Abbreviations  $\sim$ X\_1 = ( $\sim$ M\_1, $\sim$ M\_2, $\sim$ M\_3) = choice[(attvid\_8,attsk\_8,cert(attvid\_8,pk(attsk\_8),cask\_8)),(attvid\_9,attsk\_9,cert(attvid\_9,pk(attsk\_9),cask\_9))] ~M\_5 = choice[aenc((groupkey\_request, sign(groupkey\_request, vsk\_17),cert(vid\_41,pk(vsk\_17),cask\_8)),pk(cask\_8)), aenc((groupkey\_request, sign(groupkey\_request, vsk\_19), cert(vid\_43,pk(vsk\_19),cask\_9)),pk(cask\_9))] ~M\_7 = choice[aenc((groupkey\_request, sign(groupkey\_request, vsk\_16),cert(vid\_40,pk(vsk\_16),cask\_8)),pk(cask\_8)), aenc((groupkey\_request, sign(groupkey\_request, vsk\_18), cert(vid\_42,pk(vsk\_18),cask\_9)),pk(cask\_9))] Attacker **Honest Process** {1}new gmsk\_8 {2}new cask 8 {3}new vid\_40 {4}new vsk 16 {5}new vid\_41 {6}new vsk 17 {7}new attvid 8 {8}new attsk\_8 {9}new gmsk\_9 {10} new cask\_9 {11} new vid\_42 {12}new vsk\_18 {13} new vid\_43 {14} new vsk\_19 {15} new attvid\_9 {16} new attsk 9  $\sim$ M = pk(choice[cask\_8,cask\_9]) {325}event choice[AttackerGetsEnrollmentCertificate(attvid\_8,pk(attsk\_8)),AttackerGetsEnrollmentCertificate(attvid\_9,pk(attsk\_9))] ~X 1  $\sim$  M\_4 = choice[cert(vid\_41,pk(vsk\_17),cask\_8),cert(vid\_43,pk(vsk\_19),cask\_9)] ~M 5  $\sim M_6 = \frac{\text{choice}[\text{cert}(\text{vid}_40,\text{pk}(\text{vsk}_16),\text{cask}_8),\text{cert}(\text{vid}_42,\text{pk}(\text{vsk}_18),\text{cask}_9)]}{\text{vid}_42,\text{pk}(\text{vsk}_18),\text{cask}_9)]}$ ~M 5 {400} get v\_543: table suchthat (if choice[true, false] then (success?(1-proj-revokedcerts(v\_543)) && (choice[vid\_41,caught-fail] =nf 1-proj-revokedcerts(v\_543))) else (success?(1-proj-revokedcerts(v\_543)) && (choice[caught-fail,vid\_43] =nf 1-proj-revokedcerts(v\_543)))): else branch taken

{177}event ValidGroupKeyRequestSent(choice[vid\_41, vid\_43])

~M 7

{358}if (if choice[true,false] then not((choice[true,false,caught-fail])) else not(choice[false,true]))

This process performs a test that may succeed on one side and not on the other.

{26} event ValidGroupKeyRequestSent(choice[vid\_40, vid\_42])

A trace has been found.