ANDY GAVIL: Hi. I am Andy Gavil. I'm a professor of law at Howard University School of Law in Washington, and I'm here today with Michael Turner of the U.S. Federal Trade Commission to talk about proving agreement with indirect or circumstantial evidence. This training module is not about proving anti-competitive effects. There are other modules in the ICN training network and there is Cartel Working Group work product relevant to that issue. It is also not about proving agreement with direct evidence and we'll explain what direct evidence is a little later. This module is solely about proving agreement based on reasonable inferences drawn from circumstantial evidence. This is a common feature of many competition policy systems. Direct evidence is not required. But there are some differences in the specific legal standards and the burdens of proof.

MICHAEL TURNER: So, first we should define direct and circumstantial evidence and how these affect the analysis. Direct evidence is evidence that explicitly refers to an agreement or understanding between the relevant parties and can be strong or weak. Strong direct evidence typically does not need any other supporting evidence in order to prove agreement and it is not the subject of this module. Typically, strong direct evidence takes the form of written or oral communication between the parties that unambiguously establishes an understanding between them to pursue a joint course of action. It might also include a recording of the parties making the agreement or an admission by a party to the agreement. Now, weak direct evidence can be admissions of an agreement by someone with a reason to know, like an employee of a market participant. The more specificity the weak direct evidence has as to time, place and manner of the agreement, the stronger it is. Weak direct evidence typically needs other kinds of supporting evidence, such as circumstantial evidence, to prove an agreement. An example of weak direct evidence would be a person testifying that she was told by a supervisor not to go after her

competitor's customers because of an industry agreement. Circumstantial evidence does not directly refer to agreement at all. It's all other evidence from which you can reasonably infer an agreement either when taken alone or when combined with other pieces of evidence. We generally analyze circumstantial evidence present in any given case using a two-step process that asks: 1) is the market conducive to coordination? and 2: is there enough circumstantial evidence to support a reasonable inference that any observed, coordinated conduct was likely the product of an agreement? But we'll discuss this two-step process in further detail later in this module. Next, we should distinguish between the two types of agreement, both of which can be anti-competitive. Express agreement are what we normally think about when we think of price fixing or dividing markets. Competitors gather together and they say, let's fix prices. They explicitly agree to coordinate their business activities. Tacit agreement is different. There's no explicit exchange of assurances, but there is intentional coordination for the purpose of achieving some common anti-competitive goal, such as fixing prices. Although both express and tacit agreement can be similarly anti-competitive, express agreements are typically proved with direct evidence or a combination of direct and circumstantial evidence, whereas tacit agreements are usually proved through circumstantial evidence alone.

The problem is that it's often difficult to distinguish parallel conduct from tacit agreement. Here's an example of tacit agreement. There's a three-competitor market. Competitor A states publicly that prices are too low. Competitor B publicly agrees that prices are too low and that higher prices are needed for a stable market. Competitor C publicly agrees with A and B that prices are too low and further states that the price should be at least $5. Competitor A announces a price increase to $5 and then competitors B and C raise price to the same level. Contrast that with a situation where competitor A raises its price and its rivals, B and

C, follow. This sort of leader-follower behavior is particularly common in some oligopoly markets where competitors selling similar products recognize their interdependence and can easily observe each other's behavior. In these circumstances, competitors are coordinating, but their parallel behavior might not be a result of agreement at all. It just looks like they agreed. Yet, firms that coordinate through what has been described as conscious parallelism often have the same effects on consumers as firms that reach an agreement to coordinate: higher prices and reduced competition. So, why should competition policy differentiate between them if the effects are the same? For a few reasons. First, in many jurisdictions, there is a legal requirement that there be considered action, some kind of agreement. Parallel conduct that does not involve some form of agreement, therefore, will fall outside the scope of the competition law. Second, if we attempt to prohibit parallel conduct alone, we will likely over-deter rational business strategies, such as leader-follower behavior. Third, finding a remedy for parallel conduct can be a challenge. It is very difficult to instruct the firms in an oligopoly market that they should not observe and respond to their competitor's actions. And even if you did make such a rule, how would you enforce it? What would the remedy be? How would you enjoin a firm from observing and responding to the action of its rivals without impairing, rather than improving, competition? Finally, an anti-competitive agreement is typically more stable than conscious parallelism, which itself can be an evidence of agreement. The market will tend to correct abnormally high prices and other restraints unless the competitors are working together.

