$\sim$ X\_1 = ( $\sim$ M\_1, $\sim$ M\_2, $\sim$ M\_3) = choice[(attvid\_4,attsk\_4,cert(attvid\_4,pk(attsk\_4),cask\_4)),(attvid\_5,attsk\_5,cert(attvid\_5,pk(attsk\_5),cask\_5))] ~M\_5 = choice[aenc((groupkey\_request, sign(groupkey\_request, vsk\_9),cert(vid\_13,pk(vsk\_9),cask\_4)),pk(cask\_4)), aenc((groupkey\_request, sign(groupkey\_request, vsk\_11), cert(vid\_15,pk(vsk\_11),cask\_5)),pk(cask\_5))] ~M\_7 = choice[aenc((groupkey\_request, sign(groupkey\_request, vsk\_8),cert(vid\_12,pk(vsk\_8),cask\_4)),pk(cask\_4)), aenc((groupkey\_request, sign(groupkey\_request, vsk\_10), cert(vid\_14,pk(vsk\_10),cask\_5)),pk(cask\_5))] A trace has been found. ~M\_8 = choice[aenc(((groupkey\_response,vid\_13, gsk(vid\_13,gmsk\_4),gpk(gmsk\_4)),sign((groupkey\_response, vid\_13,gsk(vid\_13,gmsk\_4),gpk(gmsk\_4)),cask\_4)), pk(vsk\_9)),aenc(((groupkey\_response,vid\_15,gsk(vid\_15,gmsk\_5)),sign((groupkey\_response, vid\_15,gsk(vid\_15,gmsk\_5)),gpk(gmsk\_5)),cask\_5)), pk(vsk\_11))] **Honest Process** Attacker {1}new gmsk 4 {2}new cask\_4 {3}new vid\_12 {4}new vsk\_8 {5}new vid\_13 {6}new vsk\_9 {7}new attvid\_4 {8}new attsk\_4 {9}new gmsk\_5 {10}new cask\_5 {11}new vid\_14 {12} new vsk\_10 {13}new vid\_15 {14} new vsk\_11 {15} new attvid\_5 {16} new attsk\_5  $\sim$ M = pk(choice[cask 4,cask 5]) {173}event choice[AttackerGetsEnrollmentCertificate(attvid\_4,pk(attsk\_4)),AttackerGetsEnrollmentCertificate(attvid\_5,pk(attsk\_5))] ~X 1  $\sim$ M\_4 = choice[cert(vid\_13,pk(vsk\_9),cask\_4),cert(vid\_15,pk(vsk\_11),cask\_5)] {101}event ValidGroupKeyRequestSent(choice[vid\_13, vid 15]) ~M 5  $\sim$  M\_6 = choice[cert(vid\_12,pk(vsk\_8),cask\_4),cert(vid\_14,pk(vsk\_10),cask\_5)] {26} event ValidGroupKeyRequestSent(choice[vid\_12, vid\_14]) ~M 7 ~M 5 {217}get v\_82: table suchthat (if choice[true, false] then (success?(1-proj-revokedcerts(v\_82)) && (choice[vid\_13,caught-fail] =nf 1-proj-revokedcerts(v\_82))) else (success?(1-proj-revokedcerts(v\_82)) && (choice[caught-fail,vid\_15] =nf 1-proj-revokedcerts(v\_82)))): else branch taken {204}event choice[ValidGroupKeyRequestReceived(cask\_4,vid\_13),ValidGroupKeyRequestReceived(cask\_5,vid\_15)] {209} event choice[ValidGroupPrivateKeySent(vid\_13, gsk(vid\_13,gmsk\_4),gpk(gmsk\_4)),ValidGroupPrivateKeySent( vid\_15,gsk(vid\_15,gmsk\_5),gpk(gmsk\_5))] ~M 8 ~M 8 {110}new vpseudosk\_10 {111} new vpseudosk\_11 {112}new m\_12 {130} if choice[true,false]
This process performs a test that may succeed on one side and not on the other.

Abbreviations