij with $i, j = H, T$, where the first element is her choice at h and the second that at t. Find the equilibria of the game in mixed strategies. *Hint:* 2's payoff is $2\pi - 1$.