All of these considerations give rise to a core premise of this module. Parallel conduct alone does not establish an agreement. We need to see some other indicia of agreement in order to infer the existence of an agreement and proceed to consider its effects. Accordingly, we distinguish between parallel conduct and agreement using circumstantial evidence with a two-

stage analytical process. First, we ask if the market is conducive to coordination. In other words, is it probable that competitors can reach and maintain some level of coordination in prices or other conduct? Second, we also ask whether there is other evidence from which it is reasonable to infer an agreement.

But before we go in-depth with those concepts, I should explain what we could mean by an agreement more generally. Agreement is defined in various ways depending on the legal jurisdiction. Here, we show some definitions of agreement from a few different legal jurisdictions. Note that what they all have in common is that in order to find an agreement, you need something more than conscious parallelism. In addition, the burden of proof required to show an anti-competitive agreement can vary depending on the legal jurisdiction. And the burden of proof can vary depending on whether there is a criminal prosecution or a civil case. In the United States, for example, some courts impose a very high burden on inferring agreement from circumstantial evidence when there is an alleged agreement that does not appear to be economically plausible. That is, when the agreement doesn't appear to provide commercial benefit to the parties involved. In such cases, the courts require evidence sufficient to exclude the possibility of independent behavior.

ANDY GAVIL: We've been talking about several related concepts. Agreement, both express and tacit, and conscious parallelism or interdependence, which many systems have concluded is not the equivalent of agreement. And we've been discussing ways that we might differentiate those two. We now turn to a hypothetical, commonly used in both the economic and legal literature to explain these differences, and the hypothetical involves four petrol stations on four corners in a busy downtown area.

Let's start by looking at the characteristics of the market in which the four stations

compete. First, there are no other nearby stations. Second, we have posted prices that are observable to both consumers and rivals. Third, we are going to focus solely on gas prices and not think about automobile servicing and consider that the products themselves are homogeneous. There are different grades of petrol, but otherwise they are interchangeable. It is not easy to open a new station. You require regulatory approvals and other sunk costs and the station owners recognize their interdependence. They understand that changes by price by one may affect the behavior of others. So, what kinds of behavior might we observe in this situation? We might see that the stations tend to follow each other's pricing, engage in parallel pricing. We might also see the kind of leader-follower behavior that Michael was talking about. If one raises price, it will be immediately apparent to the other three and they may follow suit and also raise their prices, but maybe not all at once. This would be an example of conscious parallelism, not agreement, and it would be very difficult and inconsistent with concerted action requirements to try to condemn the four gas stations for following each other's pricing.

Now, let's expand upon the petrol station hypothetical and add some additional facts to demonstrate how we might actually see this as express or tacit agreement, as well as just conscious parallelism. What if the four gas station owners meet for breakfast each Monday morning and what if after breakfast at 8:30, they return and they all raise prices? Would it make a difference if they raise prices at noon? Would it make a difference if they raise prices to different amounts or the same amount? Let's consider if station one raises price and station two promptly follows. But when stations three and four do not raise price by the end of the day, stations one and two return to previous price. That would strongly suggest the absence of understanding or agreement. What if, rather than specifically dealing with price, they all stop offering cash discounts or self-service pumps the same day or the same week? That's more

complicated conduct and it's less likely that that would occur as a result of simple leader-follower behavior. And what if the four owners meet for breakfast and they discuss trends in area pricing based on aggregated trade association gathered data? What if a waitperson testifies that when they eat, they always talk about petrol pricing? Would that be direct evidence of an express agreement? Or what if prices change, either up and down, following common changes in wholesale prices? That would seem to be an independent business justification for the parallel pricing.

