IBE and S/MIME

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Adding New Algorithms

- Algorithm standards are just the beginning
- Modern security protocols are algorithm agile, but each protocol needs to be profiled to use each algorithm
- Innovative new algorithms may require the use of protocol extensions or support infrastructure to take advantage of unforeseen capabilities

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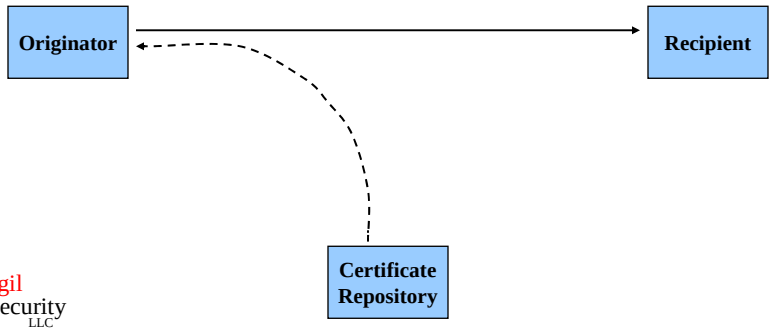
Traditional S/MIME Encryption

1. Originator fetches the certificate
   (or saves it from an earlier message)
2. Originator sends the encrypted message



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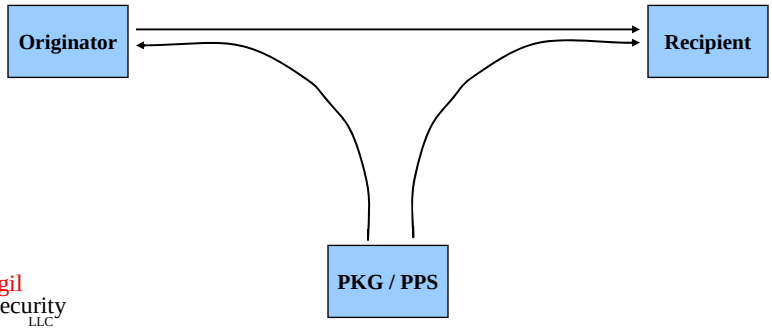
IBE S/MIME Encryption

1. Originator fetches the IBE Public Parameters
2. Originator sends the encrypted message
3. Recipient fetches their IBE private key



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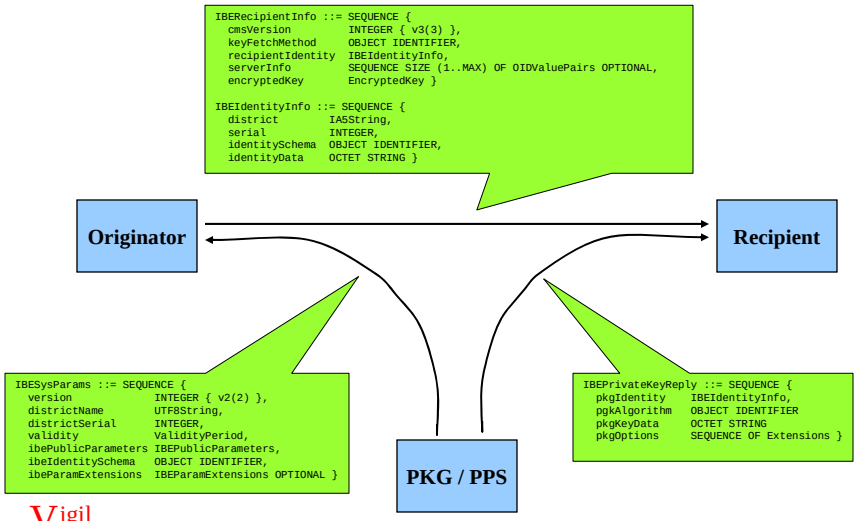
IBE S/MIME Encryption



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Interoperability is the Goal

- Interoperable use of new algorithms means:
  - Algorithm standards
  - Specification of syntax and elements of procedure to use the new algorithm in existing security protocols

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Questions?

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