

Alice's Polarization Encoding

Bob's Projective Measurement

photon polarization		basis X	
		0 \leftrightarrow	1 \times
bit A	0	H \leftrightarrow	D \nearrow
	1	V \updownarrow	A \searrow

B		basis Y	
		\leftrightarrow	\times
photon polarization	\leftrightarrow	0	?
	\updownarrow	1	?
	\nearrow	?	0
	\searrow	?	1

Alice

bit A	1	0	1	1	0	0	1	0	1	0	1	0
basis X	0	1	0	1	0	1	1	0	0	1	0	0
photon polarization	\updownarrow	\nearrow	\updownarrow	\searrow	\leftrightarrow	\nearrow	\searrow	\leftrightarrow	\updownarrow	\nearrow	\updownarrow	\leftrightarrow

Bob

via quantum channel												
basis Y	1	1	0	1	0	0	0	0	1	0	0	1
measured polarization	\times	\times	\leftrightarrow	\times	\leftrightarrow	\leftrightarrow	\leftrightarrow	\leftrightarrow	\times	\leftrightarrow	\leftrightarrow	\times
result B	$\frac{0}{1}$	0	1	1	0	$\frac{0}{1}$	$\frac{0}{1}$	0	$\frac{0}{1}$	$\frac{0}{1}$	1	$\frac{0}{1}$
basis comparison	\times	\checkmark	\checkmark	\checkmark	\checkmark	\times	\times	\checkmark	\times	\times	\checkmark	\times
final key		0	1	1	0			0			1	

via classical channel

$X = Y ?$