The question then becomes, what circumstances have to be present in order for a group of rivals to coordinate and how are we going to differentiate the kind of coordination that we see in conscious parallelism from agreement? For a group of rivals to successfully coordinate their conduct, they need to solve certain problems. They need to find a way to achieve consensus on price, output, share of the market, maybe territory, innovation, or other aspects of competition. They also need to have a way to detect cheating on the consensus and to deter cheating on the consensus maybe through some credible threat of punishment, such as lower prices or a lower share of the market. Note that that can also involve exclusionary conduct. And, finally, they need to find a way to maintain the consensus in response to changing market conditions. That might be resistance from buyers or it might be new entry and expansion from new rivals in the market.

In this slide, we've assembled a number of factors that have been identified as tending to facilitate or frustrate coordination. Note that these factors are not telling us whether or not there is conscious parallelism versus agreement, but these do tell us whether or not a market is likely to be more or less conductive to coordination of some kind. We're not going to go through the entire list of factors, but we will pull out some illustrations. Note some of the main factors

however, few firms, homogeneity of the products, simple products as opposed to complex products, transparent prices and open transactions. We'll talk about how some of these make it easier or harder for firms to coordinate.

The factors on the previous slide can illustrate how markets might be more or less conducive to coordination. It is not like there is a single factor that will be all-telling and there is no formula to combine the factors. It may be a combination of factors that lead us to conclude that a market is more or less conducive to coordination. But here let's pull out some particular examples. The first, open bids and transparent prices, and let's think about it in terms of those three coordination problems that firms inclined to coordinate need to solve. How would open bids and transparent prices work? Would that facilitate or frustrate coordination? Well, it might tend to facilitate coordination precisely because it makes detection of cheating more easy. It could also make reaching consensus in the first place easier to do. The second, long-term contracts with large customers. Well, that tends to be destabilizing. That tends to frustrate the coordination. Why? Because large gains can be made by cheating on the cartel and securing one of those large buyers or long-term contracts. Unpredictable demand can also make detection harder because low sales could have multiple explanations. It could be the result of low market demand or cheating by the rival. So, detection of cheating on the cartel or coordination arrangement can be more difficult. A dynamic market where the market is changing can make it harder to achieve and adjust consensus, harder to detect cheating. Innovation, for example, can be a factor in a market that makes it very difficult to detect cheating, and there can be big gains from cheating. One of the more interesting of the factors is excess capacity. When we have excess capacity for multiple firms, there's a large incentive to cheat. There's the ability to serve a larger portion of the market and individual firms might want to cheat because they know they

have the capacity to sell more, perhaps at lower prices. But the greater ability of a single firm with excess capacity to punish may mean that excess capacity of a single firm, perhaps the leading firm, would be a factor facilitating coordination. That would be a means of threatening punishment of any cheaters in the cartel something that was seen, for example, in the Lysine cartel.

How do we then begin the process of moving from conscious parallelism to coordination that equals agreement? Well, we might ask what factors matter the most. One definition given by a group of commentators recently is as follows: Economic actions and outcomes above and beyond parallel conduct by oligopolistic firms that are largely inconsistent with unilateral conduct, but largely consistent with explicitly coordinated action. We're now going to look a little bit more carefully at that concept and we'll close with some examples from real cases.

MICHAEL TURNER: As we discussed, there are many factors to describe whether industry has the necessary characteristics and incentives to coordinate. We think of these factors as being a necessary, but not sufficient, type of evidence when you are proving a case of agreement through circumstantial evidence. For example, it is useful to see that there was a rational motive for the market participants to seek to coordinate their behavior. It is also important that the market structure is conducive to coordination. As Andy explained, if there are few competitors, simple products and transparent pricing, the competitors will have greater incentives to coordinate because coordination will be easier to achieve and maintain. If the industry has a history of coordination, it is both evidence that the industry can coordinate and that it may again be able to do so in the future. And, finally, if the industry appears to be noncompetitive, if market shares are unusually stable over time, or if prices appear to be stable but above a competitive level, it could be a sign that there is an agreement. On the other hand, if

there were hundreds of competitors with small market shares selling highly differentiated products and there is no trade association, it is less likely that any observed parallel price increases are the product of agreement. Instead, we might look at whether the firms face a common explanation for their parallel conduct, such as an increase in the cost of a common input during the relevant period.

