maanantai 8 toukokuuta 2023 9 5

$$|\psi_{2}\rangle = \frac{1}{2} \propto (|0\rangle + |1\rangle) (|00\rangle + |11\rangle) + \frac{1}{2} \beta (|0\rangle - |1\rangle) (|10\rangle + |01\rangle)$$

$$= \frac{1}{2} (\alpha |000\rangle + \alpha |011\rangle + \alpha |100\rangle + \alpha |111\rangle$$

$$+ \frac{\beta |010\rangle}{\beta |00\rangle} + \frac{\beta |001\rangle}{\beta |00\rangle} - \frac{\beta |110\rangle}{\beta |10\rangle} - \frac{\beta |110\rangle}{\beta |10\rangle}$$

$$= \frac{1}{2} (|00\rangle (\alpha |0\rangle + \beta |1\rangle) + |01\rangle (\alpha |1\rangle + \beta |0\rangle) + \dots$$

$$H(|0\rangle + |1\rangle) = \frac{1}{2} (|0\rangle + |1\rangle) + \frac{1}{2} (|0\rangle - |1\rangle)$$

$$= \frac{1}{2} (|0\rangle + |1\rangle) + \frac{1}{2} (|0\rangle - |1\rangle)$$