So, we just discussed whether an industry's market structure is conducive to coordination. But this type of evidence can be equally consistent with both parallel behavior and agreement. So, we also need to see other evidence of the actions of the competitors that would allow an inference that parallel conduct is due to an agreement. Communications close in time to price increases are often particularly relevant because they may help to show a connection between price and communication that cannot easily be ascribed to conscious parallelism. Facilitating practices like pricing announcements can make it easier for market participants to follow each other without directly communicating and can resemble permissible conscious parallelism, but may also be a form of communication that facilitates coordination and suggests agreement. Actions that appear to be contrary to self-interest, unless the firms have an agreement, can also support an inference of agreement. These could be conduct like periodic bidding on projects or failure to enter a geographic area or not offering a product that customers want and that would appear to involve foregoing competitive opportunities and leaving them to a firm's rivals. In addition, conduct lacking in efficiency or other business explanation can suggest an agreement. This might include maintaining prices despite excess manufacturing capacity and increasing prices along with competitors when market demand is falling. With both the industry structure and industry conduct evidence, we're looking at whether competitors have tried and were able to solve their three coordination problems. The goal is to consider all of the

circumstantial evidence together and attempt to answer whether the conduct is more consistent with agreement than simple parallel behavior. The more difficult it is to explain the conduct absent an agreement, the more likely it is that the firm's parallel conduct was the product of an agreement. As I mentioned before, the amount of evidence you need to infer an agreement will vary depending on the burden of proof. But no one piece of circumstantial evidence will likely be enough to prove an agreement.

One important kind of evidence to look for is signaling or committing behavior in the marketplace. This type of behavior has the effect of reducing uncertainty between market competitors and making it more likely that they can coordinate and detect cheating on an agreement. For example, publicly announcing price increases well in advance can make it much easier for competitors to coordinate their pricing. Announcing price increases in advance to rivals before announcing it to customers can be even more likely to lead to coordination and may not have any obvious pro-competitive benefits. The last two examples, contractual commitment to match rivals' prices and contractual commitment to offer each other -- each customer the same price may be ways that competitors can contract to reduce uncertainty in a market by reducing incentives to compete on price and market share, especially if they are widely adopted. Reducing uncertainty can increase the chances that firms will be able to solve all of their coordination problems and actions taken to do so can support an inference of agreement. This can be especially relevant if it appears that prior to the conduct, the firms tried but failed to implement leader-follower behavior, but afterwards they were more successful. Some commentators have noted that there are a few factors that can be especially suggestive of an agreement. For example, transfers between competing firms can suggest that competitors are honoring a past agreement as to price or share, and acting to implement the agreement through

some kind of auditing mechanism. Certain information exchanges can also facilitate agreement if they make it more likely that competitors will learn what the others have done or are planning to do with regard to pricing or other market behavior. Information about past pricing, for example, can help firms to confirm past adherence to an agreement and detect cheating. And information about future pricing can help firms to reach consensus going forward. Broad adoption by many firms of exclusionary conduct typically associated with dominant firms, such as coordinated exclusion and firms that attempt to enter the market, can also strongly suggest an agreement between the incumbent and competitors. Complex patterns of pricing announcements in the markets may be difficult to explain absent an agreement, particularly the longer the patterns occur. And, finally, in a competitive market environment, we might expect to see declining prices where demand is declining. Absent an agreement, it is difficult to explain price increases in the face of falling demand. Each of the prior four slides help us to determine whether the conduct at issue is conscious parallelism or more likely an attempt by the market participants to solve their coordination problems through an agreement. We take all of the relevant factors in a totality of the evidence standard and analyze where it is more likely than not that the market participants coordinated through an agreement. Finally, one important factor to keep in mind is that we will not infer an agreement where the parties have the incentives stacked without regard to how the others will react in the market. In other words, there needs to be interdependence between the parties' pricing or output decisions. This means that where competitors can set output without regard to its rivals' decisions, we will not infer an agreement for a simple reason. Why would a competitor agree to do something that it could do without an agreement?

So, now we're going to take a look at two examples, applying some of these principles

that we've pulled from relevant U.S. case law. In the first, the market was the market for publication paper, which is the paper that is used in publications like magazines and newspapers. The parallel conduct was that the competitors each raised prices on three different occasions to the same levels and in quick succession with each other. The fact that the price increases were so close in time is suggestive, but without more evidence, it is not enough to show that an agreement was more likely than independent conduct, that it was more than just parallel pricing. So, first, we look at whether the market itself was conducive to coordination. And there are many factors that suggest that it was. For example, there are only a few sellers in this market, so it was an oligopoly market. The product was homogenous or a commodity product, so the same product from each was accepted by their customers. There were significant barriers to entry and excess industry capacity. And at the time, there was also historically low prices, which makes price increases less likely absent an agreement. Now, we look for evidence of an agreement. The most important evidence in this case was the fact that the presidents of the competitors spoke with each other shortly before the price increases and discussed future pricing plans. There was also some evidence that one of the competitors was internally confident that its competitor would stick to a price increase and made its own decision to follow on price increase on that basis. There was also no real business justification for the communications between the parties. All of this taken together made it more likely than not that the parallel pricing was made pursuant to an agreement rather than for independent reasons.

MICHAEL TURNER: In our second example, the Court concluded that the circumstantial evidence was not sufficient to support an inference of agreement. In this case, prescription drug manufacturers used a rebate scheme to collectively charge pharmacies a higher price than they charge hospitals for prescription drugs. The manufacturers sold their drugs

through wholesalers at a fixed price and recompensed the wholesaler for selling the drug to hospitals at a lower price than to pharmacies. The pharmacies claimed that this differentiated pricing practice was a product of an agreement. So, again, we have a situation where there is parallel pricing conduct by the competitors, but they deny having entered into an agreement. So we need more evidence than the mere fact of parallel pricing.

First, we looked at whether the market is conducive to coordination and the evidence was inconsistent. On the one hand, there were only a few prescription drug manufacturers in the United States, which would tend to make it easier to coordinate. Further, the drug wholesalers had a trade association which made it easier for the wholesalers to communicate and, hence, coordinate. There is also evidence that the drug manufacturers attended some of these trade association meetings. On the other hand, the fact that vertical agreements between manufacturers and wholesalers were necessary makes it less likely that there was an agreement between the manufacturers. It is generally more difficult to come into an agreement when it involves two levels of competition. And in this market, there was product heterogeneity because the prescription drugs in question were all different and sold at different price points. This would make an agreement more difficult between the manufacturers.

Next, we will look at the conduct of the market participants, and here there was evidence both for and against agreement. As I mentioned, the manufacturers had uniform policies discriminating on price against pharmacies, but this parallel behavior by itself is not sufficient to show agreement. Although the existence of the trade association may have created an opportunity for the firms to communicate, there was no evidence of actual communications between the manufacturers related to in time or subject matter to their pricing practices, and there was no evidence that any of the manufacturers attempted to punish rivals that did not adopt the

differentiated pricing policy towards pharmacies, in large part because there was no evidence of communications between the manufactures and because it made economic sense for each individual drug manufacturer to charge more to pharmacies because pharmacies were more willing than hospitals to pay more for drugs. When the evidence was taken together, the Court concluded that it was just as likely that the manufacturers adopted like pricing policies for independent business reasons as through agreement and, hence, an inference of agreement was not warranted. This was, in large part, because there was no evidence of the communications between the manufacturers and because it made economic sense for each individual drug manufacturer to charge more to pharmacies because pharmacies were more willing than hospitals to pay more for drugs.

HARALD MISCHE: Now, we are turning to two examples selected from EU case law. In discussing those cases, it is important to bear one thing in mind. For less formal cooperation, as already explained, EU law uses the legal concept of a concerted practice. In a concerted practice, companies engage in practical cooperation that substitutes knowingly for the risks of competition without, however, concluding a formal agreement in the sense of a contract. The first EU case is an example with sufficient evidence to establish a concerted practice. It is an important illustration of how the burden of proof applies under EU law when information exchange has as object the disclosure of sensitive business information related to future market conduct. The case concerned the Dutch mobile telecommunications market. The conduct in question was the reduction of commissions that Dutch mobile telephone network operators paid for certain subscriptions to dealers following a single meeting. In view of the anti-competitive nature of the information exchanged in the present case, the first question commonly to be examined, if the market was conducive to coordination, played only a minor role. The Dutch

mobile network market was an oligopolistic market because the Dutch authorities had only issued five mobile telephone network licenses. Because a license is a precondition to entering the market, this also meant that independent entry was not possible. Instead, to enter the market, any new mobile operator would have had to conclude a license agreement with one of the five operators holding a license. This market structure meant that the industry was more conducive to coordination by the five operators. The crucial evidence in this case was a single meeting with an exchange of sensitive business information. During this single meeting, one of the operators disclosed to the others information about it's envisaged reduction of dealer remunerations for certain subscriptions, which was to take effect on a specific date. There was no justification for the information exchange. Although other operators did not respond by disclosing their own commercial plans, it was concluded that the information exchange was clearly anti-competitive because it allowed the mobile telephone network operators to coordinate their market conduct concerning a particular parameter of competition. In fact, the information exchange removed the uncertainty between the operators regarding the timing, extent and details of the envisaged reductions in the commissions paid to dealers. Under EU law, companies are presumed to have taken account of the information exchanged in determining their market conduct. They carry the burden for showing that their concerted action had no effect on the market in question. The Court concluded that the information exchange was anti-competitive in nature and, in itself, sufficient to support a finding of an unlawful concerted practice.

In the second example from EU case law, the available circumstantial evidence was considered to be insufficient to prove a concerted practice. In this case, over a number of years, wood pulp manufacturers had made near simultaneous or simultaneous quarterly price announcements with almost identical prices. Manufacturers communicated their prices to

customers and agents that worked for several wood pulp manufacturers. The prices were announced well before the beginning of the quarter during which the prices would be applied. The product that gave rise to the alleged concerted practice was wood pulp. Wood pulp was produced in four different qualities. Although within each quality, wood pulp was largely interchangeable, paper was manufactured from a mixture of pulp qualities. Once a paper producer had determined the specific mixture of pulp for a certain paper quality, the paper producer was reluctant to alter that formula and change pulp supplier. The wood pulp market had features that made it conducive to a concerted practice. First of all, it was oligopolistic. Although more than 50 producers offered wood pulp, a small number of large wood pulp producers represented most of the market supply. Moreover, on the demand side, there was a small number of large paper producers representing most of the demand. An analysis of other circumstantial evidence showed, however, that a concerted practice was not the only plausible explanation for the observed parallel conduct. First, the system of quarterly price announcements could be regarded as irrational market response to the fact that the pulp market was a long-term market and cyclical in nature. Moreover, the pulp producers had made the price announcements at the request of buyers. In the specific circumstances, price announcements functioned merely as a price ceiling and could limit commercial risks for both buyers and sellers. Second, the fact that price announcements were made almost simultaneously could well be the result of transparency in the market. Third, parallelism of prices and price terms could be explained by a number of factors including oligopolistic market features, inelastic demand, temporary stockpiling caused by public subsidies and macroeconomic and cycles. In addition, the Court observed that competitors not taking part in the alleged concerted practice represented a market share of close to 40 percent. The Court considered that the presence of those

competitors discarded the ability of the other market participants to collude successfully. Considering that there was no evidence of secret and unlawful information exchange or other behavior showing collusion, an inference of a concerted practice was not warranted.

ANDY GAVIL: We close the presentation with a list of additional resources you might want to consult. The issues discussed in this module have been extensively evaluated by commentators and courts and we hope you will find this list of additional resources helpful as well. On behalf of myself, Michael Turner, and those who have helped us put this module together, thank you.